Introduction to Economics

Methodology, Assumptions and Models

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2014

Outline

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[1]
- 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.

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

Requirements

- Optional but rewarded active attendance (3 pts each, max 15)
- Written exam (December 11) based on readings and lectures (max 50 pts)
- Paper due **January 18** (max 35 pts) with feedback within a week
- Save your papers into IS, `Study Materials/Homework Vaults` till midnight
- 100 pts possible, 60 pts minimum for pass

Topics

1. The Nord Pool electricity markets
2. Central and Eastern European oil and gas markets
3. Western European oil and gas markets
4. Saudi Arabia oil industry
5. US natural gas market
6. Australian coal industry
7. Sub-Saharan Africa oil and gas industry

Outline

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 have they are *scientists*?
- Economics has mainstream paradigm mostly agreed 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*.

Outline

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*.

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)

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. wee see A $\Rightarrow$ B while it's B $\Rightarrow$ A or C $\Rightarrow$ $\{A, B\}$ etc.

From economics to policy

- Positive x normative economic statements:
- P - A testable hypothesis about cause and effect, eg: *Decrease of Saudi Arabian oil production causes crude oil price to rise*. 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 output to increase world oil price and make a huge profit of it*. Normative economics, part of economic policy.

Issues - Economics x Politics

- Combination of N and P might by tricky.
- *Price of oil should be lowered by augmenting Saudi oil producing capacity*.
- 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.

Outline

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

Richard M. Alston, J. R. Kearl, and Michael B. Vaughan. Is there a consensus among economists in the 1990's? *The American Economic Review*, 82(2):pp. 203–209, 1992. ISSN 00028282. URL `http://www.jstor.org/stable/2117401`.

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.