Ordinalist Utility Theory

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Why Ordinalist Theory

- Utility: subjective, psychological concept, cardinal measurement not meaningful

- Use of money or subjective units (utils) by Walras not a proper solution

- Constancy of MU_m: Unrealistic and problematic (cannot explain income effect and Giffen goods)

- 'Law' of DMU: psychological law, 'established' from introspection

- Pareto (1848-1923) removed the measurability associated with cardinal theory

- Assumption: Consumer need not assign numbers that represent utility, but can rank commodities (or bundles) in order of PREFFERENCE

The Preference Relation

- Preferences assume significance in the context of choice
- Consumer preferences determine which *commodity bundles* are purchased; A = (x1, x2)
- Object of choice: Some 'mix' of commodities
- Choice Variables, given a budget constraint
- Commodities: Goods and services; 'Bads' and dispreference
- Given two bundles X and Y, consumer either prefers X to Y, preferes Y to X or remains indifferent between X and Y
- XPY or YPX or XIY

The Indifference Relationship

- Not an extra notion over preference
- To say that XIY is to say 'neither XPY nor YPX'
- Three attributes:
  - i) Transitivity
  - ii) Reflexivity
  - iii) Symmetry
- Examine 'Is as old as'; 'is the brother of'; 'is taller than'
- Indifference is an Equivalence relationship
- The Commodity Space
  - Apples and Oranges; Wheat and Wine

General Axioms of Choice

- Axiom of Completeness
  - For all X and Y, either XRY or YRX
- Axiom of Transitivity
  - For all X,Y,Z, if XRY and YRZ, then XRZ
- Axiom of Selection
  - Given the 'feasible set', consumer's objective is to reach the most preferred bundle
- Axiom of Dominance
  - Monotonicity, Non-Satiation
- Draw the IC (-ve slope, curvature? lexicographic preference?)
- Axiom of Continuity
  - There exists a set of points on a boundary dividing the cdt space into less prfd and more prfd, st, the points are I to each other
- Axiom of Convexity
  - DMRS (Strict Convexity)

Indifference Curve

- Commodity space my be filled with ICs
- Several curves drawn to represent taste & preference : Indifference Map (same tp, map stable)
- Downward Sloping
- Numbers arbitrary
- Higher ICs represent higher utility
- ICs may not be parallel, but will not touch or cross
- Convex
- Generally, will not touch the axis (monomania)
- Relevant stretch is downward sloping, convex, in totality like bangles
- Bliss point

Utility Function

- A real-valued function such that
- If XPY, U(X)>U(Y)
- We can translate our statements about preference into statements about utility
- IC: iso-utility curve
- $U=U(x_1, x_2)$
- How to denote MU's?
- Trace ICs from the utility function $U=2x_1x_2$
- (9,1), (6, 1.5), (3,3), (1.5, 6), (1,9) for Ubar = 18
- For 8?

Budget Line

- $M = p_1x_1 + p_2x_2$
- Intercept, Slope (meanings)
- Digression: $y = mx + c$
- $x/a + y/b = 1$
- Shifts
- Feasible Set
- Derivation of Equilibrium graphically
- Equivalence of the result from cardinalist and ordinalist perspectives
- Reference: Price Theory, Ryan and Pearce

Thank You