I. Introduction

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This course

- Study behavioral effects for labor related outcomes
- Empirical studies
- Overview
  - Introduction
  - Psychology of incentives
    - Reciprocity and contract enforcement
    - Dysfunctional effects of explicit incentives
    - Peer effects
    - Loss aversion, collusion and sabotage in the presence of tournament incentives
    - Incentives, type self-selection and performance
  - Labor supply
  - Market behavior
    - Monopsony and minimum wages
    - Fairness, efficiency wages and wage rigidities
    - Incomplete contracts, fairness and the functioning of markets
Requirements/Information

1. Take part in the lecture
2. Exam

• Slides can be downloaded
  – www.iza.org/home/falk
• Readers available at IZA
Behavioral Economics: From the Nobel Prize laudation

“Traditionally, economic theory has relied on the assumption of a "homo œconomicus", whose behavior is governed by self-interest and who is capable of rational decision-making. Economics has also been regarded as a non-experimental science, where researchers – as in astronomy or meteorology – have had to rely exclusively on field data, that is, direct observations of the real world. During the last two decades, however, these views have undergone a transformation. …
…Controlled laboratory experiments have emerged as a vital component of economic research and, in certain instances, experimental results have shown that basic postulates in economic theory should be modified. This process has been generated by researchers in two areas: cognitive psychologists who have studied human judgment and decision-making, and experimental economists who have tested economic models in the laboratory. This year’s Nobel prize is awarded to the innovators in these two fields: Daniel Kahneman and Vernon Smith.”
Goal

- The goal of behavioral economics is to increase the explanatory power of economics by providing it with a more realistic psychological foundation.
  - better predictive power of economic phenomena
  - better policy advice
  - better understanding of human behavior in general

- Deviations from the standard model
  - Boundedly rational behavior
    - Heuristics, rules of thumb, learning, imitation, non exponential discounting (time inconsistent behavior)
  - Non-standard preferences
    - Social preferences (reciprocity, trust, inequity aversion, envy)
    - Loss aversion
Experimental economics

• Progress of behavioral economics closely related to the use of experiments
• Allow tight control and a direct test of basic assumptions about rationality and preferences
• Can also be used in labor economics contexts

• On methods, advantages and objections, see Experimental Economics slides
## Data sources in economics

<table>
<thead>
<tr>
<th>Happenstance</th>
<th>Experimental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Field</strong></td>
<td><strong>GDP</strong></td>
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<tr>
<td>Inflation</td>
<td>Field experiments</td>
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<tr>
<td><strong>Lab</strong></td>
<td>Discovery of Penicillin</td>
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<td></td>
<td>Lab experiments</td>
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The essence of experiments: Control

• Environment:
  – Preferences, technology, and initial endowments
  – Controlled by using monetary rewards

• Institution (rules of the game):  
  – Possible actions
  – Sequence of actions
  – Information conditions
    • Experiments usually define an extensive or normal form game
  – Framing (language, story)
Control...

- Experimenter knows what is exogenous and what is endogenous
  - No (?) causality problems: Treatments allow implementation of the ceteris condition
- Few unobservable variables
- Experimenter controls information conditions
  - Important for study of, e.g., asymmetric info games
- Experimenter knows the theoretical equilibrium
  - Equilibrium and disequilibrium can explicitly observed
  - Quick and sticky adjustment can be observed and examined
Control...

- Evidence is replicable
  - Experimenter controls the conditions under which evidence is generated
  - Those who question results can replicate the experiment
Internal and external validity

• Internal validity: Do the data permit causal inferences?
  – Internal validity is a matter of proper experimental controls, experimental design, and data analysis.

• External validity: Can we generalize our inferences from the laboratory to the field?
External validity raises two questions

- **Isomorphism**: are the relevant conditions in the experiment and in the “real” world similar? (also called: Parallelism)
  - The honest skeptic who challenges the external validity of an experiment has to argue that the experiment does not capture important conditions that prevail in reality
  - Response: Try to implement the neglected conditions

- **Induction**: Will behavioral regularities persist in new situations as long as the relevant underlying conditions remain substantially unchanged?
Induction

• You observe the sun rise every morning for 50 years. Yet, deductive logic does not imply that the sun will rise again tomorrow morning. Despite this most people believe that it will rise again. This act of faith is called induction.

• No experiment, in fact no empirical result whatsoever can prove that under the same circumstances the same will happen again.

• Yet, if an experiment implements certain conditions that generate robust and replicable regularities, we can have faith that the same regularities will occur in reality given that the conditions are met.
General Remark

• Whether the conditions implemented in the laboratory are also present in reality will always be subject to some uncertainty
• Therefore, laboratory experiments are no substitute
  – for the analysis of field happenstance data
  – for the conduct and the analysis of field experiments
  – and for survey data
• This calls for a combination of all these empirical methods
Frequent objections against experiments
(see Falk/Fehr, Labour Economics 2003)

- *Experiments are unrealistic*
- Most economic models are unrealistic in the sense that they leave out many aspects of reality.
- However, the simplicity of (a model or) an experiment is often a virtue because it enhances our understanding of the interaction of relevant variables.
- Whether realism is important depends on the purpose of the experiment. Often the purpose is to test a theory or understanding the failure of a theory. Then the evidence is important for theory building but not for a direct understanding of reality.
Comments on realism

• Ch. Plott (JEL 1982, p. 1509): “The art of posing questions rests on an ability to make the study of simple special cases relevant to an understanding of the complex. General theories and models by definition apply to all special cases. Therefore, general theories and models should be expected to work in the special cases of laboratory markets. As models fail to capture what is observed in the special cases, they can be modified or rejected in light of experience. The relevance of experimental methods is thereby established”.
• Ch. Plott (JEL 1982, p. 1482): “While laboratory processes are simple in comparison to naturally occurring processes, they are real processes in the sense that real people participate for real and substantial profits and follow real rules in doing so. It is precisely because they are real that they are interesting.”
Objections continued

• Experiments are artificial, because
  – of subject pool bias (students)
  – low stakes
  – small number of participants
  – inexperienced subjects

• This is no fundamental objection
  – Use other subjects, e.g.,: (Fehr et al., JLE 1998: soldiers; Cooper et al. AER 1999: managers)
  – Increase the stake level, e.g.,: (Holt/Laury, AER 2002; Cameron, JRU 1999)
  – Increase the number of participants, e.g.,: (Isaac and Walker, J.Pub.E 1990; Bellemare/Kröger 2003)
  – Recruit experienced participants, e.g.,: (Kagel/Levin, AER 1986)
**Limits of experiments**

- **Control is never perfect**
  - Weather, laboratory environment
  - Self-selection: who takes part in the experiment?

- **Experiments compared to theory**
  - Experiments are never general, just an example
  - No comparative static or simple change of assumptions etc.

- **Experiments compared to field studies**
  - Can all preferences be induced? For example:
    - Time preference (an experiment lasts 2 hours)
    - Disutility of labor (just a number, i.e., monetary equivalent? See “real” effort experiments)