Lecture 24 – Consumer Behavior

The lectures on consumer behavior provide the underpinnings for the demand curve. They will also give us some guidelines for individual and household behavior.

I. Basics

General Approach – Individuals or households choose to consume the basket of goods (broadly defined) that make them as well off as possible given their resources. Economists refer to this as maximizing their utility subject to their budget constraint.

Budget – Resources available to use to consume goods. Usually this refers to income, but it could also refer to time or other things that are used in consumption.

Budget Constraint – Possible combinations of goods that can be purchased with the budget of the individual or household

Preferences – Way that the individual or household decides which baskets of goods are preferred to others

Utility – The level of satisfaction that the individual or household gets.

II. Indifference Curves

Each person can decide whether they prefer one basket of goods to another. For example, if we are deciding what combinations of pieces of pizza and bowls of salad are preferred, we can always decide whether a combination of pieces of pizza and bowls of salad makes us better off or worse off than another. Let’s say we are comparing to the combination of 2 bowls of salad and 3 pieces of pizza, represented by the point (2,3) in the following diagram:
When more is preferred to less (i.e., we like to consume the goods), we know that any point that has at least 3 pieces of pizza and at least 2 bowls of salad will be preferred to the point that represents 3 pieces of pizza and 2 bowls of salad.

We know then that any point that is above and to the right of the point to which we are making the comparison is preferred. Similarly, any point that is down and to the left consumes less of one or both of pizza or salad:

In the other two areas, the combination includes more of one of the two goods and less of the other. If we like both goods, then adding one of the goods makes us better off, while subtracting some of the other makes us worse off. By how much depends on our preferences.
What we do know, though, is that there will be some points that we will prefer, some that we do not prefer and some which make us equally well off in those two regions.

**Indifference Curve** – Locus of points that includes all of the combinations of goods that give the consumer the same level of well-being (or utility or satisfaction).

**Properties of Indifference Curves**

1) Indifference Curves are downward sloping -- In order for someone to be indifferent between two combinations, an increase in one good must be accompanied by a reduction in the other.

2) Indifference Curves must not touch

Counter-example: Along one indifference curve, the person is indifferent between A and B. Along the other, the person is indifferent between B and C. But the person cannot be indifferent between A and C because C has more of both goods and more is always preferred to less.

3) Indifference Curves that are farther away from the origin are preferred to those that are closer to the origin.
**Slope of Indifference Curve = Marginal Rate of Substitution** = Rate at which consumer is willing to trade one good for another

**Map of Indifference Curves** – Mapping of all indifference curves. Each indifference curve is associated with a different level of utility (or well-being or satisfaction)

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**III. Budget Constraint**

We must also figure out what the same person or household is ABLE to purchase. This is represented by the budget constraint.

Consider an individual that has $10 dollars and is interested in purchasing the same pieces of pizza or bowls of salad. A piece of pizza costs $2 and a bowl of salad costs $1. We can represent this person’s consumption possibilities, or budget constraint, by:

The budget constraint is determined by two things:
Income – Income (or other resource) that can be spent

Prices – Prices of the goods that can be consumed

**Slope of the Budget Constraint:**

For each bowl (one unit) of salad that we give up we get $P_s$ dollars. The number of pieces of pizza that we can purchase with that money is $P_s / P_p$. Since the slope of the budget constraint is $(\# \text{ of pieces of pizza})/(\# \text{ bowls of salad})$ and because we give up one bowl of salad to get the pizza, the slope of the curve is:

Slope = $-P_s / P_p$

**IV. Maximizing Utility Subject to the Budget Constraint**

We are now ready to ask how the person maximizes utility subject to the budget constraint. That is, given the budget constraint of the person, what is the highest amount of utility that the person can achieve.

Even though we might like to get onto this indifference curve, it is not possible given the consumption possibilities defined by the budget constraint.
Attaining the utility of this indifference curve is possible given the budget constraint (at any of the three points, for example), but a higher utility can be attained.

With the exception of corner solutions which we will examine in a minute, the highest utility possible given the budget constraint will be attained when the indifference curve is tangent to the budget constraint.

At this point, the slope of the indifference curve is equal to the slope of the budget constraint. That is:

At the optimum, \( MRS = -\frac{P_s}{P_p} \)
V. When do the Curves Shift?

Indifference Curve – When preferences change
Budget Constraint – When income changes
When prices change

Examples:

A) Increase in Income

B) Rise in the Price of Salad
VI. Deriving the Demand Curve

Demand Curve of an Individual

**Demand Curve** – For each price how much is demanded. To see this, vary the price of one good and map out what happens to the demand for that good.

As price of salad goes up (budget constraint becomes steeper), demand for salad decreases.

**Price of Salad**