

Indifference Curve

★ Introduction :-

The concept of indifference curve analysis was first propounded by British economist Francis Ysidro Edgeworth and was put into use by Italian economist Vilfredo Pareto during the early 20th century. However, it was brought into extensive use by economists J. R. Hicks and R. G. D. Allen.

Hicks and Allen criticized Marshallian cardinal approach of utility and developed indifference curve theory of consumer's demand. Thus, this theory is also known as ordinal approach.

★ Meaning :-

The indifference curve analysis work on a simple graph having two-dimensional. Each individual axis indicates a single type of economic goods.

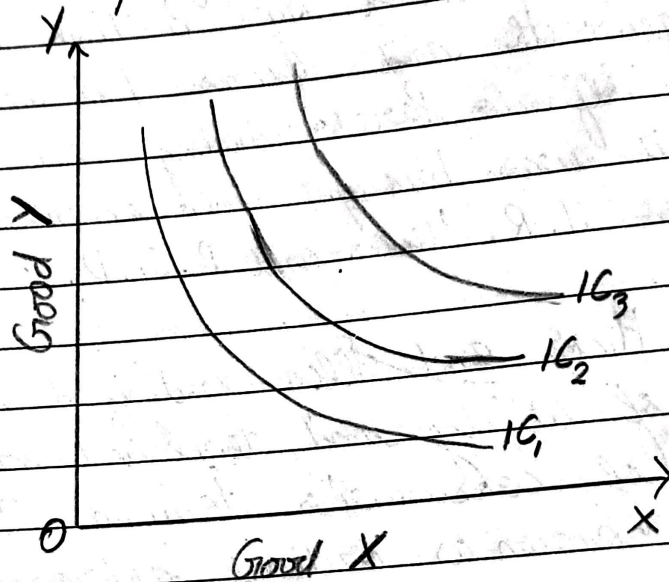
If the graph is on the curve on line, then it means that the consumer has no preference for any goods, because all the good has the same level of satisfaction or utility utility to the consumer. For instance, a child might be indifferent while having a toy, two comic book, four toy trucks and a single comic book.

★ Definition :-

"The locus of all commodity combinations from which a consumer derives the same level of satisfaction from an indifference curve."

- Prof. Henderson and Prof. Quandt

* Indifference Map: The Indifference Map refers to a set of Indifference Curves. The below diagram shows an indifference map with three indifference curves.



Indifference Map

Here, we understand that all three products resulting in the ~~its~~ indifferent curve give him the same satisfaction. However, his preference for those combined products can be arranged in their order of preference.

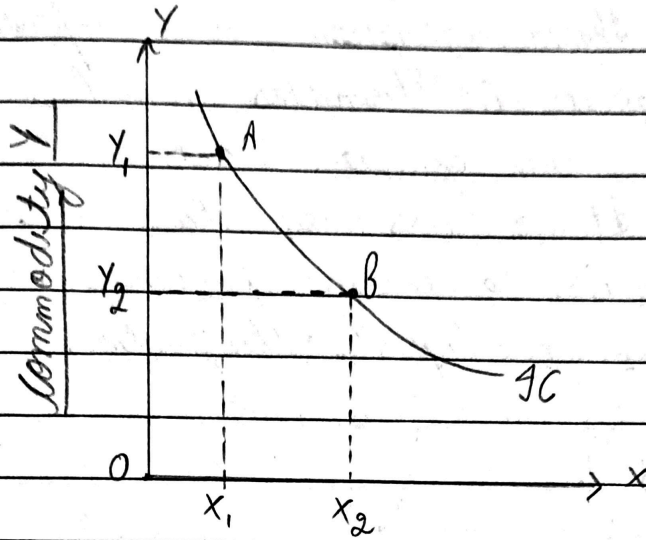
* Properties :

1. Indifference curve always slopes Downward from left to Right :

An indifference curve has a negative slope, i.e. it slopes downward from left to right.

Because, if a consumer decides to have one more unit of a commodity (say apples), quantity of another

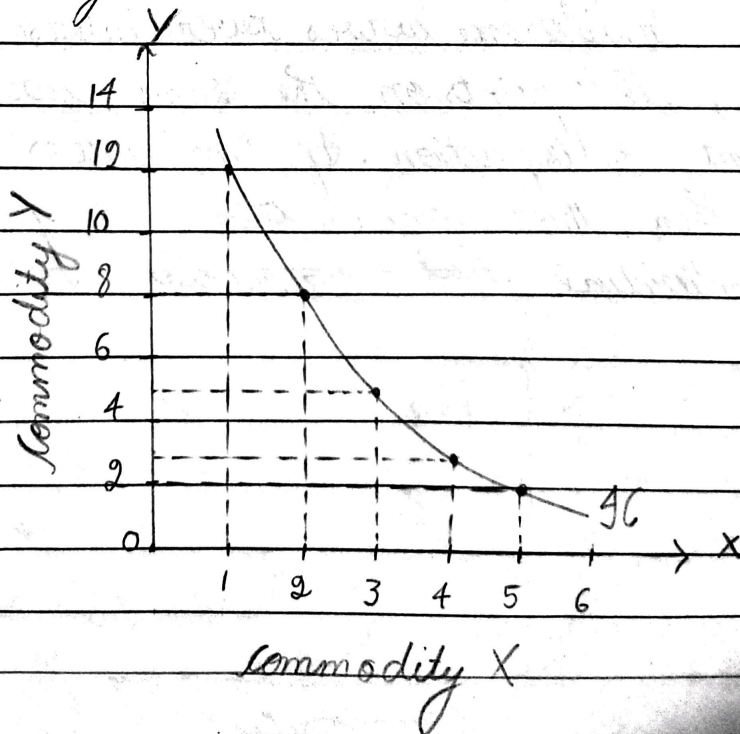
good (say oranges) must fall so that the total satisfaction (utility) remains same.



Commodity X

2. Indifference curve is always convex to the origin :

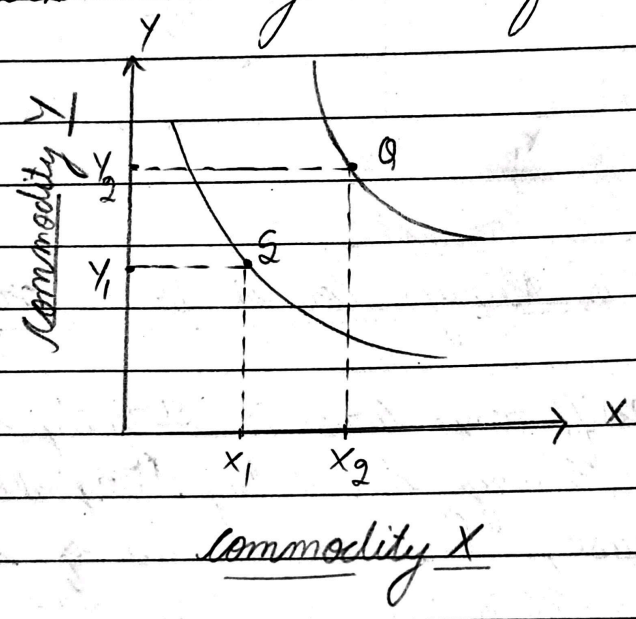
An Indifference curve is strictly convex to origin i.e. MR_{xy} is always diminishing. [Marginal rate of substitution]
 Because, Due to the law of diminishing marginal utility a consumer is always willing to sacrifice lesser units of a commodity for every additional unit of another good.



3. Higher indifference curve represents higher level of satisfaction:

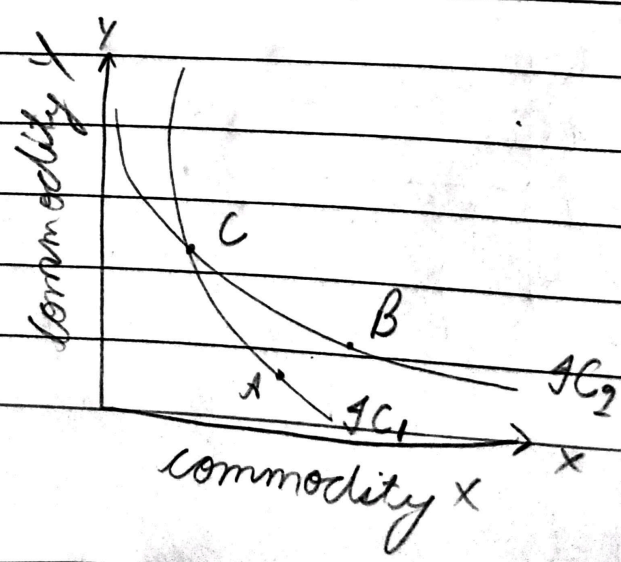
Higher indifference curve represents larger bundles of goods i.e. bundles which contain more of both or more of at least one.

It is assumed that consumer's preferences are monotonic i.e. he always prefers larger bundle as it gives him higher satisfaction.



4. Indifference curve can't intersect each other:

Indifference curves never intersect, because by definition, all points on the same curve represent equivalent satisfaction. If two curves were to overlap, then that would create a graph for a single individual that looked like the previous graph.



* Fundamental Assumption of Indifference Curve Analysis :-

1. Responsible Consumer:

Fundamental Assumption of Indifference Curve Analysis. The consumer is believed to be behaving rationally. In the sense that he will pick the combination from among the different possible combinations, considering the costs of products and money revenue, which gives him full pleasure.

2. Ordinary Utility:

The utility is incommensurable, but more equivalent. It presumes that the customer is able to associate various degrees of happiness with each other. The utility can be described in terms of regular numbers, i.e. First, second, third, and so forth. In ordinary numbers, it is more common to name indifference curves as I, II, III, etc.

3. Decreasing Marginal Substitution Rate (M.R.S.):

A study of the indifference curve assumes a decreasing marginal substitution rate. This implies that, as the stock of a product rises with the consumer, he replaces it at a declining rate for the other product.

4. Model Two Products:

There are two x and y products. It provides the costs of the two products. The customer ~~due~~ to has full knowledge of the prices of the items on the market.

5. Assumption of continuity: Ensures that all possible varieties of products may be ordered or graded by the customer due to the satisfaction they generate.

6. The scale of choice: The customer arranges the two products on a scale of choice, which means that the products have both preference and indifference. In his order of choice, he is expected to rate them and may state whether he prefers one mixture to the other or is indifferent to them.

7. Transitivity: With respect to preference and aversion, this study implies transitivity. This implies that if the mixture of A is preferable to B, and B is preferable to C, then A is preferable to C as well. Similarly, if the consumer is oblivious to the A and B, and B and C combination, then the consumer is oblivious to the A and C combinations.

8. Consistency of selection: There is consistency in the actions of buyers. It means that if a customer chooses a combination of products to B at any given time, then the combination of B would not be preferred to A at another time.

9. Non-satiety: A customer has no goods in excess of the

quantity demanded. The level of satiety he does not achieve. Consumers prefer a good quantity over a smaller quantity.

10. Weak Ordering :

The study of the IC is based on the 'Weak Ordering' preference hypothesis method. It means that for two variations, there is a risk of the customer becoming indifferent.

The poor order thus accepts the relationship between preference and indifference. The user may, for instance, prefer A to B, or B to A, or maybe indifferent to A and B.

Strong ordering, on the contrary, suggests that only the relation of choice will occur. A is preferred to B or B is preferred to A, without the probability of ignorance between A and B by the customer.

Thus, only the relation of choice is admitted by the strong ordering. If a consumer is given to choose from two combination of A and B, the strong order means that he prefers A to B, while the weak order means that B is not preferred to A, which implies that the consumer either prefers A to B or is indifferent to A & B.