

KEY TAKEWAYS

Chapter 4

Introducing the Budget Constraint

Budget constraints represent the plausible combinations of products and services a buyer can purchase with the available capital on hand.

Key Points

- Consumers analyze the optimal way in which to leverage their purchasing power to maximize their utility and minimize opportunity costs through employing trade-offs.
- The way economists demonstrate this arithmetically and visually is through generating budget curves and indifference curves.
- Budget curves indicate the relationship between two goods relative to opportunity costs, which defines the value of each good relative to one another.
- Indifference curves underline the way in which a given consumer interprets the value of each good relative to one another, demonstrating

how much of 'good xx' is equivalent in utility to a certain quantity of 'good yy' (and vice versa).

- Through utilizing these economic tools, economists can predict consumer behavior and consumers can maximize their overall utility based upon their budget constraints.

Mapping Preferences with Indifference Curves

- Indifference curves illustrate bundles of goods that provide the same utility.
- An economist can derive conclusions based upon the properties of the illustration. In framing these implications it is useful to identify the two potential extremes of substitute goods and complementary goods.
- The comparison between the goods demonstrates the relative utility one has compared to another, and the way in which consumers will act when posed with a decision between various products and services.
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Implications of Indifference Maps

Perfect Substitutes: To understand what an indifference curve will look like when products are perfect substitutes, please see the graph below

Perfect Complements: The opposite of a perfect substitute is a perfect complement, which is illustrated graphically through curves with perfect right angles at the center.

Perfect Substitute Indifference Curve: In this particular series of indifference curves it is clear that 'Good X' and 'Good Y' are perfect substitutes for one another. That is to say that the utility of one is identical to the utility of the other across all quantities represented on the map.
GRAPH

Properties of Indifference Curves

Key Points

- The concept of an indifference curve is predicated on the idea that a given consumer has rational preferences in regard to the purchase of groupings of goods, with a series of key properties that define the process of mapping these curves.

- Indifference curves only reside in the non-negative quadrant of a two-dimensional graphical illustration (or the upper right).
- Indifference curves are always negatively sloped. Essentially this assumes that the marginal rate of substitution is always positive.
- All curves projected on the indifference map must not intersect in order to ensure transitivity.
- Nearly all indifference lines will be convex, or curving inwards at the center (towards the bottom left).

Impact of Income on Consumer Choices

Key Points

- The basic premise behind the income effect is that varying income levels will determine different quantities and balanced baskets along the provided indifference curves for any two goods being compared.
- These differences in quantity reflect the increase or decrease in a given individual's purchasing power, thus the income effect could be summarized as the increase in relative utility

captured by a consumer with more monetary power.

- Income effects on consumer choice grow more complex as the type of good changes, as different product and services demonstrate different properties relative to both other products/services and a consumers preferences and utility.
- The four key types of goods to consider are normal goods, inferior goods, complements and substitutes.

Effects of Income on Different Goods

Income effects on consumer choice grow more complex as the type of good changes, as different product and services demonstrate different properties relative to both other products/services and a consumers preferences and utility. As a result, it is useful to outline the differences in income effects on normal, inferior, complementary and substitute goods:

- **Normal:** A normal good is a good with incremental increases or decreases in utility as quantity changes, demonstrating a predictable and simple linear relationship as income increases or decreases. demonstrates a graphical representation of the effects of income changes upon preference map.

- **Inferior:** Inferior goods, or goods that are less preferable, will demonstrate inverse relationships with income compared to normal goods. That is to say that an increase in income will not necessarily result in an increase in quantity for the inferior good, as the consumer derives minimal utility in purchasing the inferior good compared to other goods. Inferior goods are often sacrificed as income rises and consumers gain more choice/options. This can be represented in.
- **Complementary:** Complementary goods are goods that are interdependent in consumption, or essentially goods that require simultaneous consumption by the consumer. An example of this would be like purchasing an automobile and car insurance, the consumption of one requires the consumption of the other. As income increases, these will increase relative to one another (as a ratio). demonstrates this concept in graphical form.
- **Substitutes:** Perfect substitutes are essentially interchangeable goods, where the consumption of one compared to another has no meaningful impact on the consumer's utility derived. Substitutes are goods that a consumer cannot differentiate between in terms of the need being filled and the satisfaction obtained.

Income increases will thus affect the consumption of these goods interchangeably, resulting in increase in the quantity of either or both.

Impact of Price on Consumer Choices

The demand curve shows how consumer choices respond to changes in price.

Key Points

- For normal goods or services, demand is illustrated with a downward sloping curve, where the quantity on the x-axis will generally increase as the price on the y-axis decreases (and vice versa).
- As the demand curve implies, price is the central driving force behind a decision to purchase a given product or service.
- A critical consideration of product/service pricing is the price elasticity of a given good, which indicates how responsive demand is to a change in price.
- Using demand curves, economists can project the impact of a price change on the consumer choices in a given market.

- The quantity demanded may change in response to both shifts in demand (and the creation of a new demand curve, as demonstrated in and movements along the established demand curve.

Deriving Overall Demand

As the demand curve implies, price is often the central driving force behind a decision to purchase a given product or service. Consumers must weigh the overall utility they can capture by making a purchase and benchmark that against their overall monetary resources to optimize their purchasing decisions. This practice regulates the price companies can set for their products and services, as the income effects and the prospective substitutions (substitution effect) will drive consumer purchase towards purchases that create the most value for themselves.

Price Elasticity

A critical consideration of product/service pricing is the price elasticity of a given good, which indicates how responsive demand is to a change in price. Price elasticity is essentially a measurement of how much any deviations in price will drive the overall quantity

purchased up or down, underlining to what extent consumer purchasing decisions will be dictated by pricing.

Deriving the Demand Curve

The law of demand pursues the derivation of a demand curve for a given product that benchmarks the relative prices and quantities desired.

Key Points

- The derivation of demand is a useful tool in this pursuit, often combined with a supply curve in order to determine equilibrium prices and understand the relationship between consumer needs and what is readily available in the market.
- The inherent relationship between the price of a good and the relative amount of that good consumers will demand is the fulcrum of recognizing demand curves in the broader context of consumer choice and purchasing behavior.
- Generally speaking, normal goods will demonstrate a higher demand as a result of lower prices and vice versa.

- Giffen goods are a situation where the income effect supersedes the substitution effect, creating an increase in demand despite a rise in price.
- Neutral goods, unlike Giffen goods, demonstrate complete ambivalence to price. That is to say that consumer will pay any price to get a fixed quantity.

Deriving Demand Curves

One important consideration in demand curve derivation is the differentiation between demand curve shifts and movement along the curve itself. Movement along the curve itself is the identification of what quantity will be purchased at different price points.

Applications of Principles on Consumer Choices

Key Points

- Economics assumes a population of rational consumers, subjected to the complexities of modern economics while they attempt to maximize the utility obtainable within their income range.
- The income effect says that a consumers overall income level will have an effect on the

quantities of goods that consumer will purchase.

- The substitution effect, similar to the income effect, identifies ways in which consumer purchasing power will alter the relative quantities of goods/services purchased by consumers at varying income levels and budgetary constraints.
- Combining the substitution effect and the income effect, one can derive an overall labor - leisure trade-off based on a given consumers purchasing power (income) relative to the price of necessary bundles of goods (substitution effect).
- A rational consumer will begin to work less hours after meeting their consumption requirements in order to capture the value of leisure (and enjoy their income in a meaningful way).

Income Effect

The income effect needs two simple inputs: the average price of goods and the consumer's income level. This creates a relative buying power, which will play a substantial role in the quantity of goods purchased.

Types of Goods

One additional important component of consumer choice is the way in which different goods demonstrate different reactions to income alterations and price changes:

- **Income Changes:** When income changes rises or falls, consumption of certain types of goods will have a positive or negative correlation with these changes.

With *normal goods*, an increase of income will correlate with a higher quantity of consumption while a decrease in income will see a decrease in consumption. *Inferior goods*, on the other hand, will demonstrate an inverse relationship. A rise in income will cause a decrease in their consumption and vice versa.

- **Price Changes:** When price rises or falls, consumption of certain types of good will either demonstrate positive or negative correlations to these shifts in regard to quantity consumed. *Ordinary goods* will demonstrate the intuitive situation, where a rise in price will result in a decrease in quantity consumer. Inversely, *Giffen goods* demonstrate a positive relationship, where the price rises will result in higher demand for the good and high consumption.