Properties of Indifference Curve Analysis | Indifference Curves

Indifference curve analysis is a fundamental concept in microeconomics that helps us understand consumer preferences and choice. The properties of indifference curves, which represent different combinations of goods or services that provide an individual with the same level of satisfaction, are crucial to this analysis. Here are the key properties of indifference curves analysis:

Properties of Indifference Curve Analysis

1. More Realistic Approach

The indifference curves analysis is a more realistic approach to explain consumer's behavior than the cardinal utility analysis because the utility analysis assumes "too much" and explains "too little". Whereas, the indifference curves analysis explains "more and better", with "fewer and less restrictive" assumptions.

2. Cardinal vs. Ordinal Measurement of Utility

Marshall's theory was based on cardinal terms, which meant that utility could be measured in numbers.

Hicks theory is based on ordinal terms, which means that utility should be measured in terms of equal, more or less. A utility is feeling of satisfaction derived after having consumed a commodity. How can a feeling be measured in numerical terms?

Furthermore, Marshall's theory is limited to consume one commodity at a time, and also in his theory, income remains constant which is not necessarily true.

Hicks theory is closer to the reality of life. It closely describes the consumer's behavior in the market.

Furthermore, his theory is not limited to consume one commodity at a time and income does not remain constant. Cardinal measurement is just hypothetical. Therefore, Hicks theory is more appropriate to use.

3. Effects Felt

According to Marshall's theory, price, income and substitution effects would remain constant. Whereas Nicks theory indicated otherwise, which of course is true because in the practical life these three factors keep varying which will result in an outcome on the consumer's equilibrium.

4. Price Effect through Changes in Real Income

Supposing that the price of a commodity falls and thereby the real income of a consumer increases. How can this increase? How can this increase in real income be measured? there is no answer to this in Marshallian utility analysis.

However, Prot Hicks measures of an increase in real income resulting from a fall in the price of a commodity by shifting the consumer on to an indifference curve. (And vice-versa if the situation is reversed).

5. Giffen Paradox

Marshallian utility analysis does not break up the "price into "income effect" and "substitution effect thereby it does not show the negative effect in the case of Giffen goods. Hence, it fails to explain Giffen paradox. This has explained in the Hicksian indifference curves analysis.

By dividing the "price effect' and "income effect" substitution the Hicksian analysis explains the relative nature of various goods e.g inferior and superior.

6. Greater Scope

Marshallian utility analysis completely bypassed the issue of interrelated i.e. substitutes and complements. As against this, Prof. Hicks has given a detailed analysis of consumers for "related goods" i.e. competitive.

7. Marginal Utility of Money

According to Marshall's t1mry, MU of remains constant, whereas in Hicks theory, it varies, Marginal utility of cannot remain constant.

For example, when a consumer purchases prices, he pays for them, hence & parts with his money. Thus, reduction of money raises its marginal utility which proves point of view that M. U. of money does not remain constant.

In this connection, Hicks argument runs as follow. Supposing that the consumer is in equilibrium the price of one says good falls. In this way, marginal utility of money will not remain constant according to the equation.

Marginal utility of money = MUx / PX.

MUx will greater than PX. To restore MU of money mote of good "X' will be by the consumer so that MUx falls to become equal to the new price of obviously, the expenditure of the consumer on good "X" will increase.

To restore his total to the given amount of money income, the consumer will adjust his expenditure on goods.

Since other things are assumed to remain constant, therefore, marginal utility of money cannot remain constant. It will change with the change in the price of a commodity as point out by Prof. Hicks.

8. Monotonicity

An indifference curve typically slopes downward from left to right, indicating that as an individual consumes more of one good while keeping the consumption of the other good constant, the individual remains at least as well off or becomes better off. In other words, more is preferred to less.

9. Convexity

Indifference curves are typically convex to the origin. This convex shape illustrates the principle of diminishing marginal rate of substitution (MRS). As an individual moves down the indifference curve, they are willing to give up fewer units of one good to obtain one additional

unit of the other good. This reflects the idea that the consumer's preferences exhibit diminishing marginal utility.

10. Completeness

The assumption of completeness means that consumers can rank or compare all possible combinations of goods or services. For any two bundles of goods, consumers can prefer one to the other, be indifferent between them, or prefer the second to the first.

11. Transitivity

The transitivity assumption implies that if a consumer prefers bundle A to bundle B and prefers bundle B to bundle C, then they must prefer bundle A to bundle C. This assumption helps ensure consistency in the consumer's preferences.

12. Non-Satiation:

Non-satiation, also known as the "more-is-better" assumption, posits that consumers always prefer more of a good to less, given that all other goods remain constant. This assumption supports the concept that individuals seek to maximize their utility.

13. Continuity:

The assumption of continuity implies that indifference curves are continuous and have no gaps or jumps. This ensures that small changes in the quantities of goods result in only small changes in satisfaction.

14. Diminishing Marginal Rate of Substitution (MRS):

As you move along an indifference curve, the MRS, which represents the rate at which a consumer is willing to substitute one good for another while remaining equally satisfied, decreases. In other words, the consumer is less willing to trade one good for another as they move to the right along the curve.

15. Indifference Map:

A set of indifference curves, known as an indifference map, represents a consumer's preferences for different combinations of goods. Higher indifference curves represent greater utility, as they indicate higher levels of satisfaction.

16. Orthogonality

Indifference curves are typically drawn orthogonally (at right angles) to the budget constraint line. This means that the optimal consumption bundle occurs where the budget constraint is tangent to the highest possible indifference curve. At this point, the MRS is equal to the relative price of the two goods.

17. Infinite Number

In theory, there are an infinite number of indifference curves, each representing a different level of satisfaction. The consumer's preferences are ranked based on these curves, with higher curves indicating higher satisfaction.

These properties are essential for understanding consumer choice, and they form the basis for various economic models, such as the theory of consumer behavior, which helps economists and policymakers analyze and predict consumer choices and market outcomes.