INTRODUCTION TO DECISION THEORY

(ECN 203C, Fall 2008)

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Course Organization

Homework: weekly problem sets.

Evaluation:

• regular handing in of homework 20%.
• take-home midterm (probably around Veterans day) 40%,
• final paper 40%.

• The paper could consist of various things:

  1. A literature review identifying an interesting open and possibly doable research question
  2. A (possibly small) new result (I may be able to give you some projects)
  3. A fairly thorough discussion of the normativity of some axiom / the validity of some type
     of normative argument

A written proposal is due on Monday, November 10; it counts 10% out of the 40%. The final
version is due on Tuesday, December 9.
Weeks 1 through 3:

Rational Choice and Revealed Preference

*The Standard Model*


*Rationality and Revealed Preference*

- Sen, A. (1973), ”Behavior and the Concept of Preference,” Economica 40, p. 241-259

*Choice under Incompleteness*


*Ordinal Utility*

- Kreps*, Notes, ch. 3

¹*-*ed readings are required.
Weeks 4 and 5: Temptation and Self-Control

Modeling Temptation


General Models of Self-Control


Related non-axiomatic models


Weeks 6 through 8:
Decision Making Under Uncertainty: Expected Utility Theory

Expected Utility Theory under Risk (Known Probabilities).—
The von-Neumann Morgenstern Representation Theorem; Characterizing Risk-Attitudes
• Kreps*, Notes, ch. 5 and 6


Expected Utility with Subjective Probabilities.—

*The Fundamental Representation Theorem*


Mixing Subjective and Objective Probabilities: The Anscombe-Aumann Approach

• Kreps, Notes, ch. 7.

Probabilistic Sophistication: Non-Expected Utility Decisions based on Subjective Probabilities


Normative Issues:


On the notion of Subjective Probability:

• Kreps, Notes, ch. 11.


Framing

Weeks 9 and 10: Non-Expected Utility Theory under Risk

Overview


Expected Utility implies Almost-Risk Neutrality for Moderate Stakes


Quasi-Expected Utility Theory with Loss Aversion and Endogeneous Status Quo Point


Rank-Dependent Expected Utility and Prospect Theory

Week 11: Decision Making under Ambiguity

*Representation of Incomplete Beliefs and Preferences*


*Decision Making under Complete Ignorance*


*A Classical Experiment*


*Models of Decision Making under Ambiguity*

Weeks 12: Dynamic Choice

Preference for Flexibility


