

# Introduction to Economics

## Methodology, Assumptions and Models

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- 1 Course Overview
- 2 What's Economics
- 3 Models
- 4 Economic Policy
- 5 Summary

# Outline

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# Objectives

- Introduce you to the basics of economic analysis
- How economists think, which tools do they use and how they mean what they say
- Basics of *mainstream* neoclassical synthesis<sup>1</sup>
- The course is based mainly on Mankiw [2007] with Varian [2010] extending some topics.
- Your questions and comments welcomed! Course is held in lecture/discussion mode.

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<sup>1</sup>For further reading on history of economic thought see eg Schumpeter [2000], for heterodox economics see contemp debate.

# Requirements

- Optional but rewarded attendance (3 pts each, max 15)
- Written exam (during first two weeks in December) based on readings and lectures (max 50 pts)
- Paper due **January 17** (max 35 pts) with feedback within a week
- Save your papers into IS, Vault till midnight
- Altogether 100 pts possible, 60 pts minimum for pass

# Topics

- 1 Electricity markets in V4 countries
- 2 Oil commodity trading in Europe
- 3 Natural gas commodity trading in Europe
- 4 Energy trends in emerging markets
- 5 US prospects for natural gas export
- 6 Coal mining and coal trade in the Czech Republic
- 7 Pumped-storage hydroelectric power in the central European countries

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# Definition

- Economics **is** the study of how society manages its scarce resources.
- Note: *Economics* is the science, *Economist* is practitioner and *Economy* is sum of people, products and relations.
- Economics assumes that:
  - There is scarcity of resources
  - People behave in a rational way, pursuing their own interests and utility
  - Economy reaches equilibrium



# Micro x Macro

- They address various levels of analysis and ask different questions. They are intertwined, interconnected but also distinct and peculiar.
- **Microeconomics** focuses on households' and firms' decisions and their interactions on the market.
- **Macroeconomics** addresses the economy-wide phenomena such as product (GDP), unemployment, inflation, balance of payments (ei foreign trade).
- Micro is much more consensual than macro (among economists, see below)

# Differences between economists

- Why can you hear quite different (often opposite) opinions of different economists, when they are *scientists*?
- Economics has mainstream paradigm mostly agreed on by economists (not so by those pretending to be economists)
- Example Alston et al. [1992]:
  - Ceiling the estate lease decreases quantity and quality of housing available (93%)
  - Floating exchange rates facilitate effective international monetary setting (90%)
  - Minimal wage increases unemployment of youth and unskilled (79%)
  - Taxation of environmental pollution is more effective than limiting physical emissions (79%)

# Basic terms

- **Scarcity** - or No Free Lunch. A thing is scarce when people want more than available.
  - Not necessarily equal to preciousness!
- **Utility** - the pleasure, happiness, or satisfaction obtained from consuming a good or service their satisfaction.
- **Opportunity costs** - trade-off - to get more of one thing society forgoes the opportunity of getting the next best thing.
- **Equilibrium** - state of economy when no variable changes unless influenced from outside. (Pareto or Nash)
- **Variable** - measurable category worth observing. May be *stock* or *flow*, *dependent* or *independent*.

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# The Model

- Basic and probably the most prolific tool of economics
- Simply put: Observation  $\Rightarrow$  Hypothesis (model)  $\Rightarrow$  Testing  $\Rightarrow$  Evaluation (acceptance, rejection, or modification of the hypothesis/model)
- To explain how individuals and firms allocate resources and how market prices are determined (and many more), economists use a **model**: *a description of the relationship between two or more economic variables.*
- Technically, models may be of many different kinds (eg either deterministic or stochastic) and based on various platforms (econometrics, general equilibrium, agent based. . .)

# Assumptions

- **Ceteris paribus** or “other things equal” assumption - when working with models, one variable changes while all other stay still.
- **Generalization** - Models abstract from reality, miss many features of real world so they can focus on those important.
- Models both describe and predict. A good model makes sharp, clear predictions that are consistent with reality.
- Some very simple models make sharp predictions that are incorrect, and other more complex models make ambiguous predictions—any outcome is possible—which are untestable.

# Examples

- Most of the topics in this course will be explained with models, so that's what you'll see.
- Supply and Demand - knowing one's willingness to pay and others costs reveals the price
- Prisoners dilemma - knowing various outcomes reveals the strategy (or behavior)
- Benchmarking

# Issues

*Everything should be made as simple as possible, but not simpler.*

—Albert Einstein

- Composition problem - Even if we know behavior every single element, even their sum, the system as a whole might work otherwise.
- Omitting variables, observing false causality, confusing correlation with causality
  - eg. we see  $A \Rightarrow B$  while it's  $B \Rightarrow A$  or  $C \Rightarrow \{A, B\}$  etc.
- Garbage in garbage out



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# From economics to policy

- Positive x normative economic statements:
- P - A testable hypothesis about cause and effect, eg: *Recent decrease of crude oil is accompanied by Saudi Arabian' budget deficit.* Positive economics thus deals with factual statements.
- N – A value judgment or a conclusion as to whether something is good or bad, eg: *Saudi government should decrease its oil export dependency to make its public budgets more robust.* Normative economics, part of economic policy.

# Issues - Economics x Politics

- Combination of N and P might be tricky.
- *Recent decrease of crude oil is caused by Saudi Arabian' budget deficit.*
- Good intentions pave the road to hell – Czech proverb (and indeed positive statement)
- It is nice to have good intentions embodied in normative statements of high moral profile (eg *Poverty should be eradicated; Oil should be cheap and widely available*). However, quite a lot of economic prescriptions based solely on normative (and often intuitive) assumptions lead to disasters or at least adverse effects. (Setting minimum wage or maximum price. . . )
- The more precise and positive based objectives the better outcomes.

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# Mankiw's Ten Principles of Economics

- 1 People Face Tradeoffs
- 2 The Cost of Something Is What You Give Up to Get It
- 3 Rational People Think at the Margin
- 4 People Respond to Incentives
- 5 Trade Can Make Everyone Better Off
- 6 Markets Are Usually a Good Way to Organize Economic Activity
- 7 Governments Can Sometimes Improve Market Outcomes
- 8 A Country's Standard of Living Depends on Its Ability to Produce Goods and Services
- 9 Prices Rise When the Government Prints Too Much Money
- 10 Society Faces a Short-Run Tradeoff between Inflation and Unemployment

# References

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- N. Gregory Mankiw. *Principles of Economics*. Mason: Thomson Higher Education, 2007.
- Joseph Schumpeter. *History of Economic Analysis*. Mason: Thomson Higher Education, 2000.
- Hal R. Varian. *Intermediate Microeconomics. A Modern Approach*. W. W. Norton & Company, 2010.