Chapter 5

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SCARCITY AND DEMAND

- Demand refers to actions of consumers
- Demand assumes that consumers can pay for goods in question and that they're also willing to pay out the necessary money
- Individual consumer's choices are subject to a constraint: limited income, scarcity of income
- Since income is scarce, any consumer purchase decisions for different commodities must be interdependent
  - Amount you spend on one thing will determine how much you have left to spend on another

UTILITY: A TOOL TO ANALYZE PURCHASE DECISIONS

- Theory of consumer choice based on hypothesis that each consumer spends their income in the way that yields the greatest amount of satisfaction or **utility**
- One can measure the benefit of a movie ticket by asking how much of some other commodity you are willing to give up for it

The Purpose of Utility Analysis

- Money can be an imperfect measure of utility - the value of the dollar changes
- Why use concept of money utility then?
  - We do know how to approach measuring it (don't know how to measure what's going on inside consumer's mind)
  - It is extremely useful for analyzing demand behaviour - what consumers will spend to buy some good

Total Versus Marginal Utility

- **Total utility -** of a quantity of a good to a consumer is the maximum amount of money that he or she is willing to give up in exchange for it
- Total monetary utility measure your dollar evaluation of the benefit that you derive from your total purchases of some commodity during a period of time
- **Marginal utility -** of a commodity to a consumer is the maximum amount of money that he or she is willing to pay for one more unit of that commodity
- Marginal is understood as something additional - marginal utility of some good X is defined as the addition to total utility that you derive by consuming one more unit of X
  - A tool to analyze how much of a commodity that you must buy to make your total utility as large as possible
  - Example
    - If you have consumed three pizza (worth $40.50 to you), and additional pie brings your total utility to $52
    - You marginal utility is the difference between the two or $11.50

Principle of Diminishing Marginal Utility

- The more of a good the consumer has, the less **marginal utility** an additional unit contributes to overall satisfaction
  - Every person has a hierarchy of uses for a particular commodity
  - Buy one pizza for your gf, second pizza is for your roommate who is the next priority and so on
  - Each pizza contributes something to your satisfaction but each additional pizza contributes less that its predecessor because it satisfies a lower priority use
- **Principle of diminishing marginal utility -** asserts that additional units of a commodity are worth less and less to a consumer in money terms. As consumption increases, marginal utility of each addition unit decreases
- Curve for marginal utility has negative slope - illustrates how it declines as quantity of good rises
- When a commodity is scarce, it is expected to have a high marginal utility even if it might provide little total utility - because there's so little of it in the first place

Using Marginal Utility: The Optimal Purchase Rule

- **Marginal Analysis -** method for calculating optimal choices - tests whether and by how much a small change in a decision will move things toward or away from decision maker's goal
- Assumption: try to maximize total net utility you obtain from pizza
  - Net utility = marginal utility - price
- As long as marginal utility is a positive number, the more total utility you will get
- RULE ONE
  - If marginal net utility is positive, then consumer must be buying too small a quantity to maximize total net utility
  - Since marginal net utility tells us how much purchase of additional unit raises or lowers total net utility, a positive marginal net utility means total is still going uphill
- RULE TWO
  - No purchase quantity for which marginal net utility is a negative number can ever be optimal
- **Optimal Purchase Rule**
  - It always pays the consumer to buy more of a commodity whose marginal utility exceeds its price, and less of a any commodity whose marginal utility is less than its price. Should buy quantity where marginal utility (MU) is equal to price (P)

MU = P

- Goal is maximization of total net utility

From Diminishing Marginal Utility to Downward-Sloping Demand Curves

- Marginal utility curve and demand curve of consumer who maximizes total net utility are the same
- Principle of diminishing marginal utility implies that demand curves slope downward to right - negative slopes
- $\text{price} \Rightarrow \downarrow \text{quantity of demand} \Rightarrow \uparrow \text{marginal utility}$
- The lower the price, the more the advantageous consumer will find to buy, which is what is meant by demand curve having negative slope
- If P falls, consumer who wishes to maximize total utility must buy more, to the point that MU falls correspondingly

CONSUMER CHOICE AS A TRADE-OFF: OPPORTUNITY COST

- From viewpoint of economic analysis, trust cost of any purchase is the opportunity cost of that purchase, rather than the amount of money that is spent on it
- Opportunity cost of spending an extra dollar on good X = the utility from good Y the purchaser could have gotten by spending that dollar on good Y

Consumer's Surplus: The Net Gain from a Purchase

- Optimal purchase rule (MU = P) assume that consumer always tries to maximize money value of total utility from the purchase *minus* amount spent to make that purchase

- Any difference between price consumer pays and price they are willing to pay = net utility gain
- **Consumer's surplus -** difference between the value to the consumer of the quantity of commodity X purchased and the amount that the market requires the consumer to pay for quantity X

Consumer's surplus = Total utility (money terms) - Total expenditure

- Consumer gains some sort of free bonus or surplus
- Both parties must gain from voluntary exchange or else one of them will refuse to participate

Resolving the Diamond-Water Puzzle

- Scarcity raises price and marginal utility but reduces total utility - while total utility measure benefits to consumers, it is marginal utility that is equal to price
- Diamonds are scarce and unnecessary - high price and high marginal utility
- Water is plentiful and necessary - low price but greater total utility

Income and Quantity Demanded

- **Inferior goods -** a commodity whose quantity demanded falls when the purchaser's real income rises
- **Normal good -** if incomes rise and prices don't change, quantity demanded will increase

FROM INDIVIDUAL DEMAND CURVES TO MARKET DEMAND CURVES

- **Market-demand curve -** shows how the total quantity demanded of some product demanded by all consumers in the marking changes as the price of that product changes, over time

Market Demand as a Horizontal Sum

- Market demand curve = horizontal sum of individual demand curves

The "Law" of Demand

- **Law of demand -** states that a lower price generally increases the amount of a commodity that people in market are willing to buy. Therefore, for most good, market demand curves have negative slopes
- Individual demand curves slope down because of principle of diminishing marginal utility - implies market demand curves are also negative

Exceptions to the "Law" of Demand

- Occurs when people judge quality on basis of price - perceive a more expensive commodity as offering better quality
- Another possible upward-sloping demand curve is snob appeal - Veblen effect