Nonexpected Utility

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COURSE DESCRIPTION

The descriptive power of expected utility has been challenged by behavioral evidence showing that people deviate systematically from the expected utility paradigm. Since the end of the 70's several alternatives to the expected utility paradigm have been proposed in order to accommodate these deviations.

Aim of the course is to (quickly) present the classical paradigm of decision under risk and uncertainty, to analyze deviations from the paradigm, and to illustrate the most popular alternatives to expected utility. These alternatives are named “nonexpected utility.”

We will focus on the rank-dependent models, prospect theory, regret and disappointment theories, multiple priors and other models depending on the interest. The emphasis will be both normative and descriptive. In addition, recent and ongoing empirical evidence will be presented.

The course is designed for students and faculty willing to familiarize with the research in nonexpected utility and looking to apply alternative models of behavior to finance, marketing, management, consumer behavior and other areas of interest. There is no pre-requisite for participating in this course.

COURSE REQUIREMENTS

Read the articles assigned so as to be prepared to participate in the class discussion. There will be four problem sets. A final paper (essay) will be required. Ideally it should be an original study on non-expected utility and its applications. Details will follow.

COURSE OUTLINE (tentative)

Class 1  Introduction and de Finetti book-making principle. The classic paradigm: expected utility & subjective expected utility (revision). Behavioral violations of the classic paradigm and paradoxes
Class 2  Follow up on violations of classic paradigm; Introduction to the rank-dependent theories: rank-dependent utility, Choquet expected utility
Class 3  The rank-dependent theories: rank-dependent utility, Choquet expected utility, Prospect theory
Class 4  Empirical evidence for the rank-dependent theories
Class 5  Ambiguity: popular models
Class 6  Disappointment, regret, multiple priors, lottery dependent, case based decisions, etc
Class 7  Applications, intertemporal decisions, and future directions

The material for the course will be based on lecture notes and papers. The grading basis: 4 problem sets (50%) and essay (50%).
**COURSE MATERIAL**

**Class 1 Part a:**
Introduction and de Finetti book-making principle


*Optional Readings:*


**Class 1 Part b:**
The classic paradigm: expected utility & subjective expected utility (revision). Behavioral violations of the classic paradigm and paradoxes

- Bob Nau: PhD seminar in choice theory, Class #2.


*Optional Readings:*


Class 2:
Follow up on violations of classic paradigm; Introduction to the rank-dependent theories: rank-dependent utility, Choquet expected utility


Optional Readings:

Class 3:
The rank-dependent theories: rank-dependent utility, Choquet expected utility, Prospect theory


Optional Readings:

Class 4:
Empirical evidence for the rank-dependent theories


• Bleichrodt, Han, José Luis Pinto, & Peter P. Wakker (2001), "Making Descriptive Use of Prospect Theory to Improve the Prescriptive Use of Expected Utility," *Management Science* 47, 1498–1514.


*Optional Readings:*


**Class 5:**

*Ambiguity: popular models*


*Optional Readings:*


Class 6:
Disappointment, regret, multiple priors, lottery dependent, case based decisions etc


Optional Readings:


Class 7:
TBC

Note: For the final paper (essay) I am happy to receive your ideas and proposals. However, if you do not have any idea we will discuss some topics together in class 6 or 7.

Background literature
The main background textbook for this course is Wakker, Peter P. (2010) "Prospect Theory for Risk and Ambiguity." Cambridge University Press, Cambridge, UK.

The main background textbooks for the foundations of utility and decision theory are:


Books and papers not part of course requirements, but the classic stuffs, thus important for your future research.


