

**COURSE MANUAL
ECONOMIC PSYCHOLOGY
SSC3033**

Bachelor course
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Period 2

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PART 1. INTRODUCTION

Increasingly, economists are discovering psychology as a means to enrich their models of economic behavior and well-being and to give them a better foundation. The importance of this is illustrated by the fact that Nobelprize winner in economics in 2002 was the distinguished psychologist Daniel Kahneman. He characterizes his research as a quest for the 'logic of the irrational'. Adam Smith already recognized that economic behavior is motivated by an intriguing combination of 'rational' considerations and 'irrational' sentiments. The great challenge is to investigate the implications of the latter motives for economics.

This course aims to give an intensive introduction into this field. Sessions 2-9 provide an overview of the psychology of judgment and decision making. Basic principles of rationality of decision-making are compared with actual behavior. There are important discrepancies between rational and actual behavior that are, however, not caused by random errors or mistakes but are due to automatic and deliberate thought processes. These processes influence how decision problems are conceptualized and how future possibilities in life are evaluated. Session 8 is a plenary lecture in which an overview of the first half of the course is given. Sessions 10 and 11 introduce further applications of how psychologic mechanisms influence economic decision-making in the field and their relevance for law and public policy. Session 12 is again a plenary lecture that summarizes the second part of the course.

Educational form

In altogether ten meetings, the literature is discussed on the basis of presentations by the students. In addition, there are two plenary lectures by the block coordinator. The ten regular sessions take place in a tutorial group of about ten to twelve participants. The success of the tutorial group sessions is totally dependent on the quality of the preparation by the students. Each participant should study the mandatory literature before attending the session.

One (or two) of the participants acts as a presenter and, more generally, as the manager of the whole session. He/she organizes the discussion during the session according to the following agenda:

1) In the first and second hour of the session, the session manager gives an interactive PowerPoint presentation on the subject of the session. For your presentation, it is important to form an opinion on the mandatory literature, to present additional material that you have found yourself and/or do an experiment, and to prepare critical questions or propositions for the sessions. Your presentation should incorporate interaction with the audience by bringing questions/propositions into discussion. As a consequence, the presentation including discussions may take almost the full two hours.

The presentation should consist of two parts:

Part A (about two thirds of the total presentation):

- a clear, coherent and structured survey of the main points of the literature,
- a discussion that relates the topic to earlier sessions and the course's overall subject,
- if applicable, a discussion of the differences or similarities between results and conclusions in the literature,

Part B (about one third of the total presentation):

- cases, examples, and/or an experiment with the tutorial group that illustrate the topics in the mandatory literature of the session (e.g., from the Internet, newspapers, magazines, journals, previous courses or your own experience).

Please think of two things: explain the cases, examples or experiment clearly to your fellow students and analyze them using the literature of the session. Since the literature does not give many applications to business practice (at least in the first part of the course), you may try to find such applications.

The presentation, therefore, should be considerably more than a summary of the literature (which everybody has read anyway). You should prepare PowerPoint slides and use them to support your presentation (a computer and a beamer will be available in the rooms).

The presentation slides have to be posted on the Student Portal before the session, so that other students can download it.

2) After about an hour there is a break of ten minutes, after which the presentation and discussions can continue.

3) After the presentation and discussions have finished, participants can ask questions about the presentation.

4) If there is still some time left, the group can discuss some remaining unclear points in the mandatory literature.

Before the session, when reading the literature, the session manager should prepare major questions and comments that can be discussed during or after the presentation in each session. Moreover, students who are not presenting in the particular session should also formulate questions and comments or propositions about the mandatory literature. This allows everyone to bring an issue in the literature that he/she thinks is important and that he/she doesn't understand or agree with to the attention of the group. Try to be creative in this. The formulation of questions and comments will contribute to a lively exchange of views about the literature. In this way, the success of a session depends not only on the presenter, but on the active involvement of all group members. Taking an active part in the group discussions constitutes everyone's participation, and is graded accordingly (see below).

The participants have to reveal their preference for a specific presentation. That is, each participant has to indicate in which of the group sessions (s)he is willing to present. Every participant has to give a presentation during the course. In the first session (e.g., after the break), the presentations will be allocated to group members. Therefore, everybody should be present in this first session.

The presentations start at the second session. If there happen to be more students than presentations, some presentations can be given by two students, but such a presentation should be more extensive and should go into more detail.

If there happen to be fewer students than presentations needed, some students should give two presentations. The additional presentations are given by two students jointly. For these students, the two presentations together will get a higher weight in the final grade (please see below the section on evaluation).

Overview of the block

The course consists of twelve sessions. The exact dates of the sessions will be fixed prior to the block and communicated in Session 1.

Session
1. Introduction to the course
2. Expected utility theory, thinking and deciding
3. Decision making and a general framework for judgment
4. Anchoring and judging heuristically
5. Explanation-based judgments and thinking (ir)rationally about uncertainty
6. Thinking rationally about inverse probabilities and evaluating consequences
7. Deliberate versus intuitive decision making and prospect theory
8. Plenary overview lecture
9. Applications of prospect theory, neuroscience, emotions and uncertainty
10. Behavioral law and economics: How to integrate insights about behavior into law and legal practice?
11. Self-control and economic decisions
12. Plenary overview lecture

Literature

Mandatory literature is given for each session. **Please read the guide to the mandatory literature prior to each session carefully.** The mandatory literature consists of:

- Reid Hastie and Robyn M. Dawes, 2010. *Rational Choice in an Uncertain World: The Psychology of Judgment and Decision Making*, 2nd ed., London: Sage Publications.
- Ch. 2 of Roberto Serrano and Allan M. Feldman, 2013. *A Short Course in Intermediate Microeconomics with Calculus*, Cambridge: Cambridge University Press.
- Sects. 17.0-3 of Jeffrey M. Perloff (2012, 6th ed.), *Microeconomics*, Amsterdam: Pearson, Addison Wesley.
- Ch. 5 of Colin F. Camerer, George Loewenstein, and Matthew Rabin (eds. 2004), *Advances in Behavioral Economics*, New York: Russell Sage Foundation.
- several journal articles and working papers (please see Part 2 of this course manual).

Students are advised to buy the main textbook of Hastie and Dawes (at Studystore). **Although the book gives a non-technical treatment of the issues involved and contains a lot of illuminating examples, it is not easy conceptually. Moreover, it contains some mathematical derivations from probability theory. Therefore, you should be prepared to spend a lot of effort to really understand the basic concepts and derivations.**

Copies of the sections from the other books mentioned above and the articles will be made available for download from the Student Portal.

Evaluation

The final mark for the block will be based on three separate components:

(i) your presentation of the mandatory literature and additional material plus your performance as session manager. **The presentation will determine 30% of your final mark on the course.**

(ii) your overall participation in the discussions (by discussing questions/comments, providing an interesting proposition, evaluating the literature, criticizing certain assumptions and arguments, *etc.*). **Overall participation will determine 10% of your final mark on the course.**

(iii) a written examination at the end of the course (in week 7 of the block), for which at least the mark 5.5 is required. **The written examination will determine 60% of your final mark on the course.**

Students will only pass the course if they achieve a minimum score of 5.5 for the written examination. If students achieve a lower score than 5.5 for the written examination, this result cannot be compensated with the marks for presentation and participation.

The marks for (i) and (ii) will be given by the tutor. The presentation is evaluated as a weighted average of grades for content (about 2/3) and form (about 1/3). From the second section onwards, your participation in each session is graded by the tutor as + (good/sufficient), 0 (dubious) or – (insufficient).

The written examination under (iii) will test understanding and knowledge of the mandatory literature mentioned with the sessions and understanding of the discussions in the sessions. The exam will consist of open (essay) questions.

To summarize, the final mark for the course will be determined as follows:

- Mark for presentation: 30%
- Mark for overall participation: 10%
- Mark for written examination: 60%

The weights will be slightly different for students who, due to the small size of the group, had to prepare two presentations instead of one. For these students, presentation will determine 40% of their final marks on the course, and the written examination will determine 50% of their final marks on the course.

Students who end up with an insufficient score in the first written exam will be offered one re-exam in the same academic year. Students who still have an insufficient score in the re-exam, can take the written examination for the same course in subsequent academic years and keep their participation and presentation grades.

Students are required to participate in at least eight tutor sessions (i.e., you can miss only two out of the ten tutor sessions; the plenary lectures are optional). Students who did not give a presentation or who missed more than two sessions cannot participate in the written examination and should complete the whole course anew in a later academic year (incl. participation and presentation). The reason for this is that sufficient participation in the course is considered as an important component of what you learn in this course, in addition to the knowledge and understanding of the subject material that you show in your exam (and presentation).

PART 2. SESSIONS

1. *Introduction to the course*

The first session will consist of the following:

- Introducing oneself to each other, going through the course manual, pointing out working procedures, etc.
- Allocation of presentations
- Video film of 2002 Nobel prize lecture by Daniel Kahneman:
<http://www.nobelprize.org/mediaplayer/index.php?id=531> (about 45 minutes)

2. *Expected utility theory, thinking and deciding*

Mandatory literature:

Hastie and Dawes (H&D), Preface, Ch. 1

Serrano and Feldman (2013), Ch. 2, Sections 1-2 and Section 4

Perloff (2012), Sections 17.0-3

Guide:

- The first session starts with an overview of rational decision-making. Before we analyze *actual* judgment and decision-making, we have to develop a benchmark model for choices in economic settings. Our benchmark will be the theory of rational choice, the basis for the analysis of decisions in economics.
- Please read the mandatory literature in the following sequence:

1. Serrano and Feldman (2013), Ch.2:

Before we start with analyzing decisions under uncertainty, we have to first clarify the concept of preferences (Sections 1 and 2) and the utility function (Section 4). You have to read only these sections from the chapter.

2. Perloff (2012), Sections 17.0-3:

These sections introduce uncertainty and expected utility. Also, the concept of risk aversion is presented.

3. Hastie and Dawes (H&D), Preface, Ch. 1:

The book of Hastie and Dawes primarily deals with *violations* of expected utility theory. However, after having read and understood the two chapters described above, you should be able to understand the reasoning and derivations on pp. 18-19 of Hastie and Dawes. This is important as this kind of violation of expected utility theory will come back later in the book. This reasoning and these derivations should be part of the presentation. Make sure that you understand the essential difference between maximizing expected utility and maximizing monetary value, and the relation of this difference to risk aversion.

3. Decision making and a general framework for judgment

Mandatory literature:

H&D, Chs. 2-3

Sharpe, De Veaux, and Vellerman (2012), Sects. 19.0-2

Guide:

- In the introductory chapters 2 and 3 of H&D you should especially pay attention to the concept of sunk costs in Sects. 2.5-2.6, the Lens model in Sect. 3.1, and the statistical interactions and different principles in Sect. 3.4.
- Figure 2.3 of H&D (p. 33) is somewhat misleading and therefore not relevant for our course.
- Chapter 3.1 of H&D describes the Lens model as a framework to understand the psychological judgment process. In the next step, Hastie and Dawes describe how statistical analyses (regression models) can help to understand how certain cues influence the judgement of a person. They illustrate the use of statistical models with the example of the admissibility ratings assigned by Hastie (p. 49). Here, the question is what the influence factors (the cues, such as test score and recommendations) on Hastie's assessment of the admissibility rating to a particular applicant (the judgement) are. In the present case, the regression model suggests that all four influence factors have a positive relation to the admissibility ratings (for example, higher test scores are associated with higher ratings).
- To understand the intuition behind regression models and how to interpret the regression coefficients, it is helpful to read Sects. 19.0-1 in the book of Sharpe et al. (2012, 2nd ed.).
- In addition, to understand Fig. 3.2 more easily you should take a look at Sect. 19.2 on interaction variables in the book of Sharpe et al. (2012, 2nd ed.).
- The interpretation of regression models and of interaction effects between variables should be part of the presentation.
- The percentages 75% and 82% on p. 55, lines 6 and 5 from below, are incorrect. They should be 74% and 85%, respectively.

4. Anchoring and judging heuristically

Mandatory literature:

H&D, Chs. 4-5

Optional literature:

H&D, App. A.3

Guide:

In this session you should pay special attention to the distinction between biased samples in memory (Sect. 5.4 of H&D) and biased sampling from memory (Sect. 5.5) and to the derivation and interpretation of the ratio rule (Sect. 5.10). These points should be part of the presentation. If you have difficulty understanding the derivation and implications of the ratio rule, reading Appendix A.3 of H&D may help.

5. Explanation-based judgments and thinking (ir)rationally about uncertainty

Mandatory literature:

H&D, Chs. 6-8.3

Guide:

- Sect. 6.5 is not relevant for the course.
- On p. 145, line 1, there should be an additional factor p before " $>$ ".
- Figure 7.2 is not very clear and therefore not relevant for the course.

6. Thinking rationally about inverse probabilities and evaluating consequences

Mandatory literature:

H&D, Sects. 8.4-8.10; Ch. 9, App. A.5 (so this appendix is included in the mandatory literature)

Optional literature (e.g., for presentation):

Dohmen, Thomas, Armin Falk, David Huffman, Felix Marklein and Uwe Sunde. 2008. The Non-use of Bayes Rule: Representative evidence on bounded rationality. Working paper, ROA, Maastricht University.

Guide:

- Please make sure that you understand the analysis in Sects. 8.5-8.9. Reading App. A.5 on Bayes' Theorem may be of help in that.
- Corrections:
 - On p. 171, last line before formula for $p(\text{cancer}/\text{risk})$, .58 should be .57, and in formula .580 should be .570.
 - On p. 178, line 6, "less" should be "higher".
 - On p. 187, line 2, "20 out of 35, or 57% ..", should be 30 out of 50, or 60% ..".
 - On p. 195, line 12, to "(iii) the negative function is more rapidly changing than the positive one" should be added: "for higher amounts".
 - On p. 196, line 1, "everywhere" should be "for higher amounts".
- The presentation should pay attention to all the above points.
- The text from p. 206 third paragraph ("Before...") to end of p. 206 and p. 208 until end of paragraph 2 ("...utility values") should be left out of the presentation. **(Please note, however, that Figure 9.3, p. 207, refers to a different paragraph and should therefore be included in the presentation.)**

7. Deliberate versus intuitive decision making and prospect theory

Mandatory literature:

H&D, Ch. 10, Ch. 12 (**without** the section from p. 285, last paragraph, to p. 288, paragraph 4)

Guide:

- Pay special attention to Sects. 12.1-2 of H&D.
- On p. 282 $V_{\text{PROSPECT B}} = 189.68$ instead of 198.18 and $V_{\text{PROSPECT D}} = -426.77$ instead of -442.36.
- On p. 285 $V_{\text{PROSPECT B}} = 94.77$ and $V_{\text{PROSPECT D}} = -335.52$.
- The section starting with the last paragraph on p. 285 elaborates further on framing effects concerning matters regarding life and death. However, as some of the argumentation is somewhat unclear here, we leave out this section. Therefore, you do not have to read the passage from p. 285 (last paragraph) to the end of Sect. 12.2 (p. 288, paragraph 4).

8. Plenary overview lecture

The lecture will give an overview of some difficult issues in the book of Hastie and Dawes. For this plenary lecture you do not have to read literature.

9. Applications of prospect theory, neuroscience, emotions and uncertainty

Mandatory literature:

H&D, Sects. 12.3-12.4, Ch. 13

Camerer, Colin F. 2004. Prospect theory in the wild: evidence from the field. In: Camerer et al., Ch. 5.

Guide:

- Ch. 13 of H&D discusses new directions in research on judgment and decision-making. Sect. 13.1 gives an overview of methods and findings in the new emerging field of neuroscience of decisions. You do not have to learn all the biological terms by heart, but focus on the main findings. Similarly, please focus on the main findings in the other sections of Ch. 13 of H&D.
- The article of Camerer gives an overview of a number of interesting and important empirical applications of prospect theory. Here you should focus on the explanations of the empirical findings in terms of prospect theory. This should be an important part of the presentation.

10. Behavioral law and economics: How to integrate insights about behavior into law and legal practice?

Mandatory literature:

Jolls, Christine, 2007. Behavioral law and economics. In: *Behavioral Economics and Its Applications*. ed. Peter Diamond and Hannu Vartiainen, Princeton: Princeton University Press.

Guide:

- The article by Jolls (2007) describes how insights from psychology are integrated into the field of law and economics, in order to improve the predictive power of this field based on more realistic assumptions about human behavior. After introducing central behavioral regularities that are relevant in this context, the author describes several applications of the field of behavioral law and economics in the second part of the article.

11. Self-control and economic decisions

Mandatory literature:

Camerer, Colin F., and George Loewenstein, 2004. Behavioral Economics: Past, Present, Future. In: *Advances in Behavioral Economics*, ed. Colin F. Camerer, George Loewenstein and Matthew Rabin, Princeton and Oxford: Princeton University Press, 3-51. **Only p. 22 to 25 (line 2) of this article are relevant for the session.**

Moffitt, Terrie E., Louise Arseneault, Daniel Belsky, Nigel Dickson, Robert J. Hancox, HonaLee Harrington, Renate Houts, Richie Poulton, Brent W. Roberts, Stephen Ross, Malcolm R. Sears, W. Murray Thomson, and Avshalom Caspi, 2011. A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences*, 108(7): 2693-2698.

Thaler, Richard H., and Shlomo Benartzi, 2004. Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy*, 112(S1): S164-S187.

Guide:

- Camerer and Loewenstein (2004) provide a brief overview on how economists formalize self-control (Please note: You only have to read pages 22 to 25, line 2 of this article).
- Moffitt et al. (2011) provide large scale empirical evidence how measures for self-control are associated with real-life outcomes.
- Thaler and Bernartzi (2004) report how behavioral interventions can help employees to overcome self-control problems that lead them to save too little for their retirements.

12. Plenary overview lecture

No mandatory literature (to give you more preparation time for the exam).