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Lecture 2
Thinking Like an Economist

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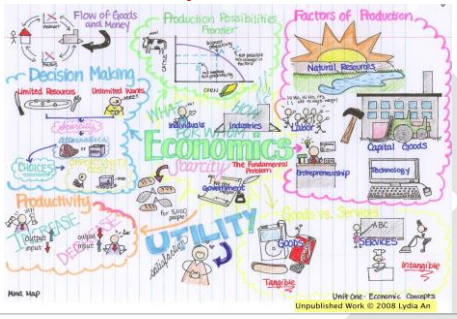
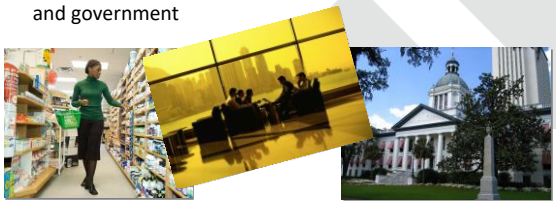
Mind Map of Economics



Thinking Like an Economist

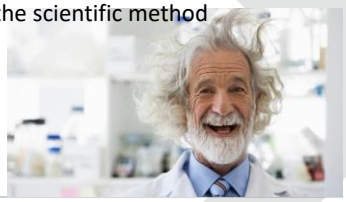
- think in terms of alternatives
- evaluate the cost of individual and social choices
- examine and understand how certain events and issues are related
- explain and predict the behavior of consumers, firms and government



The Economist as a Scientist

The economic way of thinking . . .

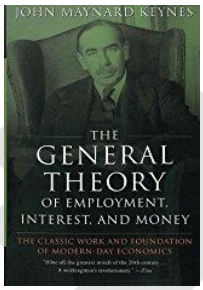
- involves thinking analytically and objectively
- makes use of the scientific method



John Maynard Keynes

"Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw correct conclusions."

J.M. Keynes (1883 – 1946)



Microeconomics

- Centers on the forces working at the individual level (e.g. individual firms and consumers)
- Focuses on the needs, desires and buying habits of the individual consumer
- An example: studying how firms react to increasing costs of production by raising the price and subsequently how consumer/household spending is adjusted when the price rises
- Name of the game: Supply, Demand and Markets

Macroeconomics

- The sum total of all micro parts
- Looks at the aggregate (sum or total) of individual markets
- The four main areas of study

  (1) Growth (increase in total output)

  (2) Price level (inflation)

  (3) Labor Markets (unemployment)

  (4) The balance in the foreign sector (exports/imports, exchange rates)

Economic thinking is scientific thinking

- Economists use data and information generated by people to explain and predict actions

Class Activity:

1) Do you believe that red cars receive more traffic tickets? Why or why not?
2) Do you believe that students who regularly attend class earn higher grades? How could you support (or fail to support) that?

Scientific Methods in Economics

- ☐ Abstraction
- ☐ Induction x Deduction
- ☐ Analysis x Synthesis
- ☐ Economic and statistical analysis
- ☐ Positive economics x Normative economics
- ☐ Modeling (balancing problem, optimization)
- ☐ Comparison; Balance method
- ☐ Statistical and mathematical methods
- ☐ Experiment (?)

- ☐ Mistakes, ceteris paribus
- ☐ Factor of time

- ☐ Graphic view
- ☐ Discussion

The Scientific Method: Observation, Theory, and More Observation

- uses abstract models to help explain how a complex, real world operates
- develops theories, collects, and analyzes data to evaluate the theories

Positive and Normative Economics

- Health care can be improved with more tax funding
- Pollution control is effective through a system of fines
- Society ought to provide homes for all
- Any strategy aimed at reducing factory closures in deprived areas would be helpful

Positive Statements

- Capable of being verified or refuted by resorting to fact or further investigation

Normative Statements

- Contains a value judgement which cannot be verified by resort to investigation or research

Positive Statements

- Statement free from speculation and hinting
- Based on facts that can be proved or disproved
- No way means "good", but rather that there is no value judgment involved.
- Example: a statement saying…

'There are very few repeat-offenders amongst those who have been executed.'

Normative Statements

- Based on norms

(Norm is an implicit (implied) or explicit (clear) behavioral pattern arising from the traditions and ethics laid down within the framework of a society)

- Statements are subjective (arguable) and biased – they cannot be proved or disproved

The Role of Assumptions

- Economists make assumptions in order to make the world easier to understand.
- The art in scientific thinking is deciding which assumptions to make.
- Economists use different assumptions to answer different questions.

Economic Models

- Economists use models to simplify reality in order to improve our understanding of the world

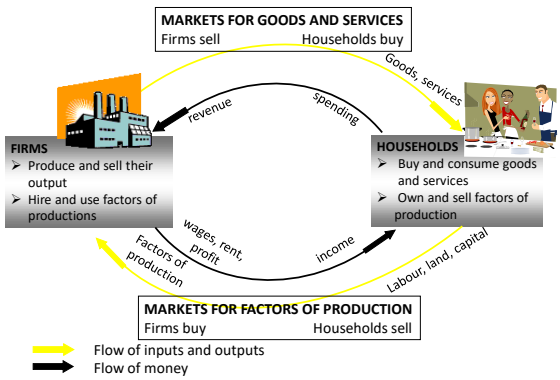
Two of the most basic economic models include:

- The Circular Flow Diagram
- The Production Possibilities Frontier (PPF)

The Circular-Flow Diagram

- The ***circular-flow diagram*** is a visual model of the economy that shows how money flow through markets among households and firms.

The Circular-Flow Diagram



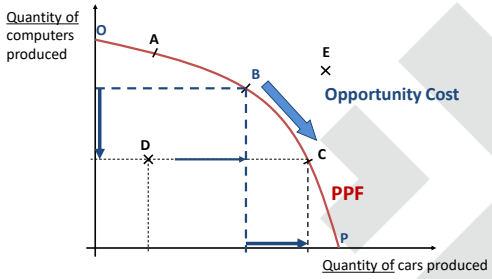
The Production Possibilities Frontier (PPF)

- The production possibilities frontier is a graph that shows the combinations of output that the economy can possibly produce given the available factors of production and the available production technology.

Concepts Illustrated by the Production Possibilities Frontier

- **Efficiency**
- **Tradeoffs**
- **Opportunity Cost**
- **Economic Growth**

The Production Possibilities Frontier (PPF)

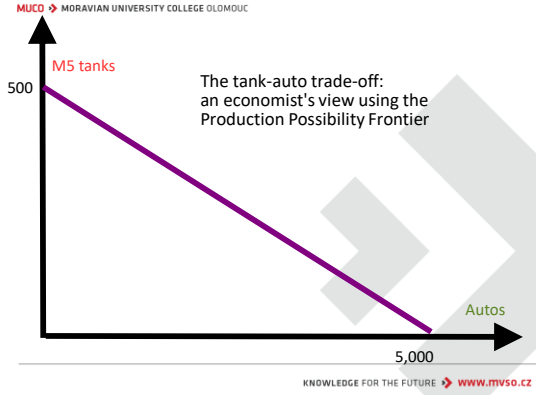


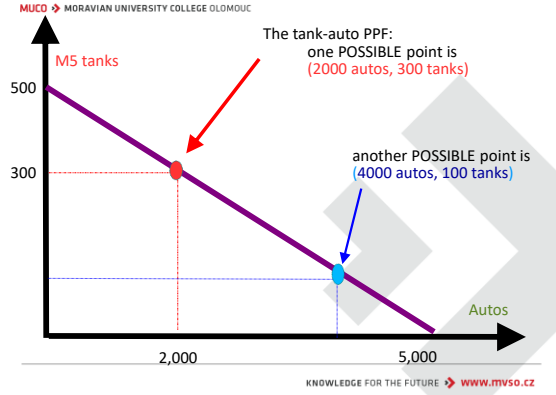
Tradeoffs and the Production Possibility Frontier

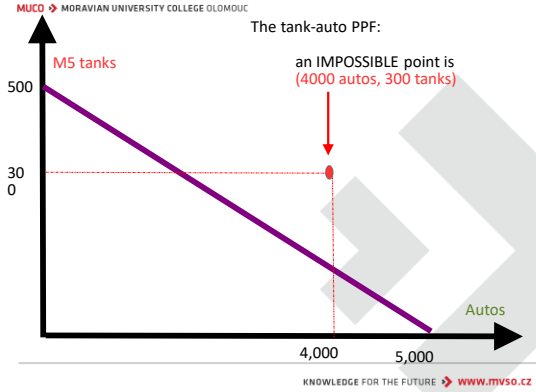
Economists would want to develop a more precise model of the tradeoffs involved –

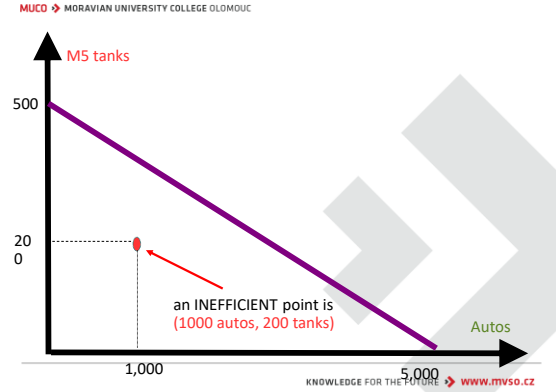
And that model can be represented graphically by a "Production Possibility Frontier", showing the choices which are:

- **possible** (on or within the frontier)
- **efficient** (exactly on the frontier)
- **inefficient** (within the frontier)
- **impossible** (beyond the frontier)









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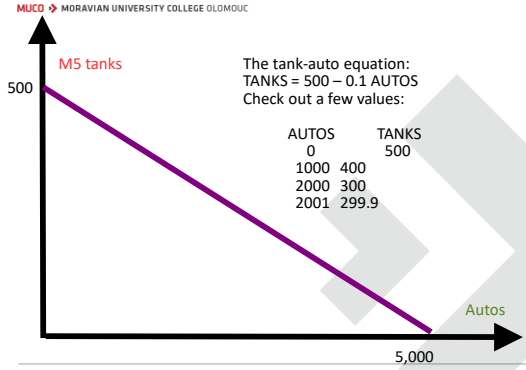

The tank-auto equation:
TANKS = 500 – 0.1 AUTOS
Check out a few values:

AUTOS	TANKS
0	500
1000	400
2000	300
2001	299.9

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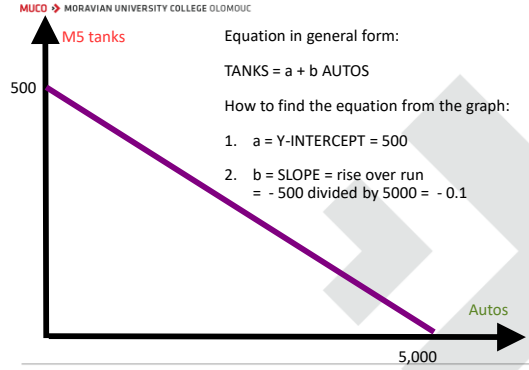

Equation in general form:

TANKS = a + b AUTOS

How to find the equation from the graph:

1. a = Y-INTERCEPT = 500
2. b = SLOPE = rise over run
   = - 500 divided by 5000 = - 0.1

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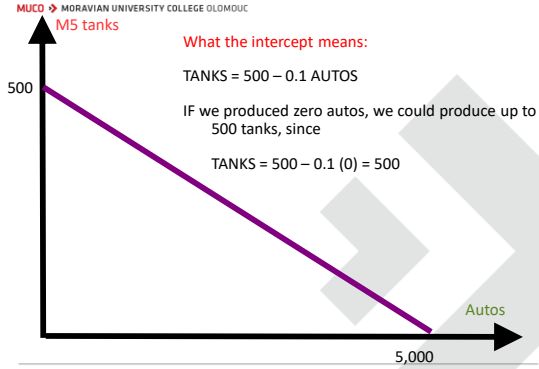

What the intercept means:

TANKS = 500 – 0.1 AUTOS

IF we produced zero autos, we could produce up to 500 tanks, since

TANKS = 500 – 0.1 (0) = 500

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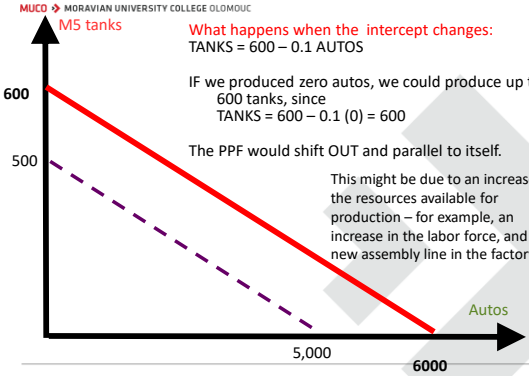

What happens when the intercept changes:
TANKS = 600 – 0.1 AUTOS

IF we produced zero autos, we could produce up to 600 tanks, since
TANKS = 600 – 0.1 (0) = 600

The PPF would shift OUT and parallel to itself.

This might be due to an increase in the resources available for production – for example, an increase in the labor force, and a new assembly line in the factory

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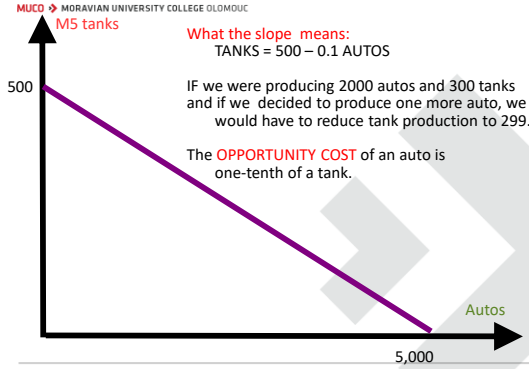

What the slope means:
TANKS = 500 – 0.1 AUTOS

IF we were producing 2000 autos and 300 tanks and if we decided to produce one more auto, we would have to reduce tank production to 299.9

The OPPORTUNITY COST of an auto is one-tenth of a tank.

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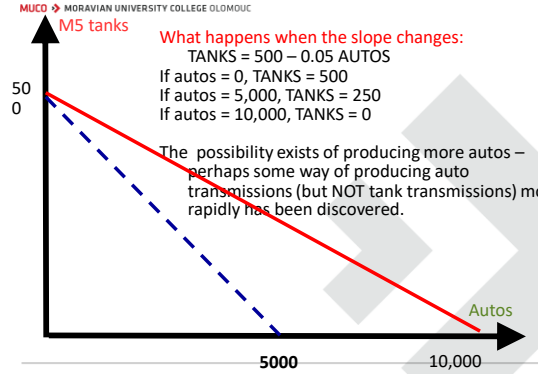


What happens when the slope changes:
TANKS = 500 – 0.05 AUTOS
If autos = 0, TANKS = 500
If autos = 5,000, TANKS = 250
If autos = 10,000, TANKS = 0

The possibility exists of producing more autos – perhaps some way of producing auto transmissions (but NOT tank transmissions) more rapidly has been discovered.

Costs and benefits

The Production Possibility Frontier shows us the economically efficient possibilities, but does not help us choose among them.

To choose, we must weigh costs and benefits:

take an action (move along the PPF)
if and only if the EXTRA benefits of the action are at least as great as the EXTRA costs.

Scarcity and use of time

Exercise: Draw PPF for

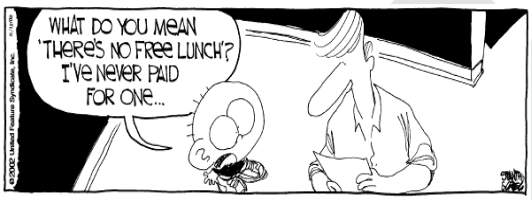
1.Studying/Partying

2. Studying/Working

Think about intercepts, actual point chosen.

There are <u>always</u> tradeoffs

- There is no such thing as a free lunch!



There are **<u>always</u>** tradeoffs
Opportunity cost

- What you give up is your <u>opportunity cost</u>-value of next best alternative
- Common mistake: opportunity cost is NOT the sum of everything you give up

Consider:

1. What is the opportunity cost of studying?
2. What is the opportunity cost of working?
3. Why do rational people make different choices?

Some Errors in Economic Thinking

- Not following the „ceteris paribus“ principle
- Good intentions do not guarantee desirable outcomes
- Subjective point of view
- The fallacy of composition
- Post-hoc fallacy
- Uncertainty in economic life

Ceteris paribus condition (principle)

- Ceteris paribus = other things (variables) constant
- Economics very often supposes ceteris paribus condition, however in a dynamic world many things can happen and things can change.
- Violation of *ceteris paribus*.
  - *Ceteris paribus* is Latin for “other things constant.”
  - We want to isolate variables so we typically allow only one to change at a time.

Good intentions do not guarantee desirable outcomes

- Intentions have direct and indirect effects.
- The Road to Hell is Paved with Good Intentions.

Milton Friedman - Errors

- Good intentions do not necessarily result in good outcomes

"There is nothing that does so much harm as good intentions"

Milton Friedman (1912-2006)

Correlation does not imply causation

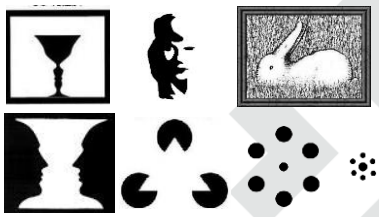
- Two effects occurred in same time can be independent.
- Situation when effect A precedes effect B does not necessarily mean that effect A causes effect B.

See:

https://www.buzzfeed.com/kjh2110/the-10-most-bizarre-correlations?utm_term=.dhgy0GGAn#.vk09ZrrKJ

https://moz.com/blog/correlation-vs-causation-mathographic

Subjective Point of View



Value is subjective

- Beauty is in the eyes of the beholder
- Value is determined by the purchaser

The fallacy of composition

The fallacy of composition:

what is true for one might not be true for all

Assumption: what's good for the individual is good for the group.

Making this assumption when it's false is the fallacy.

Some examples:

Atoms are not visible to the naked eye. Humans are made up of atoms.

- Therefore, humans are not visible to the naked eye.

You like the taste of ice cream. You like the taste of scrambled eggs.

- Therefore, you like the taste of scrambled eggs mixed with ice cream.

One and three are odd numbers

- so four is an odd number, because one and three are part of four (1+3=4).

The fallacy of composition - example

Elasticity of individual and market demand or supply curve

- Market demand curve can have small elasticity but it does not mean that individual demand curve has also small elasticity.

The fallacy of composition - example

Prisoner´s dilemma

• Prisoner´s dilemma can be defined as a paradox in decision analysis in which two individuals acting in their own best interest pursue a course of action that does not result in the ideal outcome.

Thank you for your attention!

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