Econ 101 Discussion Section-Handout 9

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1 Review

- Consumer Theroy

  - Individuals have to make decissions on how much they want to consume.
  - How can they decide? The have to think in their preferences and then in the market

- Preferences: A Utility model

  - The main idea is that consumption generetes satissfaction to consumers (i.e. utility)
  - Is this utility meeassurable? No in fact is subjective to each individual in each peariod of time
  - Therfore we say that utility is ordinal, it represents an order! and not a magnitud
  - Think of this order as when you are comparing two goods, do I like movies more than board game?, do I like movies less than board games? or I am indifferent?
  - Indiference is very important, we can represent along a curve all combinations that ake consumers indifferent.
  - The individual susbtitutes according to the slope of the indifference curve MRSxy

- Market: Budget Line

  - The individual faces income and prices, the slope of the bugget line is $-\frac{p_1}{p_2}$

- Demand

  - When the indifference curve is tangent to the budget line we say that we have found a demand.
  - How much the consumers is willing to substitute, and how much the market is willing to trade for
  - This is true when $\frac{p_x}{p_y} = MRS_{xy}$

- Income and Substitution effect

  - Imagine that there is a change in price, your quantity demanded of that good changes.
  - However some of the change comes from the fact that your income change
  - Some of the change came from the fact that you are willing to substitute for other good

2   Problems: Consumer Theory

1. Problem 1 Goku's income is fixed at $100 and he only purchases magic beans (good X) and dragon balls (good Y). Initially each magic bean costs $5 and each dragon ball costs $20.

   (a) Find the equation for Goku's budget constraint and graph it

   (b) Is the bundle (10, 2) affordable? What about the bundle (6,4)?

   (c) At the prices given above, Goku's utility maximizing bundle is 4 magic beans and 4 dragon balls. Graph Goku's indifference curve.

   (d) Now suppose that price of magic beans increases from $5 to $10. Graph Goku's new budget constraint and new indifference curve given that his new utility maximizing bundle is 2 magic beans and 4 dragon balls. Illustrate both income effect and substitution effect on the graph

   (e) Derive his demand curve for magic beans, assuming it is a straight line.

2. Now suppose magic beans and dragon balls are perfect substitutes for Goku. That is, buying 4 magic beans brings him the same satisfaction as buying 1 dragon ball.

   (a) If Goku's income is $100, what bundle will he consume?

   (b) If the prices for magic beans drops to $2, what bundle will he purchase? (self-practice: illustrate budget constraint, indifference curve, income effect and substitution effect on a graph)

3. Now suppose magic beans and dragon balls are perfect complements for Goku. That is, he always buys exactly 1 dragon ball with each magic bean (each dragon ball needs one magic bean to activate).

   (a) Given Goku's income is $100, what bundle will he consume?

   (b) If Goku's income increases to $200, what bundle will he consume? (self-practice: illustrate budget constraint, indifference curve, income effect and substitution effect on a graph)

   (c) Is it possible for him to consume 10 magic beans and 12 dragon balls at any income level