

**Discipline:** [Management]

**1. Language**

English

**2. Title**

Experimental Research and Behavioral Decision Making

**3. Lecturer**

Prof. Dr. René Fahr (Paderborn University)

Dr. Behnud Mir Djawadi (Paderborn University)

**4. Date and Location**

28-31 March 2022

Paderborn University

Warburger Strasse 100

33098 Paderborn

The first session of the course and the exercises for otree will take place in the experimental laboratory in room Q2.203. The rooms for the lectures and presentations will be announced no later than 2 weeks before the start of the course.

**5. Course Description**

5.1 Abstract and Learning Objectives

Concepts in behavioral economics such as loss aversion, anchoring, overconfidence and reciprocity are increasingly used to explain deviations from rational behavior in economic decisions. In this PhD course, basic models of behavioral economics and theories used to explain behavior that differs from standard economic assumptions are presented and imparted based on experimental studies. For this purpose, the essential methodological foundations of experimental economic research are first introduced, anchored in scientific theory, and delimited from experimental research of neighboring disciplines. In the further course, experimental studies in particular from the fields of economics and management research will be extensively reviewed and discussed in order to present the concepts of behavioral economics, their advancement to explain economic decisions and their wide applications in policies and programs. In order

to directly apply the acquired knowledge, the participants will elaborate in small groups a research question to which they develop their own experimental design, write instructions and derive potential predictions about the behavioral outcome. Each group will present their work in plenary on the last day of the course. Along with lectures about behavioral and experimental research, there will be an introduction to programming with oTree within several tutorials. The lectures about oTree will give participants a fine overview and first experience with the programming language that is expected to be extremely helpful in programming experiments for future experimental studies in the PhD career.

## 5.2 Content

The first day of the course is dedicated to the method of experimental economics where the fundamentals will be taught in several interactive lectures. By following this procedure, participants already gain sufficient knowledge at the end of the day in order to start working on their own experimental design within their assigned groups. In the second and third day there will be lectures in the morning and programming exercises in the afternoon. More specifically, the second day starts with a best practice session on selected topics such as how to write instructions, what is needed for smooth experimental procedure in the lab, what tasks can be used for real-effort experiments, what simple tools exist to measure risk preferences etc. In all further lectures, emphasis is laid on selected topics of behavioral economics. In the according morning lecture, research is presented and discussed that show individuals to have preferences other than assumed by standard economic choice theory, such as fairness, reciprocity and trust. In the afternoon, there will be first tutorials in the programming language oTree. The format of this exercise is to give participants opportunities to actively program as much as possible. To achieve this goal, participants will be introduced stepwise into the components of this programming language and asked to apply their skills on programming a simple laboratory experiment. In the first afternoon session participants will get to know the program language of Python which is essential in order to program experiments in oTree. About one month before the course participants will receive reading materials about Python so that at the start of the afternoon participants already have some knowledge about this programming language and - with guidance of the course instructors - are able to program some smaller tasks on their own. The basic concepts of oTree will also be explained in these two sessions. The third day starts with a lecture that presents concepts of behavioral economics concerning individual decision-making under risk. In particular, violations of expected utility theory will be discussed and behavioral models such as prospect theory and mental accounting are presented in more detail. The subsequent lecture about overconfidence shows to what extent individuals have a biased way of looking at a situation, misjudge beliefs and abilities, and have more confidence than one should given the objective parameters of the situation. In the afternoon, the lessons in otree continue with basic/advanced concepts and participants will be asked to program real laboratory experiments. The contents of the final day center around the topics of management research and policy making, presenting how experiments and behavioral concepts can be used to address important research questions in management and show their implications -for example in form of nudges- for public policy. After the lunch break, each group presents their work on their experiment idea to the audience. On request, we will establish an additional slot on that day in which participants can present their ongoing experimental research and receive feedback from the audience and the instructors of the course. At the end of each of the first three days, participants are expected to gather in groups of three to elaborate their own experiment which includes setting up a research question, thinking of an appropriate experimental design, deriving (behavioral) hypotheses to be tested and writing the instructions of the experiment. The contents are expected to be summarized on presentation slides and the instructions written in a separate document that can be handed out to the audience when presenting the experimental design.

### 5.3 Schedule (including start and end time)

Time	Monday (28-Mar-2022)	Tuesday (29-Mar-2022)	Wednesday (30-Mar-2022)	Thursday (31-Mar-2022)
09:30 - 11:00	Introduction to Experimental Economics (Lab)	Best-Practice for conducting Experimental Research	Decision Making under Risk (VO)	Management & Implications (VO)
<b>11:00</b> - <b>11:15</b>	<b>Coffee break</b>			
11:15 - 12:45	Fundamentals of Experimental Economics I (VO)	Other-regarding preferences (Ü, Lab)	Judgement Biases & Overconfidence (VO)	Policy & Behavioral Economic Engineering (VO)
<b>12:45</b> - <b>13:45</b>	<b>Lunch break</b>			
13:45 - 15:15	Fundamentals of Experimental Economics II (VO)	Programming in oTree (Ü, Lab)	Programming in oTree (Ü, Lab)	Presentations of group work
<b>15:15</b> - <b>15:30</b>	<b>Coffee break</b>			
15:30 - 17:00	Fundamentals of Experimental Economics III (VO)	Programming in oTree (Ü, Lab)	Programming in oTree (Ü, Lab)	Presentations of group work
<i>From 17:00</i>	<i>Working on own experimental ideas in small groups</i>	<i>Working on own experimental ideas in small groups</i>	<i>Working on own experimental ideas in small groups</i>	<i>Presentations of own ongoing experimental research projects</i>

Lab: Session in the experimental laboratory (BaER-Lab: Q2.203), VO: Vorlesung (Lecture), Ü: Übung (Exercise)

### 5.4 Course format

The course will consist of lectures, exercises, group work, and on the final day of presentations. The lectures are not meant to only teach the contents in a fixed style, rather discussions and interactions on any part of the lectures are mostly welcome. The exercises in oTree will be taught in an applied manner, so that after these few slots, participants will get a decent understanding of oTree that will provide good starting conditions in programming their own experiments in the future. At the end of each of the first three days, participants are asked to get together in groups of at most three in order to elaborate their experimental ideas. The groups will be arranged shortly after the lunch break at the first day. Presenting the joined work to the audience on the last day constitutes the exam upon which 6 ECTS can be earned. If requested, an additional slot will be installed in which participants can present their ongoing

experimental project. To grant a spot in that slot, please get in contact with one of the instructors before the start of the course and be prepared to have your project concisely documented on presentation slides. Lectures are based on classical as well as recent journal articles and working papers. The course will be held in English on demand.

## 6. Preparation and Literature

### 6.1 Prerequisites

Participants should hold a Master's degree in business, economics, or psychology. A basic knowledge in microeconomics and game theory is desirable, but not necessarily required for successfully participating in the course.

### 6.2 Essential Reading Material

The essential reading material should necessarily be read before the course in order to beneficially follow the contents of the lecture and exercise during the compressed course time.

Camerer, C. F. (2005): Three Cheers - Psychological, Theoretical, Empirical - for Loss Aversion. In: *Journal of Marketing Research*, Vol. 42 (2): 129–133.

Falk, A. and Kosfeld, M. (2006): The Hidden Costs of Control. In: *The American Economic Review*, Vol. 96 (5): 1611-1630.

Hausman, D. M. and Welch, B. (2010): Debate: To Nudge or Not to Nudge. In: *The Journal of Political Philosophy*, Vol. 18 (1): 123–136.

Hoelzl, E., and Rustichini, A. 2005: Overconfident: Do You Put Your Money On It? In: *The Economic Journal*, Vol. 115(503): 305–318.

Shaked, A. and Binmore, K. (2010): Experimental Economics: Where next? *Journal of Economic Behavior & Organization*, Vol.73 (1): 87-100.

Weimann, J. and Brosig-Koch, J. (2019): *Methods in Experimental Economics*. Springer: Springer Texts in Business and Economics, Berlin. Chapters 1 and 3 [will be scanned and sent to participants]

### 6.3 Additional Reading Material

Abeler, J., Becker, A. and Falk, A. (2014): Representative evidence on lying costs. In: *Journal of Public Economics*, Vol. 113: 96–104.

Bartuli, J., Mir Djawadi, B. and Fahr, R. (2016): *Business Ethics in Organizations: An Experimental Examination of Whistleblowing and Personality*. IZA Bonn (IZA Discussion Paper, 10190).

Bazerman, M. H. and Gino, F. (2012): Behavioral Ethics: Toward a Deeper Understanding of Moral Judgment and Dishonesty. In: *The Annual Review of Law and Social Science*, Vol 8: 85–104.

Benartzi, S. and Thaler, R. H. (1999): Risk Aversion or Myopia? Choices in Repeated Gambles and Retirement Investments. In: *Management Science*, Vol. 45 (3): 364–381.

Ben-Ner, A and Kramer, A. (2011): Personality and altruism in the dictator game: Relationship to giving to kin, collaborators, competitors, and neutrals. In: *Personality and Individual Differences*, Vol. 51: 216–221.

Berg, J., Dickhaut, J. and McCabe, K. (1995): Trust, Reciprocity, and Social History. In: *Games and Economic Behavior*, Vol. 10 (1): 122–142.

Bolton, G. E. and Ockenfels, A. (2000): ERC: A Theory of Equity, Reciprocity, and Competition. In: *The American Economic Review*, Vol. 90 (1): 166–193.

Camerer, C.F. (2003): *Behavioral Game Theory – Experiments in Strategic Interaction*. Princeton University Press, Princeton.

Camerer, C.F. and Malmendier, U. (2007): "Behavioral organizational economics." *Behavioral Economics and Its Applications*. Princeton University Press, Princeton and Oxford.

Croson, R. (2002): Why and How to Experiment: Methodologies from Experimental Economics. In: *University of Illinois Law Review*, Vol. 2002 (4): 921–945.

Croson, R. (2005): The Method of Experimental Economics. In: *International Negotiation*, Vol. 10 (1): 131–148.

Croson, R. and Gächter, S. (2010): The Science of Experimental Economics. In: *Journal of Economic Behavior and Organization*, Vol. 73 (1): 122–131.

Dana, J., Weber, R. A. and Kuang, J. X. (2007): Exploiting moral wiggle room: experiments demonstrating an illusory preference for fairness. In: *Economic Theory*, Vol. 33: 67–80.

Dhami, S. (2016): *The Foundations of Behavioral Economic Analysis*. Oxford: Oxford University Press.

Engelmann, D. and Strobel, M. (2004): Inequality Aversion, Efficiency, and Maximin Preferences in Simple Distribution Experiments. In: *The American Economic Review*, Vol. 94 (4): 857–868.

Falk, A. and Heckman, J.J. (2009): Lab Experiments are a major Source of Knowledge in the Social Sciences. In: *Science*, Vol. 326 (5952): 535–538.

Fehr, E and; Schmidt, K. M. (1999): A Theory of Fairness, Competition, and Cooperation. In: *The Quarterly Journal of Economics*, Vol. 114 (3): 817–868.

Ferguson, E., and Heckman, J. (2011): Personality and economics: Overview and proposed framework. In: *Personality and Individual Differences*, Vol. 51: 201–209.

- Fischbacher, U. and Föllmi-Heusi, F. (2013): Lies in Disguise - An Experimental Study on Cheating. In: Journal of the European Economic Association, Vol. 11: 525–547.
- Friedman, D. and Sunder, S. (1994): Experimental Methods: A Primer for Economists. Cambridge University Press, Cambridge.
- Guala, F. (2005): The Methodology of Experimental Economics. Cambridge University Press, Cambridge.
- Gintis, H. (2011): Behavioral Ethics. In: E. Slingerland and M. Collard (eds.): Creating Consilience: Integrating the Sciences and the Humanities. Oxford: Oxford University Press: 318–333.
- Hertwig, R. and Ortmann, A. (2001): Experimental practices in economics: A method-logical challenge for psychologists? In: Behavioral and Brain Sciences, Vol. 24 (3): 383-451.
- Kagel, J. H. and Roth, A.E. (1997): The Handbook of Experimental Economics. Princeton University Press, Princeton. [Paperpack der Erstausgabe von 1995]
- Kahneman, D. and Tversky, A. (1979): Prospect Theory: An Analysis of Decision under Risk. In: Econometrica, Vol. 47 (2): 263–292.
- Kahneman, D., Knetsch, J. L. and Thaler, R. H. (1990): Experimental Tests of the Endowment Effect and the Coase Theorem. In: Journal of Political Economy, Vol. 98 (6): 1325–1348.
- Levitt, S.D. and List, J.A. (2007): What do laboratory experiments measuring social preferences tell us about the real world? In: Journal of Economic Perspectives, Vol. 21 (2):153–174.
- Mir Djawadi, B. and Fahr, R. (2015): "...and they are really lying": Clean evidence on the pervasiveness of cheating in professional contexts from a field experiment. In: Journal of Economic Psychology, Vol. 48: 48–59.
- Mir Djawadi, B., Fahr, R. and Turk, F. (2014): Conceptual Model and Economic Experiments to Explain Nonpersistence and Enable Mechanism Designs Fostering Behavioral Change. In: Value in Health, Vol. 17: 814–822.
- Plott, Charles and Vernon L. Smith (eds.) (2008): The Handbook of Experimental Economics Result. North-Holland, Amsterdam.
- Read, D., Loewenstein, G. and Rabin, M. (1999): Choice Bracketing. In: Journal of Risk and Uncertainty, Vol. 19 (1-3): 171–197.
- Shaked, A. and Binmore, K. (2010): Experimental Economics: Where next? Journal of Economic Behavior & Organization, Vol.73 (1): 87-100.
- Weimann, J. and Brosig-Koch, J. (2019): Methods in Experimental Economics. Springer: Springer Texts in Business and Economics, Berlin.

#### 6.4 To prepare

The essential reading material should be read before the start of the course. It is also expected that the participants have extensively dealt with the set of slides. The slides will be sent to the participants no later than two weeks before the start of the course. Reading materials about Python will be sent one month prior to the course. Participants are expected to have intensively dealt with these materials as this is a mandatory prerequisite to understand oTree and successfully manage the programming tasks in the exercises. All materials will be made accessible via Dropbox (<https://www.dropbox.com/>). Please ensure that you create an account at Dropbox in order to access our folder with the course materials. Registering

at Dropbox is free and the materials should not exceed the maximum capacity you will be entitled to with your free membership. The course includes a session to present own ongoing experimental research projects. Participants who would like to use this opportunity should get in contact with one of the instructors before the start of the course and prepare a short presentation about the project in advance.

## 7. Administration

### 7.1 Max. number of participants

The number of participants is limited to 20.

### 7.2 Assignments

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### 7.3 Exam

The exam consists of a twenty-minute group presentation about an own experimental idea which has been elaborated within a group of ideally three participants over the first three days of the course. In addition, a preliminary printed version of the instructions has to be made available to the audience in the presentation. The idea of the experiment may stem either from a modification of a discussed or known experiment or from a completely new "crazy" idea. Each group is asked to schedule enough time for the group work following each day of the course. 60% of the final grade will be based on the group work and the presentation, while oral participation in the lectures and exercises will be included in the final grade for the remaining 40%.

### 7.4 Credits

The course is eligible for 6 ECTS.

## 8. Working Hours

<b>Working Hours</b>	<b>hours</b>
<i>(z. B. Vorarbeiten / preparations: 30 h, aktive Mitarbeit / active participation: 100 h, Prüfungsvorbereitung / preparation for exam: 30 h, Prüfung / exam: 20 h ...)</i>	
<i>Preparations:</i>	130 h
<i>Active Participation:</i>	28 h
<i>Preparation for exam:</i>	18 h
<i>Exam:</i>	4 h
<b>TOTAL</b>	<b>180 h</b>
<b>ECTS: 6</b>	