Experimental Economics

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Course description

This course is an introduction to experimental economics: its methods and some recent applications. In each class, we will study a different topic and illustrate the different experimental techniques employed. Students will participate in a series of experiments and will acquire hands on experience designing and running an experiment in their area of interest. The class will cover experiments on risk and time preferences, trust, collective action, social preferences and norms, gender, and market behavior. We will also discuss the advantages and disadvantages of different tools, including brain imaging, traditional laboratory experiments, and field experiments. We will concentrate on how different experimental designs complement each other and allow researchers to isolate potential explanations for a given behavior. As part of the course, we will learn how to program in zTree, a software program particularly useful for running laboratory experiments that require interaction between subjects.

Course organization

Each class is divided into a discussion session and a lab session. During the discussion, we will cover important sections of the experimental economics literature and run short experiments to acquire hands on experience and understand the experiment from the subjects' perspective. During the lab session, we will learn how to design and program a computerized experiment using zTree. By the end of the course students will be capable of designing and running a complex experiment.

Course requirements and grading

This course is open to all doctoral students with basic knowledge of microeconomics and game theory. There are a few assigned readings per class. Grading will be based on a term paper due two weeks after the last class. The paper should be around 5 to 10 double-spaced pages long and should propose an experimental design that answers an interesting research question. The paper should include a literature review and an introduction motivating the experiment.

Course topics

Below are the topics that will be covers in each class and the assigned readings. At the end of each class, a complete list of the discussed papers and additional suggestions for further reading will be provided.

Readings applicable to the whole course

Bardsley, Nicholas, Robin Cubitt, Graham Loomes, Peter Moffatt, Chris Starmer, and Robert Sugden. 2010. *Experimental Economics: Rethinking the Rules*. Princeton, NJ: Princeton University Press.

Fischbacher, Urs. 2007. "z-Tree: Zurich Toolbox for Ready-made Economic Experiments." *Experimental Economics* 10 (2): 171–178.

Economics as an experimental science

In this class, we will discuss the use of experiments as a research method and the strengths and weaknesses of different experimental approaches.

Camerer, Colin F. 2011. "The Promise and Success of Lab-Field Generalizability in Experimental Economics: A Critical Reply to Levitt and List." SSRN Electronic Journal.

Falk, Armin, and James J Heckman. 2009. "Lab Experiments Are a Major Source of Knowledge in the Social Sciences." *Science* 326 (5952): 535–8.

Levitt, Steven D, and John A List. 2007. "What Do Laboratory Experiments Measuring Social Preferences Reveal About the Real World?" *Journal of Economic Perspectives* 21 (2): 153–174.

Individual decision-making

Here, we will cover some of the experimental literature on risk preferences (including prospect theory), time preferences, and belief updating.

Charness, Gary, and Dan Levin. 2005. "When Optimal Choices Feel Wrong: A Laboratory Study of Bayesian Updating, Complexity, and Affect." *American Economic Review* 95 (4): 1300–1309.

Frederick, Shane, George Loewenstein, and Ted O'donoghue. 2002. "Time Discounting and Time Preference: A Critical Review." *Journal of Economic Literature* 40 (2): 351–401.

Holt, Charles A, and Susan K Laury. 2002. "Risk Aversion and Incentive Effects." *American Economic Review* 92 (5): 1644–1655.

Markets and the strategic environment

In this class, we will see how institutions, in particular markets, mitigate or multiply individual-level "anomalies".

Camerer, Colin F, and Ernst Fehr. 2006. "When Does 'Economic Man' Dominate Social Behavior?" *Science* 311 (5757): 47–52.

Goeree, Jacob K, and Charles A Holt. 2001. "Ten Little Treasures of Game Theory and Ten Intuitive Contradictions." *American Economic Review* 91 (5): 1402–1422.

Social preferences and norms

Here, we will discuss theoretical models of social preferences/norms and how they have been tested in various experiments.

Fehr, Ernst, and Klaus M Schmidt. 2006. "The Economics of Fairness, Reciprocity and Altruism--Experimental Evidence and New Theories." In *Handbook on the Economics of Giving, Reciprocity and Altruism*, edited by Serge C Kolm and Jean M Ythier, 615–691. Amsterdam: Elsevier.

Bicchieri, Cristina, and Ryan Muldoon. 2011. "Social Norms." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta.

Trust

In this class, we will discuss the well-known trust game and the main motivations for both being trusting/mistrusting and acting in a trustworthy/untrustworthy manner.

Bohnet, Iris, and Richard Zeckhauser. 2004. "Trust, Risk and Betrayal." *Journal of Economic Behavior & Organization* 55 (4): 467–484.

Charness, Gary, and Martin Dufwenberg. 2006. "Promises and Partnership." *Econometrica* 74 (6): 1579–1601.

Charness, Gary, and Martin Dufwenberg. 2011. "Participation." *American Economic Review* 101 (4): 1211–1237..

Labor markets and fairness

Here, we will cover the literature on the effects of social preferences on labor market outcomes.

Fehr, Ernst, Lorenz Goette, and Christian Zehnder. 2009. "A Behavioral Account of the Labor Market: The Role of Fairness Concerns." *Annual Review of Economics* 1 (1): 355–384.

Public good games and cooperation

Here, we will discuss social dilemmas and the different reasons people cooperate. We focus on the effects of conditional cooperation, peer punishment, and communication.

Chaudhuri, Ananish. 2010. "Sustaining Cooperation in Laboratory Public Goods Experiments: a Selective Survey of the Literature." *Experimental Economics* 14 (1): 47–83.

Fehr, Ernst, and Simon Gächter. 2002. "Altruistic punishment in humans." Nature 415: 137–140.

Herrmann, Benedikt, Christian Thöni, and Simon Gächter. 2008. "Antisocial Punishment Across Societies." Science 319 (5868): 1362–1367.

Institution formation

In this class, we will continue with experimental literature that investigates the conditions under which institutions that promote cooperation are implemented.

Bó, Pedro Dal, Andrew Foster, and Louis Putterman. 2010. "Institutions and Behavior: Experimental Evidence on the Effects of Democracy." *American Economic Review* 100 (5): 2205–2229.

Kosfeld, Michael, Akira Okada, and Arno Riedl. 2009. "Institution Formation in Public Goods Games." *American Economic Review* 99 (4): 1335–1355.

Gender

In this class, we will discuss the experimental literature on gender differences. In particular, differences in risk taking, altruism, and competitiveness.

Croson, Rachel, and Uri Gneezy. 2009. "Gender Differences in Preferences." *Journal of Economic Literature* 47 (2) (May): 448–474.

Niederle, Muriel, and Lise Vesterlund. 2011. "Gender and Competition." *Annual Review of Economics* 3 (1): 601–630.