

Review Notes – Consumer Choice and Demand

- How do consumers maximize their utility?
 - Know utility maximization both graphically and mathematically
 - Graphically – get on highest possible indifference curve
 - Mathematically – $MRS = -p_1/p_2 =$ tangency point between indifference curve and budget line.
 - When does the tangency not occur but consumer is still maximizing utility?
 - Border solutions (e.g., perfect substitutes)
 - Interior solutions (e.g., perfect complements) occur only when preferences are not well behaved.
 - how do you derive a demand curve from indifference curve analysis?
 - Know how to do this graphically.
 - Know how to do this mathematically.
 1. Must know the utility function. Specifically must know the marginal utility functions. Suppose $U = X_1X_2 \Rightarrow MU_1=X_2$ and $MU_2=X_1$.
 2. Find the $MRS = - MU_1/MU_2 = X_2/X_1$
 3. Find the tangency point where $MRS = -P_1/P_2$.
 4. Solve for X_2 (to get demand for X_1 ; the reverse to get demand for X_2).
$$X_2 = (P_1/P_2)X_1$$
 5. Substitute X_2 from 4 above into the budget line
$$P_1X_1 + P_2X_2 = M \text{ or } P_1X_1 + P_2(P_1/P_2)X_1 = M$$
 6. Solve for X_1 to get its demand curve.
$$X_1 = M/(2P_1)$$
 - What does the $MRS = - P_1/P_2$ condition (tangency) imply about the differences between different consumers?
 - Applications – we did a few applications to show how the model is useful.
 - Composite Goods
 - What are they?
 - How are they used?

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- Demand
 - Changes in Income
 - What is the income offer curve?
 - What happens to D as income changes?
 - What is the Engel curve?
 - What do income offer and Engel curves look like for different types of goods?

- Homothetic Preferences
 - Definition
 - What does the Engel curve look like with homothetic preferences?
 - Examples of Utility functions with homothetic preferences
 - Price Changes
 - Giffen Good vs. ordinary good
 - What is a price offer curve?
 - Inverse Demand functions
 - Definition
 - What does it look like graphically?
 - What is this used for?
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