Summary: Consumer Theory

Preferences

•Basic Axioms: Completeness, Transitivity, The more the better

•Indifference curves cannot cross eachother

•*MRS* of Y for X: quantity of Y a consumer is willing to give up for an additional unit of X

•Utility function *U(X,Y)*: Ordinal concept

Summary: Consumer Theory

Budgetary Restrictions

- Total expenditure: $P_X X + P_Y Y$
- Budget Set: All bundles of goods the cunsumer is able to afford given his income I
- Budget Line: $P_X X + P_Y Y = I.$ Slope: $-P_X/P_Y$

Summary: Consumer Theory

Consumer choice

- Conditions for Optimality:
  - $P_X X + P_Y Y = I$
  - $MRS = P_X / P_Y$
- Marginal utility: $MRS = MU_X / MU_Y$
- Corner Solutions: MRS is not equal to P_X / P_Y
- Conditions for Optimality $U = \min(X, (1/r)\, Y)$:
  - $P_X X + P_Y Y = I$
  - $X = (1/r)\, Y$

Summary: Consumer Theory

Individual Demand

- Price-consumption curve: $Y(X(P))$
- Demand curve: $X(P)$
  - negative slope: nearly all goods
  - positive slope: Giffen goods
- Income-consumption curve: $Y(X(I))$
- Engel curve: $X(I)$
  - positive slope: Normal goods
  - negative slope: Inferior goods

Summary: Consumer Theory

Substitution and Income Effects

- Variation in the price of X:
  - Total effect = Substitution Effect + Income Effect
- Variation in the price of Y:
  - X and Y are substitutes: $dX / dP_Y > 0$
  - X and Y are complements: $dX / dP_Y < 0$
  - X and Y are independent: $dX / dP_Y = 0$

Summary: Consumer Theory

Aggregate demand

- Sum (horizontal) of the individual demands:
- Price-Elasticity: $E_P = -(dQ/Q) / (dP/P)$
  - Demand inelastic: $E_P < 1$ (expenditure increases in price)
  - Demand elastic: $E_P > 1$ (expenditure decreases in price)
  - Demanda unit elastic: $E_P = 1$ (expenditure constant)
- Consumer Surplus
- Price Indexes Laspeyres and Paasche

Finish Lecture 4

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•Engel curve: $X(I)$

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