

Experimental and Behavioral Economics

Ernst Fehr
University of Zürich and MIT

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This course provides an introduction into the techniques of experimental economics and applies these techniques to important research questions in different fields of economics. At the end of the course students should be able to design and run their own experiments examining their preferred questions. I assume that students have a basic knowledge of microeconomic theory and game theory at the level of, for example, Hal Varian's advanced textbook on "Microeconomic Analysis" and Robert Gibbons' textbook on "Game Theory for Applied Economists". Course requirements are Micro I (14.121) and Micro II (14.122). The course consists of 12 lectures. It will take place every Wednesday from 4-7 p.m. between 10 September and 15 October 2003.

During the weeks of this course there will also be the opportunity to attend a mini-course (2-3 half-days) on the programming of experiments. The currently dominant software for the programming of experiments is z-TREE, which has been developed by Dr. Urs Fischbacher. The mini-course by Dr. Fischbacher will probably take place on 9-10 October.

Below you will find a short outline of the course and a preliminary reference list. **I strongly recommend to the students to read the articles with an asterisk.**

- Lecture 1&2: Introduction to the methods, objectives, advantages and limitations of laboratory experiments
- Lecture 3: Competitive Experimental Markets
- Lecture 4: Bargaining Behavior
- Lecture 5: Fairness and Competition
- Lecture 6: Voluntary Cooperation and Public Goods Provision
- Lecture 7: Enforcement of Social Norms
- Lecture 8: Theories of Fairness and Reciprocity
- Lecture 9: Behavioral Economics of Incentives and Contracts I
- Lecture 10: Behavioral Economics of Incentives and Contracts II
- Lecture 11: Loss Aversion and Labor Supply
- Lecture 12: The Economics of Money Illusion

Lecture 1 & 2: Methods, Objectives, Advantages and Limitations of Laboratory Experiments

Davis, Douglas and Holt, Charles (1993); *Experimental Economics*, Princeton University Press, Princeton, New Jersey: Chapter 1, Introduction and Overview

Roth, Alvin E. (1988); "Laboratory Experimentation in Economics: A Methodological Overview", *Economic Journal*, Vol. 98, 974-1031.

*Smith, Vernon L. (1989); "Theory, Experiment and Economics", *Journal of Economic Perspectives*, Vol. 3, No. 1, 151-169.

Smith, Vernon L. (1994); "Economics in the Laboratory", *Journal of Economic Perspectives*, Vol. 8, No. 1, 113-131.

*Smith, Vernon L. (1976); "Experimental Economics: Induced Value Theory", *American Economic Review*, Vol. 66, 274-279.

Lecture 3: Competitive Experimental Markets

*Davis, Douglas and Holt, Charles (1993); *Experimental Economics*, Princeton University Press, Princeton, New Jersey: Chapter 3 (Double Auction Markets) and Chapter 4 (Posted Offer Markets).

Smith, Vernon L. and Williams, Arlington W. (1990); "The Boundaries of Competitive Price Theory: Convergence Expectations and Transaction Costs", in: L. Green and J. H. Kagel (eds.), *Advances in Behavioral Economics*, Vol. 2, Ablex Publishing Corporation, Norwood, New Jersey.

*Roth, Alvin E. and Prasnikar, Vesna and Okuno-Fujiwara, Masahiro and Zamir, Shmuel (1991); "Bargaining and Market Behavior in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: An Experimental Study", *American Economic Review*, vol. 81, 1068-95.

Lecture 4: Bargaining Behavior

- *Roth, Alvin E. (1995); "Bargaining Experiments", In: Kagel, John H. and Roth, Alvin E. (Eds.) *Handbook of Experimental Economics*, Princeton University Press, Princeton, New Jersey.
- Bolton, G. and Zwick, R. (1995); „Anonymity versus Punishment in Ultimatum Bargaining“, *Games and Economic Behavior*, Vol. 10, No. 1, 95-121
- Cameron, Lisa (1999); "Raising the Stakes in the Ultimatum Game: Experimental Evidence from Indonesia", *Economic Inquiry*, Vol. 37, No. 1, 47-59
- Abbink, Klaus, Bolton, Gary E., Sadrieh, Abdolkarim, Fang-Fang Tang (2001); "Adaptive Learning versus Punishment in Ultimatum Game Bargaining", *Games and Economic Behavior*, Vol. 37, 1-25.
- *Henrich, Joseph, Rob Boyd, Sam Bowles, Colin Camerer, Ernst Fehr, Herb Gintis, and Richard McElreath (2001); "In Search of Homo Economicus - Behavioral Experiments in 15 Small Scale Societies", *American Economic Review (Papers and Proceedings)* 91 73-78.

Lecture 5: Fairness and Competition

- Agell, Jonas and Lundberg, Per (1995); "Theories of Pay and Unemployment: Survey Evidence from Swedish Manufacturing Firms", *Scandinavian Journal of Economics*, vol. 97, 295-308.
- *Akerlof, George A. and Yellen, Janet L. (1988); "Fairness and Unemployment", *American Economic Review (P&P)*, vol. 78, 44-49.
- Bewley, Truman F.(1995); "A Depressed Labor Market as Explained by Participants", *American Economic Review, Papers and Proceedings*, vol. 85, 250-254.
- Fehr, Ernst and Kirchsteiger, Georg and Riedl, Arno (1993); "Does Fairness prevent Market Clearing? An Experimental Investigation", *Quarterly Journal of Economics*, Vol. 108, Issue 2, 437-460
- *Fehr, Ernst and Armin Falk (1999); "Wage Rigidity in a Competitive Incomplete Contract Market, *Journal of Political Economy*, Vol. 107, No. 1, 106-134.
- Kahneman, Daniel, Jack L. Knetsch, and Richard Thaler, 1986. "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *American Economic Review* LXXVI, 728-41.

Lecture 6: Voluntary Cooperation and Public Goods Provision

- *Ledyard John (1995); "Public Goods: A Survey of Experimental Research", In: Kagel, John H. and Roth, Alvin E. (Eds.) *Handbook of Experimental Economics*, Princeton University Press, Princeton, New Jersey.
- Frank, Robert H., Gilovich, Thomas and Regan, Dennis T. (1993); "Does Studying Economics Inhibit Cooperation?", *Journal of Economic Perspectives*, Vol. 7, No. 2, 159-171.
- Fischbacher, Urs, Simon Gächter and Ernst Fehr (2001); "Are people conditionally cooperative? Evidence from a public goods experiment", *Economics Letters*, Vol. 71, 397-404.
- Chen, Yan and Plott, Charles (1996); "The Groves-Ledyard Mechanism: An Experimental Study of Institutional Design", *Journal of Public Economics*, Vol. 59, 335-364.
- Falkinger Josef, Fehr Ernst, Gächter Simon and Winter-Ebmer Rudolf (2000); "A Simple Mechanism for the Efficient Provision of Public Goods - Experimental Evidence", *American Economic Review* 90 (2000), 247-264.

Lecture 7: Enforcement of Social Norms

- Holländer, Heinz (1990); "A Social Exchange Approach to Voluntary Cooperation", *American Economic Review*, Vol. 80, 1157-1167.
- Dufwenberg, M. and Lundholm, M. (2001); "Social Norms and Moral Hazard", *Economic Journal* 111, 506-525.
- Ellison, G. (1994); "Cooperation in the Prisoner's Dilemma with Anonymous Random Matching", *Review of Economic Studies* 61, 567-588.
- Kandel, Eugene and Edward Lazear (1992); "Peer Pressure and Partnerships", *Journal of Political Economy* 100, 801-817.
- Kandori, M. (1992); "Social Norms and Community Enforcement", *Review of Economic Studies* 59, 63-80.
- *Fehr, Ernst and Simon Gächter (2000); "Cooperation and Punishment in Public Goods Experiments", *American Economic Review* 90, 980-994.
- Falk, Armin, Ernst Fehr and Urs Fischbacher (2003); "Driving Forces of Informal Sanctions – Fairness, Spite and Reputation", *Institute for Empirical Research in Economics*, University of Zürich, Working Paper No. 59.

Lecture 8: Theories of Fairness and Reciprocity

- Bolton, Gary and Axel Ockenfels (1999); "A Theory of Equity, Reciprocity, and Competition", forthcoming: *American Economic Review* 100: 166-193
- Charness Gary and Matthew Rabin (2002); "Understanding Social Preferences with Simple Tests", *Quarterly Journal of Economics* 117: 817-869.
- Dufwenberg, Martin and Georg Kirchsteiger (1999); "A Theory of Sequential Reciprocity", Discussion Paper, CentER, Tilburg University.
- Falk, Armin and Urs Fischbacher (1999); "A Theory of Reciprocity", Working paper No. 6, Institute for Empirical Research in Economics, University of Zürich.
- Fehr, Ernst and Klaus Schmidt (1999); "A Theory of Fairness, Competition and Cooperation", *Quarterly Journal of Economics* 114: 817-868.
- Fehr, Ernst and Klaus Schmidt (2003); "Theories of Fairness and Reciprocity – Evidence and Economic Applications", In: M. Dewatripont, L. Hansen and St. Turnovsky (Eds.), *Advances in Economics and Econometrics – 8th World Congress*, Econometric Society Monographs, Cambridge, Cambridge University Press
- Levine, David (1998); "Modeling Altruism and Spitefulness in Experiments" *Review of Economic Dynamics* 1: 593-622.
- Rabin, Matthew (1993); "Incorporating Fairness into Game Theory and Economics." *American Economic Review* 83: 1281-1302.

Lecture 9: Behavioral Economics of Incentives and Contracts I

- Church, A. H. (1993); "Estimating the Effects of Incentives on Mail Survey Response Rates: A Meta-Analysis", *Public Opinion Quarterly* 57: 62-79.
- Deci, E. L. (1971); "The Effects of Externally Mediated Rewards on Intrinsic Motivation", *Journal of Personality and Social Psychology* 18, 105-115.
- *Fehr, Ernst and Armin Falk (2002); "Psychological Foundations of Incentives", *European Economic Review* 46: 687 - 724.
- Fehr, Ernst and Simon Gächter (1998); "How Effective are Trust- and Reciprocity-Based Incentives", In: A. Ben-Ner, L. Putterman (Eds.), *Economics, values and organization*, Cambridge University Press
- Fehr, Ernst and John List (2002); *The Hidden Costs and Returns of Incentives – Trust and Trustworthiness among CEOs*, Institute for Empirical Research in Economics, University of Zürich, Working Paper No. 134
- Gneezy, U. and Rustichini, A., 2000a. A Fine is a Price. *Journal of Legal Studies* 29, 1-17.
- Gneezy, U. and Rustichini, A., 2000b. Pay Enough or Don't Pay at All. *Quarterly Journal of Economics* 115(2), 791-810.
- James, J. H. and Bolstein, R. (1992); Large Monetary Incentives and their Effects on Mail Survey Response Rates. *Public Opinion Quarterly* 56, 442-453.
- Lepper, M.R., Greene, D. and Nisbet, R. E. (1973); Undermining Children's Intrinsic Interest with Extrinsic Rewards: A Test of the "Over Justification" Hypothesis. *Journal of Personality and Social Psychology* 28, 129-137.

Lecture 10: Behavioral Economics of Incentives and Contracts II

- Baker, G., Gibbons, R. and Murphy K. J. (1994): "Subjective Performance Measures in Optimal Incentive Contracts", *Quarterly Journal of Economics* 109, 1125-56.
- Banerjee, A. Duflo, E. (2000): "Reputation Effects and the Limits of Contracting: A Study of the Indian Software Industry", *Quarterly Journal of Economics* CXV, 989-1017.
- Brown, M., Falk, A. and Fehr, E. (2001); "Incomplete Contracts and the Nature of Market Interactions", *Institute for Empirical Research in Economics, Working Paper No. 38*, University of Zurich.
- Bull, C. (1987): "The Existence of Self-Enforcing Implicit Contracts" *Quarterly Journal of Economics* 102, 147-159.
- Fehr, E., Klein, A. and Schmidt, K. M. (2001); „Fairness, Incentives and Contractual Incompleteness", *Institute for Empirical Research in Economics, Working Paper No. 72*, University of Zurich.
- Kollock, P. (1994): "The Emergence of Exchange Structures: An Experimental Study of Uncertainty, Commitment, and Trust", *American Journal of Sociology* 100, 313-45.
- MacLeod W. B. and Malcomson, J. M. (1998): "Motivation and Markets", *American Economic Review* 88, 388-411.

Lecture 11 Loss Aversion and Labor Supply

- Browning, Martin, Angus Deaton and Margaret Irish (1985); "A Profitable Approach to Labor Supply and Commodity Demands over the Life-Cycle", *Econometrica* 53: 503-543.
- Camerer, Colin, Linda Babcock, George Loewenstein and Richard Thaler (1997); "Labor Supply of New York City Cabdrivers: One Day at a Time", *Quarterly Journal of Economics* 112: 407-41.
- *Card, David (1994), Intertemporal Labor Supply: An Assessment. In: Christopher Sims (Ed.), *Advances in Econometrics: Sixth World Congress of the Econometric Society, Vol. II*, 49 – 78.
- Ernst Fehr and Lorenz Goette (2002); „Do Workers work more if Wages are high? – Evidence from a Randomized Field Experiment“, *Working paper No. 125*, *Institute for Empirical Research in Economics, University of Zürich*.
- Oettinger, Gerald S. (1999): "An Empirical Analysis of the Daily Labor Supply of Stadium Vendors", *Journal of Political Economy* 107: 360-92.

Lecture 12: The Economics of Money Illusion

- Lucas, Robert E. Jr. (1996); "Nobel Lecture: Monetary Neutrality", *Journal of Political Economy*, Vol. 104, 661-682.
- Bernanke, Ben S. and Carey, Kevin (1996); "Nominal Wage Stickiness and Aggregate Supply in the Great Depression", *Quarterly Journal of Economics*, Vol. CXI, 853-884.
- *Shafir, Eldar and Diamond, Peter and Tversky, Amos (1997); "Money Illusion", *Quarterly Journal of Economics*, Vol. 112, No. 449,
- Akerlof, George and Dickens, William T. and Perry George L. (1996); "The Macroeconomics of Low Inflation", forthcoming in: *Brookings Papers on Economic Activity*.
- Fehr, Ernst and Tyran, Jean Robert (2001); "Does Money Illusion Matter?" *American Economic Review* 91, 1239-1262.
- Fehr, Ernst and Tyran, Jean Robert (2002); *Limited Rationality and Strategic Interaction*, *Institute for Empirical Research in Economics, University of Zürich, Working Paper No. 130*.