
Econ 100A: Intermediate Microeconomic Analysis Lecture 10

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Plan of Today's Lecture

- Organizational Matters
- Review of material
- Short Math. Summary & examples
- About Midterm 1

Consumer Preferences; Indifference curve & map, MRS

- Consumer Preferences – Basic Assumptions:
 1. Preferences are **complete**
 - Consumers can rank market baskets
 2. Preferences are **transitive**
 - If they prefer A to B, and B to C, they must prefer A to C
 3. Consumers **always prefer more** of any good
 - More is better
- **Indifference curve** = all combinations of market baskets between which a consumer is **indifferent** (equally satisfied with all)
- Properties of Indifference curves
 - They: cannot cross; are convex (usually) (reflects diminishing MRS)
 - & downward sloping (usually) (or assumption 3 is violated)
- **Marginal rate of substitution (MRS)** quantifies the amount of one good a consumer will give up to obtain more of another good, MRS is measured by the slope of the indifference curve.
 - MRS decreases down the indifference curve (**diminishing MRS**)
 - Perfect substitutes (MRS = constant); Perfect complements (MRS = infinite)
- **Indifference map** a set of indifference curves; describes preferences for all combinations of goods/services

Utility, Ordinal & Cardinal Utility Functions, Budget Line

- **Utility** is a number representing consumer satisfaction from a given market basket
- **Utility function** is a formula that assigns a level of utility to market baskets
 - **Ordinal Utility Function** orders market baskets from most preferred to least preferred; does not indicate by how much one market basket is preferred to another
 - **Cardinal Utility Function** describes the extent to which one market basket is preferred to another
- **The Budget Line** is all combinations of goods for which total money spent equals total income

The Budget Line

Changes with Income & Prices

- 1. If income
 increases / decreases
 → the budget line
 shifts outward / inward
- 2. If price of a good
 increases / decreases
 → the budget line
 rotates **inward / outward**
- 3. If both prices
 increase / decrease and
 price ratio does not change →
 - the budget line **slope does not change**
 - the line shifts **inward / outward** (parallel to original line)

Optimal Consumption Point

- At the point of maximum satisfaction: *marginal rate of substitution (of F & C) is equal to the price ratio (of F & C)*

$$MRS = \frac{P_F}{P_C}$$

Marginal Utility; The principle of *diminishing marginal utility*

- ***Marginal utility*** measures the additional satisfaction from consuming one additional unit of a good
- The principle of ***diminishing marginal utility*** states:
with increase of good consumption, the additional utility gain decreases

Midterm Exam 1

- Organizational Matters
 - My extra office hours
 - 2006.09.29 (Friday), 9:00 am – 10:00 am
 - 2006.10.02 (Monday), 10:00 am – 12:00 pm
 - Questions / Answers Session
 - 2006.10.02 (Monday) 6:00 – 8:00 pm, 0010 Evans Hall
- Review Questions for MT 1
 - Will be posted on the web
- Info about MT 1
 - MT 1 includes questions on Ch 1 – 4 only (Uncertainty is NOT in MT 1)
 - MT should require LESS than 60 min
 - 1. Multiple Choice (5 – 8)
 - 2. 3 to 4 Problems
 - 3. Bonus question (extra 10 points)

Individual & Market Demand, Engel curve, normal & inferior goods

- Individual Demand relates the quantity of a good that a consumer will buy to the price of that good.
- Market Demand – summed individual demands
- Engel Curves
 - Engel curves relate the quantity of good consumed to income
 - If the good is a normal good, the Engel curve is upward sloping
 - If the good is an inferior good, the Engel curve is downward sloping (at the consumption range of where the good is inferior). Overall, the entire the Engel curve is backward bending

Substitutes, Complements, & Independent Goods

- Two goods are **substitutes** if an increase (decrease) in the price of one leads to an increase (decrease) in the quantity demanded of the other
 - Ex: movie tickets and video rentals
- Two goods are **complements** if an increase (decrease) in the price of one leads to a decrease (increase) in the quantity demanded of the other
 - Ex: gasoline and motor oil
- Two goods are **independent**, when change in the price of one good has no effect on the quantity demanded of the other
 - Ex: price of chicken and price of airplane tickets

Income & Substitution Effects

- Change of a good's price → two effects:
 - Substitution Effect:
 - Relative price of a good changes when price changes
 - Consumers will tend to buy more of the good that has become relatively cheaper, and less of the good that is relatively more expensive
 - Income Effect
 - An increase in real purchasing power when the price of one good falls
- Normal goods → both effects the same direction ($P \downarrow \rightarrow Q \uparrow$)
- Inferior goods → effects in opposite directions (substitution effect: $P \downarrow \rightarrow Q \uparrow$, but income effect: $P \downarrow \rightarrow Q \downarrow$)
 - Even with inferior goods, the income effect is rarely large enough to outweigh the substitution effect

Demand Externalities

- When individual demand depends on market demand (i.e., on demand on other consumers) we call this **demand externality**
- Types of externalities: positive and negative:
 - “Bandwagon” = positive externality (if more consumers → demand increases)
 - “Snob effects” = negative externality (if more consumers → demand decreases)
- **Positive** externality results in **more elastic demand**
- **Negative** externality results in **less elastic demand**

Summary of Today & Plan of Next Lecture

- About MT 1
- Review and examples
- Next Lecture (After the midterm):
 - We will start Chapter 7
- Have a Nice Day