Consumer Choice: Further Extensions

Consumer's problem

- How does a consumer value different goods?
- The basis of determining use-value
- Marginalist revolution and diminishing marginal utility
- The basic marginalist calculus (equating marginal benefit and marginal cost)
- Choice and rationality
- Necessary conditions for rationality- completeness and transitivity
- Additional condition of monotonicity or non-satiation to formulate the choice problem
- Visual example of a typical utility maximization problem (2 dimensional)

Subjective valuation of wellbeing and utility

- Can utility me measured?
- Cardinal vs. ordinal understanding of utility
- Preference ordering expressed in terms of utility function vs. revealed preference

The idea of revealed preference

- Motivated by the ordinal nature of utility theory where utility numbers could not be interpreted numerically (utility value of 2 is not necessarily twice that of utility value of 1!)
- Problems of testability
- The revealed preference approach does away with the utility foundation of choice and focusses on choices made under different price income combinations i.e. preferences as revealed in choice

Axioms of revealed preference

- WARP (weak axiom of reveled preference) : if a bundle x_i is chosen when x_j is available, then x_j cannot be chosen whenever x_i is available
- WARP is a necessary condition for the existence of a utility function representation of preference ordering
- GARP (generalized axiom of reveled preference) : If x_i is revealed preferred to x_j and x_j is revealed preferred to x_k then x_i is revealed preferred to x_k (the axiom of transitivity)
- GARP is both a necessary and sufficient condition for utility representation of preference ordering

Expected utility theory

- Theorization of choice under uncertainty
- Consider a choice problem over two uncertain events or lotteries
- Event A: p’ probability of payoff of M and (1-p’) probability of payoff N

  Event B: p’’ probability of payoff of M and (1-p’’) probability of payoff N
- Under some basic axioms of rational behaviour (completeness, continuity, transitivity and independence of irrelevant alternatives), the expected utility theorem (credited to Von Neumann and Morgenstein) states that

U(A) = p’U(M) + (1-p’)U(N) and U(B) = p”U(M) + (1-p”)U (N)