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### **ECONOMIC ANALYSIS**

# What is utility?

- Utility is the want satisfying power of commodity.
- It is a subjective entity and varies from person to person.
- It should be noted that utility is a not the some thing as usefulness.

## Meaning of utility

Utility may not be confused with usefulness as it is purely subjective satisfaction derived from the consumption of a commodity.

#### Example:

water has the ability to slake thirst, pen has ability to write.



#### Definition:

In objective terms, utility may be defined as the "amount of satisfaction derived from a commodity or service at a particular time".

### UTILITY APPROACH

#### Two Types of Approach

- Cardinal Approach
  - The cardinal utility theory says that utility is measurable and by placing a number of alternatives so that the utility can be added.
  - The index used to measure utility is called utils.

#### Ordinal Approach

- The ordinal utility theory says that utility is not measurable but it can be compared.
- Ordinal approach uses the ranking of alternatives as first, second, third and so on.

## Characteristics of utility

- Dependent upon human wants.
- Immeasurable.
- Utility depend upon use.
- Utility is subjective.
- Utility depends upon shape.
- Utility depends upon on knowledge.
- Utility depends upon ownership.

# Concepts of Utility

- Initial Utility Satisfaction Derived from very first unit consumed of any object.
- <u>Total Utility</u> Total Satisfaction derived from the product.
- Marginal Utility- The word Marginal means "Border" or "Edge".

It is the addition made to the total utility by consuming one more unit of a commodity.

## Utility is of two types:

Total Utility

Marginal Utility

### TOTAL UTILITY(TU)

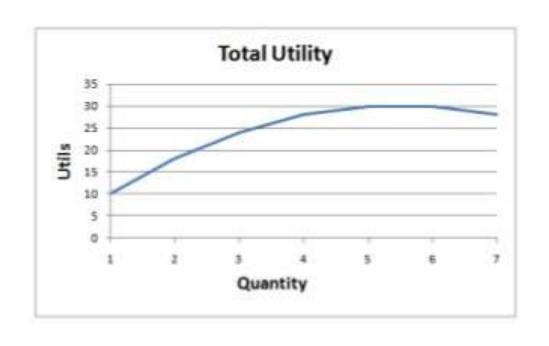
- The <u>sum total of satisfaction</u> which <u>a</u> <u>consumer receives by consuming the</u> <u>various unity of the commodity.</u>
- (The more unit of a commodity he consumes, the greater will be his total utility)

# Total Utility

- The total satisfaction of wants & needs obtained from the consumption of goods & services
- Based on the presumption that the amount of utility generated from the consumption of a good can be explicitly measures
- Hypothetical measure is util

# Curve of Total Utility

Quantity	Total Utility
1	10
2	18
3	24
4	28
5	30
6	30
7	28



# MARGINAL

The term marginal refers to the effects of a small change in consumption.

'Marginal considerations are considerations which concern a slight increase or reduction of the stock of anything which we possess.'

# Marginal

Marginal utility can be defined as a measure of relative satisfaction gained or lost from an increase or decrease in the consumption of that good or service.

#### Examples:

A motor vehicle or A haircut

# MARGINAL UTILITY (MU)

The additional to total utility as a result of consuming one more units of the same good or services.

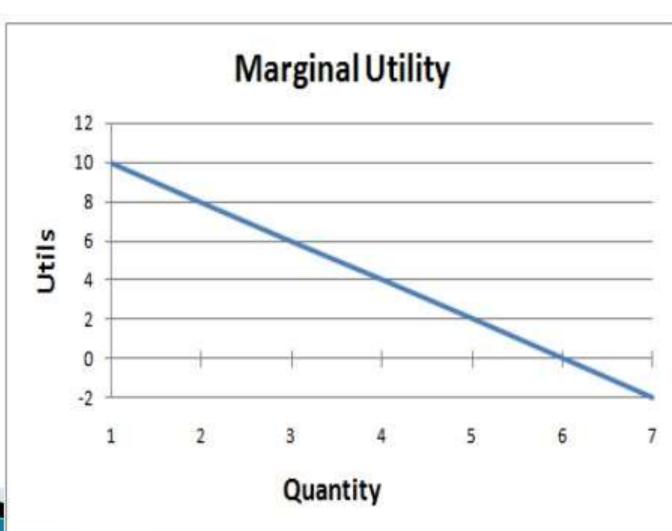
Marginal Utility (MU) = Change in Total Utility

**Change in Total Quantity** 

 $MU = \Delta TU/\Delta Q$ 

## Curve of Marginal Utility

Quantity	Marginal Utility
1	10
2	8
3	6
4	4
5	2
6	0
7	-2



### **Marginal Utility**

The additional satisfaction gained by the consumption of one more unit of something

$$\mathbf{MU}_{n} = \mathbf{TU}_{n} - \mathbf{TU}_{n-1}$$

OR

The change in total utility ( $\Delta TU$ ) resulting from a one unit change in consumption ( $\Delta X$ ).

$$MU = \Delta TU / \Delta X$$

## Marginal utility

Positive Marginal Utility

Zero Marginal Utility

Negative Marginal Utility

### Positive Marginal Utility

If, by consuming additional units of a commodity, total utility increases then the marginal utilities of these units will be Positive

# Negative Marginal Utility

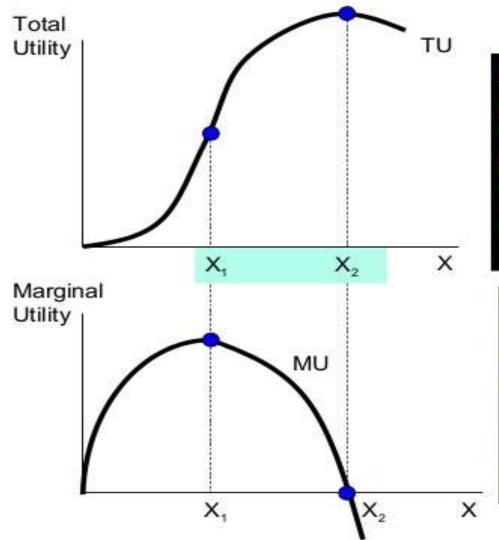
If the consumption of an additional unit of a commodity Causes fall in total utility, it means the marginal utility of that unit is negative

# Zero Marginal Utility

If the consumption of an additional unit of a commodity Causes no change in the total utility, it means the marginal utility of that unit is negative

# Relationship between Total Utility and Marginal Utility

- When marginal utility is positive total utility increases
- When marginal utility zero total utility is at maximum. It is also known as 'point of maximum satisfaction'
- When marginal utility is negative total utility diminishes.



# Graphs of Total Utility & Marginal Utility

X<sub>i</sub> is where marginal utility reaches its maximum.

This is where we encounter diminishing marginal utility.

The slope of TU has reached its maximum; TU has an inflection point here.

X<sub>2</sub> is where total utility reaches its maximum.

MU is zero.

This is the saturation point or satiation point.

After that point, TU falls and MU is negative.