

ECOS3016: Lecture Notes

Lecture 1/Week 1: Intro

1.0 Admin & Intro

1.0.1 Subject Intro

- Subject is about 'decision theory' – formal mathematical theories of individual decision making
- From intermediate microeconomics: utility, choice under risk, intertemporal choice, game theory
- Standard theory assumes people behave (descriptive – how people actually make decisions) as the theory says they should (normative – how people should make good rational decisions)
 - Behavioural economics questions the descriptive validity of the standard model

1.0.2 The standard economic model

- Coherent preferences, unbiased beliefs and optimal choices

1. Preference rationality

- Standard preferences – well-defined, consistent and stable
 - Independent of reference points and framing of alternatives
 - Defined in terms of final levels of consumption or wealth (rather than changes in variables)
- Preferences towards risk characterised by expected utility, towards risk depends on constant exponential discounting which implied consistent behaviour – depend on decision-maker's own profit (not others payoff)

2. Perception rationality

- Standard beliefs – information processed appropriately using Bayes' rule to update subjective probability judgements in response to new evidence

3. Process rationality

- Standard decision-making – choices made to maximise utility function subject to market constraints

DellaVigna equation

- $\max_{x_t^i \in X_i} \sum_{t=0}^{\infty} \delta^t \sum_{s_t \in S_t} p(s_t) U(x_t^i | s_t)$
 - $U(\cdot)$ is stable utility function depending on own allocation x
 - $p(s)$ are subjective probabilities updated using Bayes' rules and δ is constant exponential discount factor
- Evaluating the model (McFadden 1999)
 - Convenient: useful tool for economic analysis and policy
 - Successful: captures salient features
 - Unnecessarily strong: objectives of economics can be achieved using weaker forms of rationality – users and critics interpret it in unnecessarily restrictive ways
 - False: overwhelming evidence against literal interpretation as universal model of choice behaviour

1.0.3 Non-standard preferences

- Preferences depend on reference points (e.g. initial endowment, past consumption, consumption of others) and on changes rather than levels
 - Inconsistent with expected utility (differing towards gains and losses, under/over weighting probability, excessive aversion to small-stakes risk)
 - Time preferences often present-biased and time-inconsistent
 - People display preferences (positive/negative) towards payoffs of others, and thus not purely self interested
- 1. Beliefs (judgement)
 - Probability judgements subject to systematic biases (availability, representativeness, anchoring and adjustment) – info processed in inconsistent manner with Bayes rule (e.g. Law of small numbers)
- 2. Decision-making (choice)
 - Choices sensitive to framing (represented decisions), may not consider all relevant info (inattention), swayed by normatively irrelevant information