

UTILITY ANALYSIS

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- Want – satisfying capacity of a good is called utility.
- Now the question is how a consumer should spend his limited income on different goods and services so that he may get maximum satisfaction or that he may be in equilibrium ? Economists give three theories .
- **Cardinal Utility Analysis**
- **Ordinal Utility Analysis or Indifference Curve Analysis**
- **Revealed Preference Analysis**

Cardinal Utility Analysis

- This analysis was developed by Dupit , Gossen , Walras , Menger and Jevons etc. In the twentieth century Marshall and Pigou further elaborated cardinal utility analysis. Fisher has used the term **Util** .

Meaning and Definition of Utility

- The term utility in economics is used to denote that quality in a commodity or service by virtue of which our wants are satisfied. In other words, want – satisfying power of a good is called utility.
- In the words of Hibbdon, "Utility is the quality of a good to satisfy a want"

Features of Utility

- Utility is Subjective
- Utility is Relative
- Utility is not Essentially Useful
- Utility is independent of Morality
- Utility is different from Satisfaction

Assumptions of Utility

- Rational consumer
- Cardinal Utility
- Independent Utility
- Marginal Utility of Money is Constant
- Divisibility
- Diminishing Marginal Utility
- Total Utility Depends on Quantities of Individual Commodities.

Concepts of Utility

- Initial Utility
- Total Utility
- Marginal Utility
 - Positive Marginal Utility
 - Zero Marginal Utility
 - Negative Marginal Utility

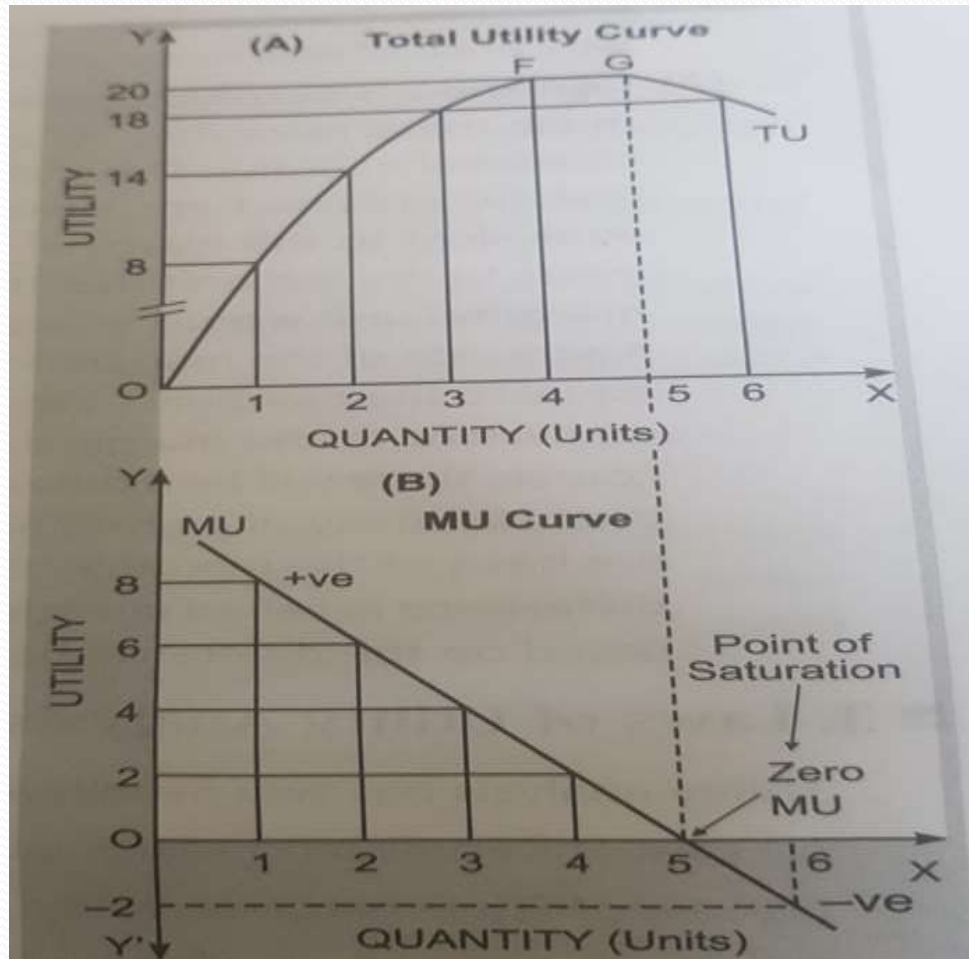
Relation between Total Utility and Marginal Utility

Relationship of these concepts

Table 1. Relation between Total Utility and Marginal Utility

Quantity	Total Utility	Marginal Utility	Description
0	0	—	
1	8	$8 - 0 = 8$	Positive MU
2	14	$14 - 8 = 6$	TU is increasing
3	18	$18 - 14 = 4$	TU is increasing
4	20	$20 - 18 = 2$	TU is increasing
5	20	$20 - 20 = 0$	Zero MU, TU is maximum
6	18	$18 - 20 = -2$	Negative MU, TU is decreasing

Relation between Total Utility and Marginal Utility



Laws of Utility Analysis

- Utility analysis has two main laws
- Law of Diminishing Marginal Utility
- Law of Equi – Marginal Utility

Law of Diminishing Marginal Utility

- Law of Diminishing Marginal utility is the foundation stone of utility analysis . This law is used in our daily life. At a given time when we go on consuming additional units of a commodity , other things being equal, goes on diminishing in relation to the preceding unit.

Assumptions

(1) Assumptions

Application of any law of Economics is subject to fulfilment of certain conditions. Such conditions are called assumptions of the law. Definition of every law contains the clause 'other things being equal'. This clause is an epitome of these assumptions. In the absence of these assumptions the law does not apply. Main assumptions of this law are as follows:

- (i) Utility can be measured in the cardinal number system.
- (ii) Marginal utility of money remains constant.
- (iii) Marginal utility of every commodity is independent.
- (iv) Every unit of the commodity being used is of same quality and size.
- (v) There is a continuous consumption of the commodity.
- (vi) Suitable quantity of the commodity is consumed.
- (vii) There is no change in the income of the consumer.
- (viii) There is no change in the price of the commodity and its substitutes.
- (ix) There is no change in the tastes, character, fashion and habits of the consumer.

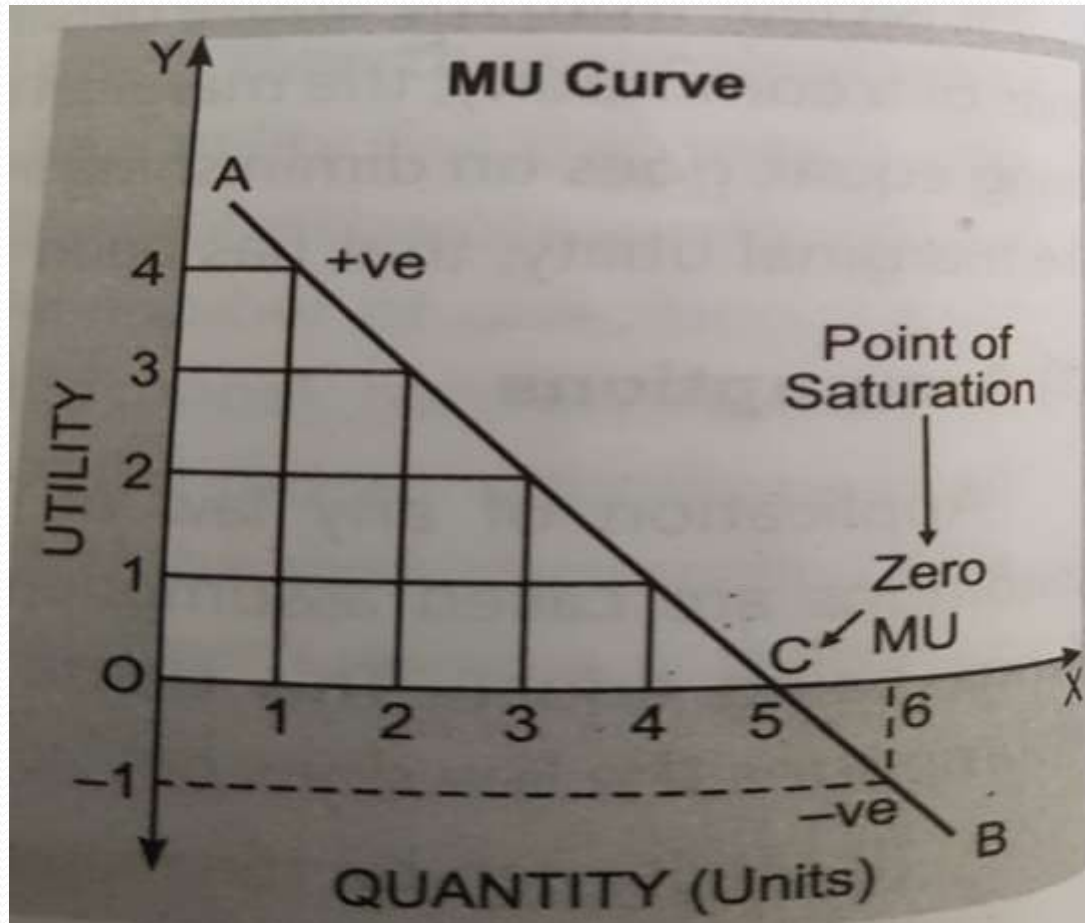
Law of Diminishing Marginal Utility

This law can be explained with...

Table 2. Law of Diminishing Marginal Utility

No. of Ice Cream Cups	Marginal Utility
First	4
Second	3
Third	2
Fourth	1
Fifth	0
Sixth	-1

Law of Diminishing Marginal Utility



Exceptions

- Curious and Rare Things
- Misers
- Good Book or Poem
- Drunkards
- Initial Units

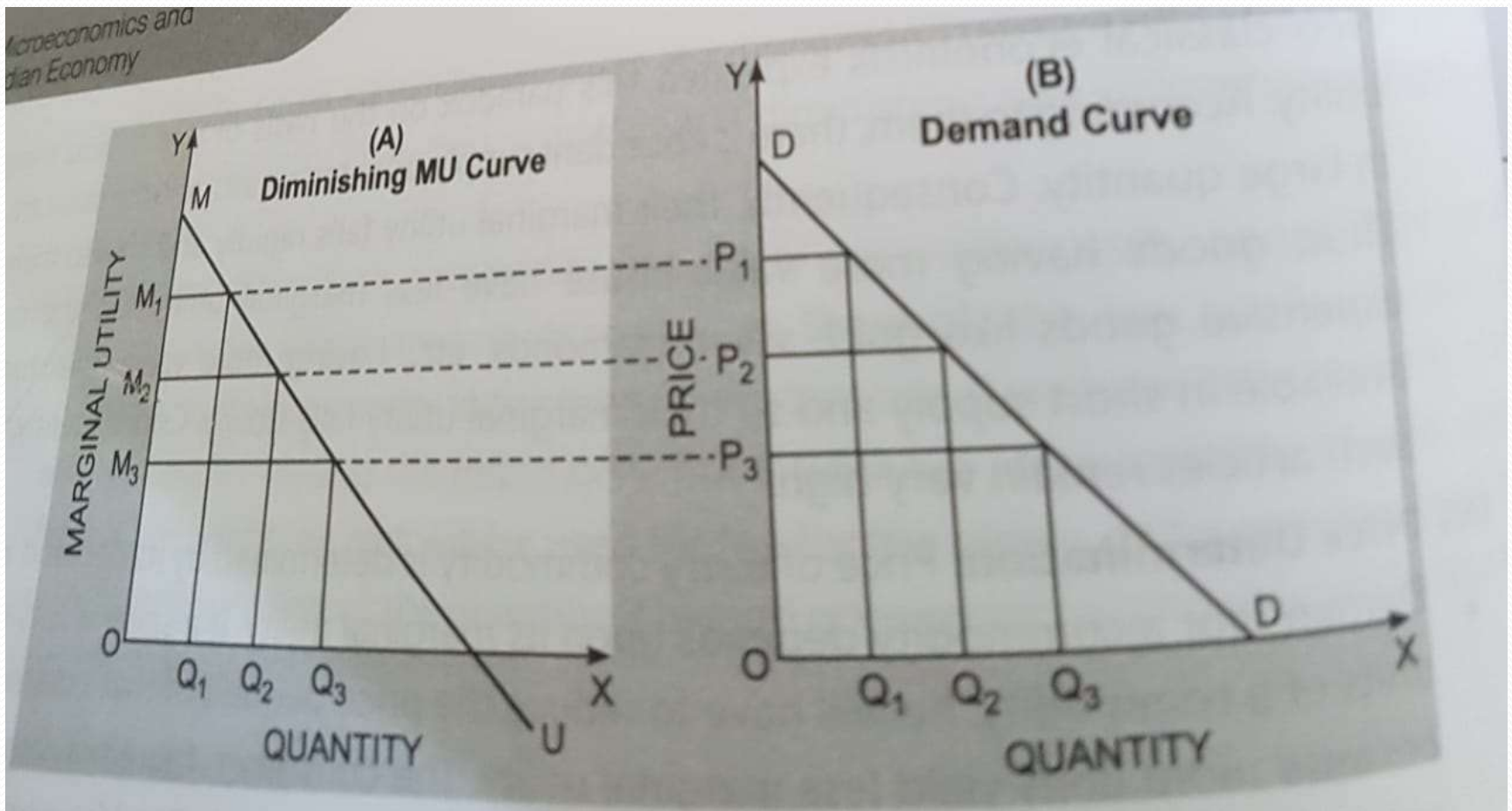
Causes of its Application

- Commodities are Imperfect substitutes
- Satiability of Particular Wants
- Alternative Uses

Importance of the Law

- Basis of the Laws of Consumption
- Variety in Production and Consumption
- Difference between Value-in-use and Value – in –use-Exchange
- Price Determination
- Basis of Progressive Taxation
- Advantage to the Consumer
- Basis of Redistribution of Wealth and Income

Derivation of Demand Curve With The Help of Law of Diminishing Marginal Utility



Criticism

- Cardinal measurement of utility is not possible
- Marginal utility of Money is not constant
- Every commodity is not an independent commodity
- Marginal Utility cannot be estimated in all conditions
- Unrealistic Assumption

Law of Equi-marginal Utility

- The law states that to get maximum satisfaction , a consumer should spend his limited income on different commodities in such a way that the last rupee spent on each commodity yields him equal marginal utility.
- $MU_1 = MU_2 = MU_3$

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Law of Equi-Marginal Utility

Table 3. Law of Equi-marginal Utility

Rupees Spent	MU of Mangoes	MU of Milk
1st	12 ✓	10 ✓
2nd	10 ✓	8 ✓
3rd	8 ✓	6 ✓
4th	6 ✓	4 ✓
5th	4 ✓	2 ✓

Law of Equi-Marginal Utility

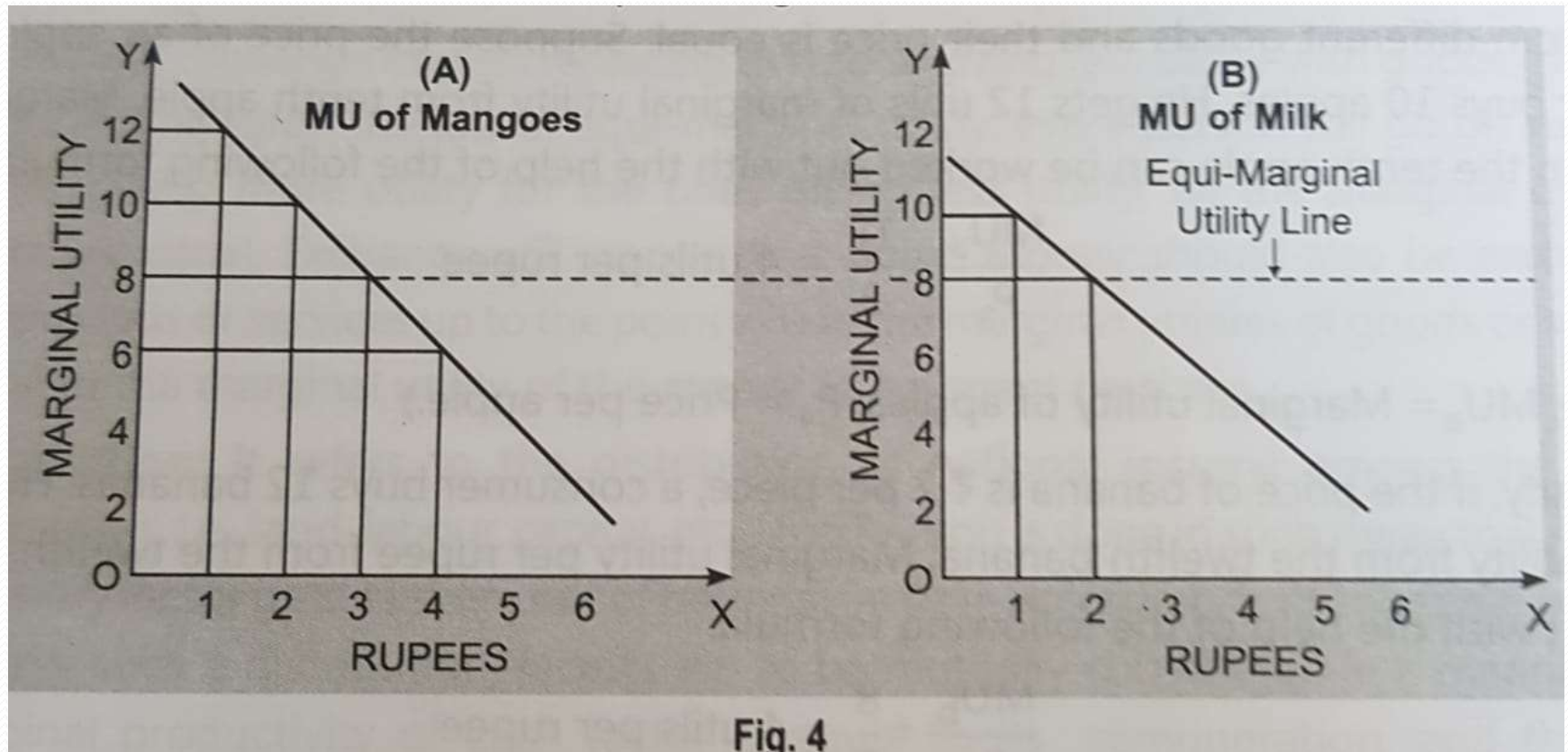


Fig. 4

Importance of the Law

- Consumption
- Production
- Exchange
- Distribution
- Public Finance
- Distribution of Income between Saving and Consumption
- Optimum Distribution Of Commodities
- Distribution of Assets

Criticism

- Consumer are not fully Rational
- Consumer is not Calculating
- Shortage of goods
- Influence of fashion , Custom and habits
- Ignorance of the consumer
- Indivisibility of goods
- Constant income and price
- Cardinal Measure
- Constant of utility is not possible
- Cardinal Measurement is not possible