

## Chapter 1

### Nature & Scope of Business Economics

———— \* ———— \* ————

#### Unit 1 - Introduction

What is Economics about?

- Greek word **Oikonomia** which means **Household**
- 19<sup>th</sup> Century Economics was known as "**political Economics**"
- An inquiry into the 'Nature and causes of the wealth of Nations (1776) **The wealth of Nation** by **Adam Smith** (first modern work of Economics)

#### • Two fundamental facts

- Human beings have unlimited wants and
- The means to satisfy these unlimited wants are **relate scarce**

Mean - Resources

Scarce - limited



## Meaning of Business Economics ?

- Decision making refers to the process of selecting an appropriate alternative that will provide the most efficient means of attaining a desired end, from two or more alternative courses of action.
- Decision making is not simple and straightforward. It is highly complex and dynamic.
- Business economics integrates economics theory with business practice.
- Business economics is also referred to as managerial economics.

## Definition of Business Economics ?

- The use of economic analysis to make business decisions involving the best use of an organization's scarce resources. It is also known as Managerial Economics.
- Joel Dean defined business economics in terms of the use of economic analysis in the formulation of business policies. Business Economics is essentially a component of Applied Economics.



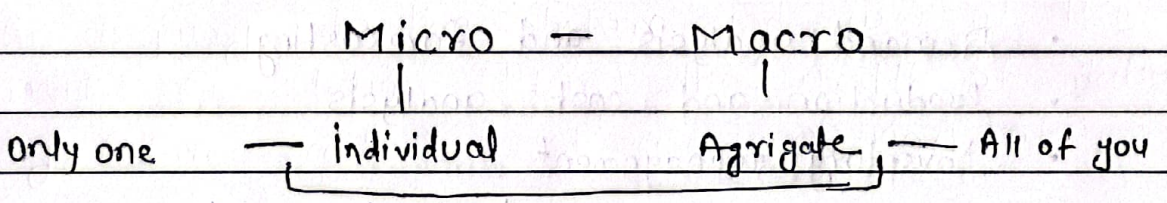
## Nature of Business Economics

### Micro Economics

- study of the behavior of different individual (consumer and firms) and Organisation within an economic system.

### Macro Economics

- Study of the overall economic phenomena or the economy as a whole.



Short trick for understanding

### Describing the nature of Business economics

- Economic world is complex and interdependence
- Economic theories are hypothetical and simplistic in nature
- Business economics is a science
- Based on macro Economics
- Incorporates elements of Macro Analysis
- Business Economics is also an Art
- Use of theory of market and private enterprises
- Pragmatic (practical way of dealings with problems) in approach



- Interdisciplinary in Nature
- Normative in Nature (ought to be, descriptive in nature, involves value judgement)

Positive in nature (what is, no value judgment, cause and effects relationship)

### Scope of Business Economics

1. Microeconomics applied to Internal or Operational issues:- that arise within the organisation and fall within the purview and control of management.

- Demand analysis and forecasting
- Production and cost analysis
- Inventory management
- Market structure and Pricing Policies
- Resource allocation
- Theory of capital and investment decisions
- Profit analysis
- Risk and uncertainty analysis

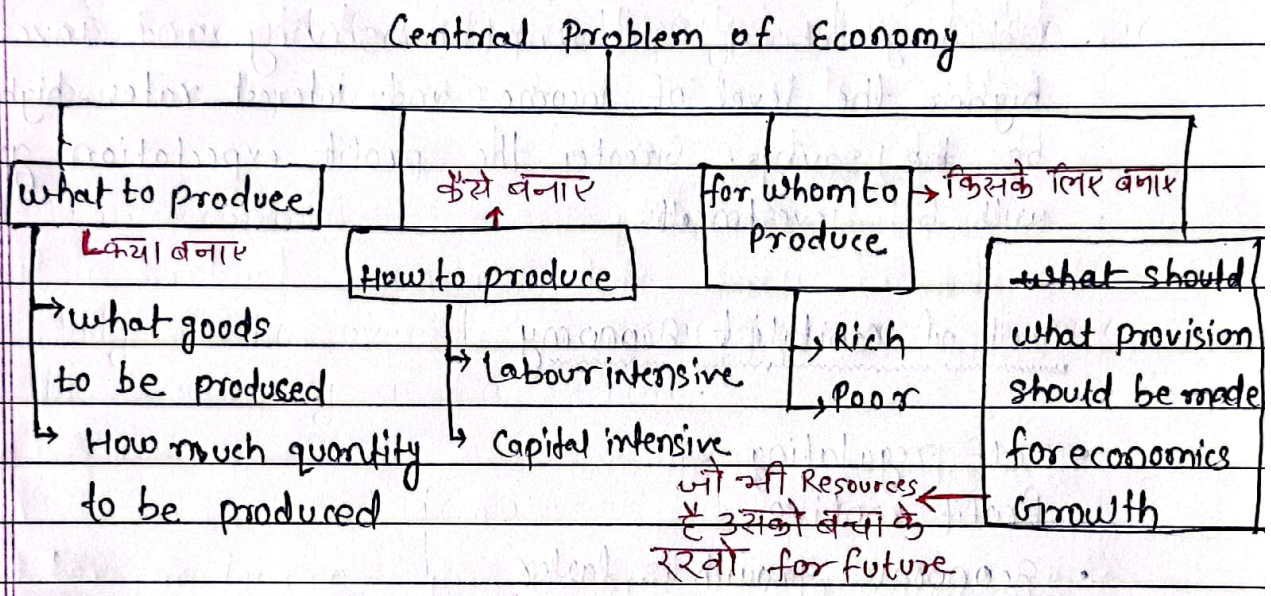
2. Macroeconomics applied to external or Environmental issues

- Economic System
- Business Cycle
- National Income, employment prices, Saving and Investment
- fiscal policy, foreign trade policy, economics policies
- Central banks
- Union and Cooperatives
- Social and political environment



Unit: 2

Basic problem of an Economy



Capitalist Economy (eg: united states and United Kingdom, Hongkong, South Korea)

characteristics:

- (i) Right to private property
- (ii) freedom of enterprise
- (iii) freedom of economic choice
- (iv) Profit motive
- (v) Consumer sovereignty → Power
- (vi) Competition
- (vii) Absence of government interference



How do capitalist economies solve their central problems?

- \* Deciding what to produce - Capital goods
- Deciding how to produce - Capital intensive
- Deciding for whom to produce - rich
- Deciding about consumption, saving and Investment - higher the level of income and interest rates, higher will be the savings. Greater the profit expectation greater will be investment.

### Merit of Capitalist Economy

- Self regulating
- Profit motive
- Economic growth is faster
- optimum allocation of resources
- Operating efficiency
- Cost of production is minimized
- Incentive for efficient economic decision and implementation
- Quality goods due to Competition
- Incentive for innovation
- fundamental right to property and right to freedom
- Democratic framework

Driving force - जितावा काम करो उतना पैसा कमाओ

Democratic - कोई control नहीं कर रहा है



## Demerits of Capitalism

- Economic inequality and social injustice
- Property rights over human rights
- Economic inequalities
- Ignores human welfare
- Income inequality
- Exploitation of labour
- Consumer Sovereignty is myth
- Misallocation of resources (for luxury goods)
- Less of merit goods (education and health)
- Unplanned production
- Enormous waste of productive resources
- formation of monopolies
- Excessive materialism as well as conspicuous and unethical consumption

## SOCIALIST ECONOMY (eg: china, North Korea)

The concept of socialist economy was <sup>introduce</sup> propounded by Karl Marx and Frederic Engels in their work 'the Communist Manifesto' Public in 1848. Socialist economy is also called as Command economy or centrally planned economy.

### Characteristics:

- Collective ownership
- Economic planning
- Absence of consumer choice
- Relatively equal income distribution
- Minimum role of price mechanism or market forces



- Absence of Competition

### Merit of Socialism

- Equitable distribution of wealth and income
- Rapid and balanced economic development
- Better utilization of resources
- Unemployment is minimised
- Co-operative mentality
- Right to work and minimum standard of living
- Social Security

### Demerits of Socialism

- Predominance of bureaucracy, corruption, red tapism
- Restrict freedom of individual
- Right to property not available
- Administered prices are not determined by market forces
- Does not provide incentive
- state monopolies
- Limited freedom of choice

### MIXED ECONOMY (eg; India)

features of Mixed Economy (Private, Public, Combined sectors)  
Merit are same as of capitalist and Socialist Economy

India is mixed economy



## Demerits of Mixed Economy

- Constrained growth of private sector
- Poor implementation of planning
- Higher rate of tax
- Lack of efficiency
- Corruption
- Wastage of resources
- Undue delay in ~~economy~~ economic decisions
- Poor performance of public sectors

ALL IS WELL



CA BOY



## Chapter-2 Theory of Demand and Supply

### Demand

Buy iPhone

	A	B	C
Desire -	Yes	Yes	NO
• Purchasing - Power	Yes	NO	Yes
willingness - to pay	Yes	Yes	NO
	<u>Demand</u>		

Effective Demand = Desire + purchasing power + willingness to pay

- The quantity demand is Always expressed at a given price

Any Commodity at a given point of time for a give price if a Customer is ready to purchase it Constitutes Demand.

### Determinants of Demand:

Demand is influenced by lot of factors through which demands changes from time to time hence it is referred as determinants.



1. Price: Price is the most important determinants which influences demand to a maximum extent.

When Price  $\uparrow$  Demand  $\downarrow$

Price  $\downarrow$  Demand  $\uparrow$



That is inverse/indirect Relationship

i.e. Price is primary factor & Demand is Secondary factor  
or

Demand is Dependent on price (when price changes  
Demand also changes)

The Relationship between price & demand is expressed in a mathematical equation known as

$$D = f(P)$$

Direct

Indirect

D: Demand (Dependent factor)

P: Price (Independent factor)

f: function Relationship



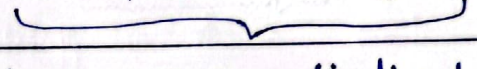
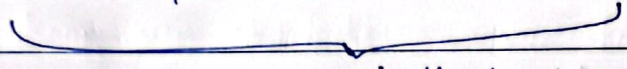
(ii) Price of Related Commodities

Substitute or  
Competing

Complementary

When price  $\uparrow$  Quantities  $\uparrow$   
Price  $\downarrow$  Quantities  $\downarrow$

when price  $\uparrow$  Quantity  $\downarrow$   
price  $\downarrow$  Quantity  $\uparrow$



That is ~~inverse~~ direct Relationship

Ex: Tea & Coffee

Inverse / indirect Relationship

Ex: - Car & petrol

Bread & Butter

(iii) Disposable Income of the Consumer:



## • Defination of Demand

- Quantity of a good or service buyers are willing and able to purchase at various prices over a given time.

## • Beyond desire:

- Demand is more than mere desire
- Real-world constraints like prices and limited means, influence purchasing decisions.

### factors influencing Effective demand

(i) Desire

(ii) ~~willingness~~  
means to purchase

(iii) willingness  
to use those  
means

## • Effective Demand Conditions:

- Backed by purchasing power and willingness to pay

## Quantity Demanded:

- Always expressed at a given price.
- Differs at different prices.



## Nature of Quantity Demanded:

- It's flow, representing a continuous series of purchase over time.
- Expression of Demand:
  - Quantified as "so much per period of time".

## Scope of Demand:

- Various quantities bought during a given period at different prices, income, or prices of related goods

What determines demand?

(i) price of the commodity: The price of a commodity is a fundamental determinant of its demand.

Price  $\uparrow$  Demand  $\downarrow$

Price  $\downarrow$  Demand  $\uparrow$

Indirect/Inverse Relationship



(ii) Price of Related Commodities:

Two type of Price of Related Commodities:

Di 6.

Complementary Goods	Substitute Goods
<p>Defination: Complementary Goods are bought or consumed together such as tea and sugar automobile and petrol or pen and ink.</p>	<p>Substitutes are goods that can be used interchangeably to satisfy the same want like tea &amp; coffee or different brands of toothpaste.</p>
<p>Relation Inverse/ Indirect Relation</p>	<p>Direct Relation or positive Relation</p>
<p>Price <math>\uparrow</math> Quantity <math>\downarrow</math> Price <math>\downarrow</math> Quantity <math>\uparrow</math></p>	<p>Price <math>\uparrow</math> Quantities <math>\uparrow</math> Price <math>\downarrow</math> Quantities <math>\downarrow</math></p>

(iii) Purchasing power and Disposable Income:

- Purchasing power is determined by the level of disposable income.
- The demand for a commodity is influenced by the disposable income of potential Buyers



- Effect of Disposable income:
- An increase in disposable income generally increases the demand for goods & services at any given price.
  - Conversely, a decrease in disposable income tends to lower the quantity demanded at all possible prices.

### Nature of Goods

Normal goods exhibit an increasing demand as consumers' income rises.

Example - include household furniture, clothing, automobiles and consumer durables - long term

Income ↑	Demand ↑	} Direct Relation
Income ↓	Demand ↓	

### Inferior Goods / Low Quality Goods

Example: - ~~Medicine, salt~~

Example: Income increase होता तो Branded thing लेते हैं वैसे Low quality chasma अतः income increase हुआ तो Branded chasma ले लिया.

Limited Demand Increases -

- The quantity demanded for inferior goods increases only up to a certain income level.

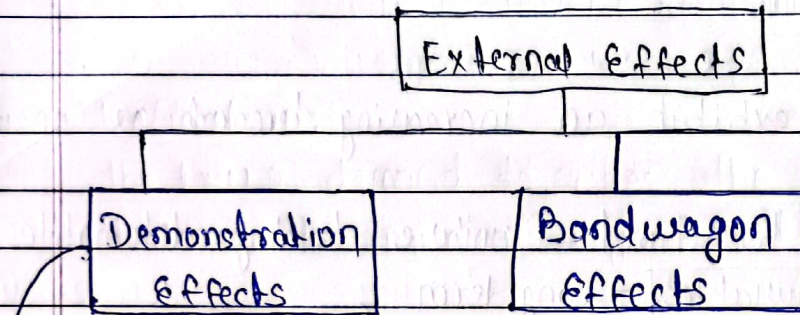
### Essential goods

Necessary things like: - salt, medicine, oil, cooking



### (iv) Tastes and preferences of Buyers:

- Demand is often influenced by the taste and preferences of Buyers, which may change over time.
- Modern or fashionable goods tend to command higher demand compared to older or out-of-fashion items.



- Coined by **James Duesenberry**, it refers to the desire to emulate the consumption behavior of others.

• People may buy things based on seeing others with similar items leading to a desire to own those goods as well  
(किसी की copy करना)

• Other are also consuming it. Reflects the desire to be fashionable stylish or to conform to a desired social group/associated  
(सबके पास है तो मैं भी खरीद लेता हूँ)



## Snob Effects

- When a product become widely popular, some individuals may reduce or altogether stop consuming it to maintain exclusivity

(सबसे अलग दिखना)

Like:- Technical ब्रुवोज़ का (iPhone)

## Veblen Effects

- Named after economist **Thorstein Veblen** it highlight the impact of conspicuous consumption of demand luxury goods that become more desirable as their prices increase due to the perceived status associated with owning them.
- (Status maintain करना)

## Consumer Expectation

Consumer expect increase in future prices, increase in income and shortages in supply, more quantities will be demanded

other factors

### 1. Size of population:

- Larger population generally leads to a higher number of buyers
- Quantity demanded in the market tends to be higher at every price when population is larger
- Conversely, low population size is associated with lower market demand.



## The Law of Demand

- Prof. Alfred Marshall

Quantity ↑ Price ↓

Quantity ↓ Price ↑

That is inverse Relation

- Definition:

The law of demand describes the inverse relationship between the price of a good and the quantity demanded

- Alfred Marshall's Definition:

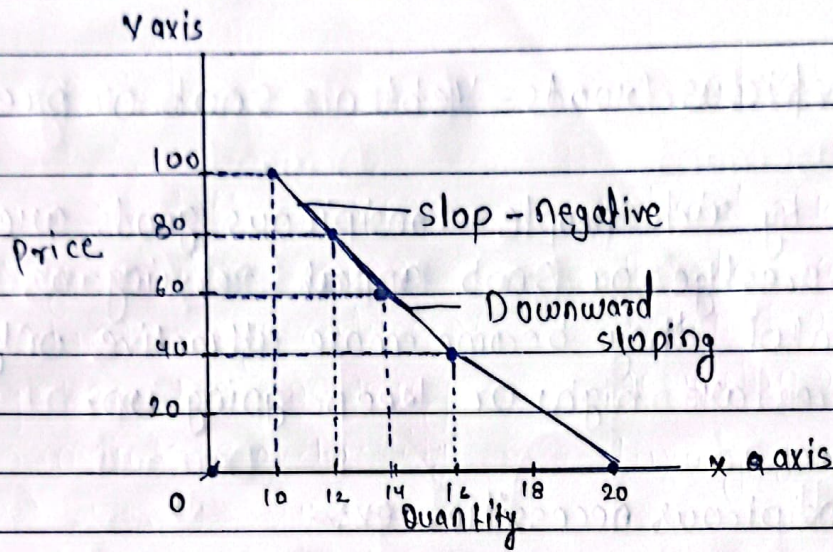
"The greater the amount to be sold the smaller must be the price"

### Demand schedule

Price	Quantity
100	10
80	12
60	14
40	16
0	20



## Demand Curve



## Inverse Relations

- Market Demand: individual customer made by Market Demand

## Quantity Demand

Price	A	B	Market Demand
0	5	4	9
10	4	3	7
20	1	0	1
30	0	0	0

- Increase in Demand - Rightward shift
- Decrease in Demand - Leftward shift



## Exception:

### (i) Conspicuous Goods - Veblen & Snob or prestige

- Use by rich people. Conspicuous goods are articles of prestige or snob appeal serving as status symbol. They become more attractive only if their prices are high or keep going up.

### (ii) Conspicuous necessities: ~~ex~~

ex:- Internet, TV, Refrigerator

$P \uparrow D \uparrow$

### (iii) Giffen Goods: Giffen goods are inferior goods. But all inferior goods are not Giffen goods.

Price  $\uparrow$  Demand  $\uparrow$

> Sir Robert Giffen

### (iv) Future expectation about:

future में किसी चीज का Price बढ़ जाएगा जैसे iPhone लेना तो आज ही ले लेंगे



(vi) Demand for necessities: Essential goods

ex:- clothing, Cook

(viii) Speculative goods

### Rational of the Law of Demand

(1) Price Effects: (i) Substitution Effect

(ii) Income Effect

• Goods are close substitutes

Like-Pen: Nataraj pen & Link slyser

Income effect:- Price ↓ Demand ↑

(2) Utility Maximising behaviour of Consumer

• Maximise his Satisfaction

(3) Arrival of new Consumers:

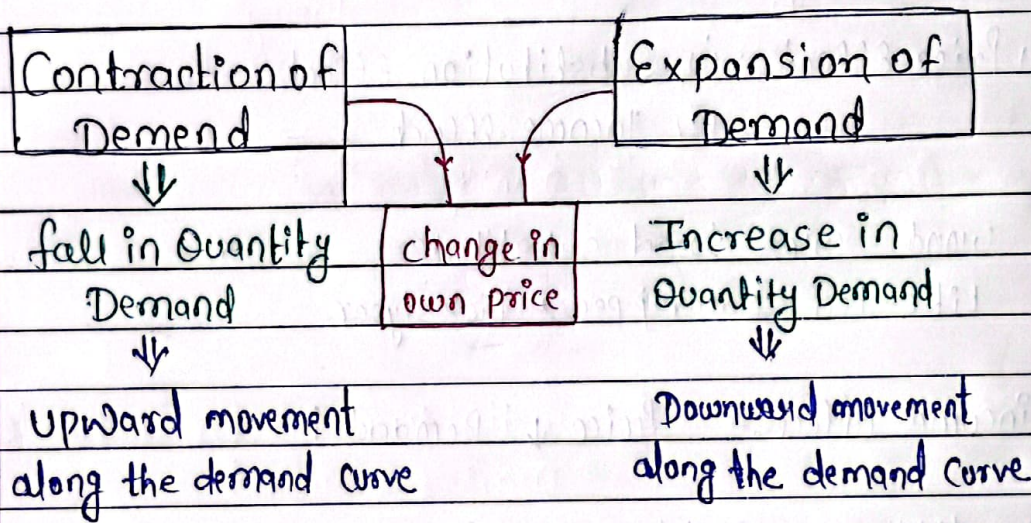
Price ↓ Demand ↑



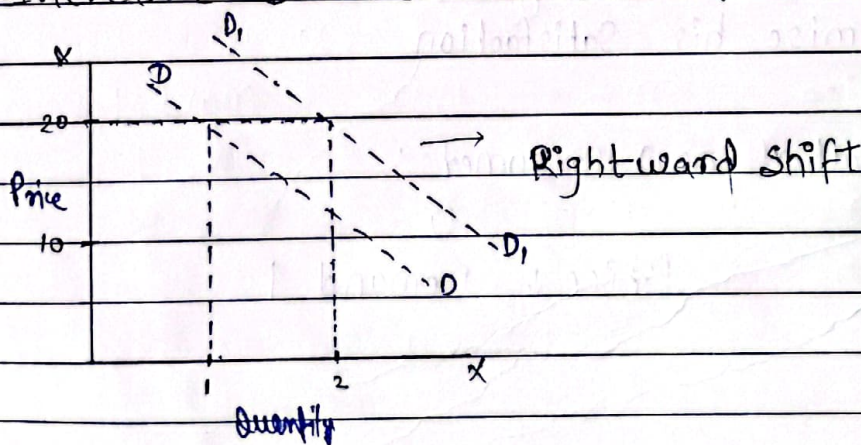
## Expansion & Contraction of Demand

← ~~Contraction of Demand~~ - ~~fall in Quantity Demand~~

• Quantity Demand at individual / Particular prices

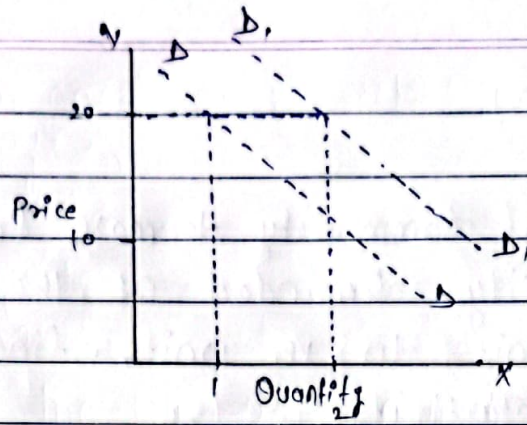


Increase & Decrease in Demand - due to other factors



Buyers' income increases etc.  
Increase in Demand





- Consumer of income कम होगई  
due to other factors
- Leftward shift
- Decrease in demand

### Elasticity of Demand



## Types of Elasticity

1] Unit Elasticity  $E_p = 1$

% change in  $QD =$  % change in price

2] Perfect inelastic

$E_p = 0$  (Gas, )

% change in  $QD = 0$

3] Perfectly Elastic

$E_p = \infty$

% change in Price = 0 (Coc & Pepsi)

4] Relatively / Elastic

$E_p > 1$

% change in  $QD >$  % change in Price

Nominator  $>$  Denominator

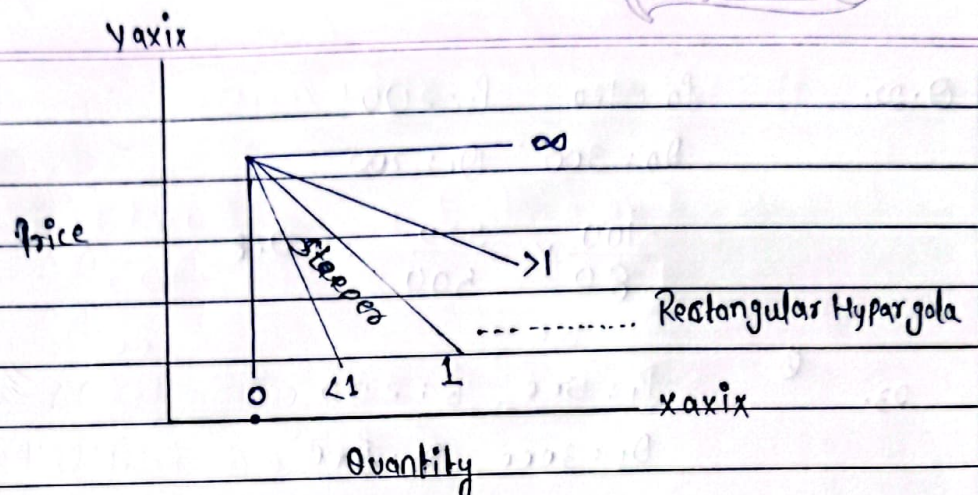
5] Inelastic [Relatively]

$E_p < 1$

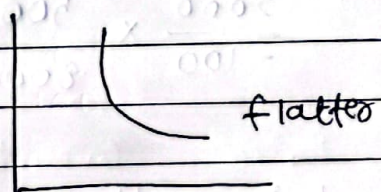
% change in Price  $<$  % change in  $QD$

Denominator  $>$  Nominator





Perfectly inelastic  
Parallel to y axis



Perfect elastic  
Parallel to x axis

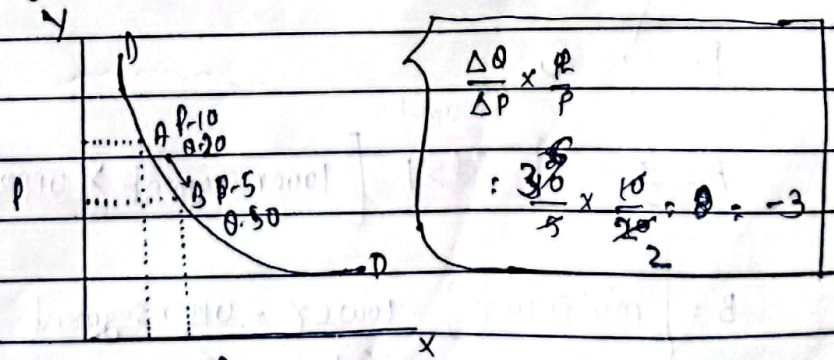
x change but y not change

### 2] Point Elasticity

infinitesimal - extreme

$$\text{Derivation } \epsilon_p = \left[ \frac{-DQ}{DQ} \times \frac{P}{Q} \right]$$

### Arc Elasticity



$$\epsilon_p = \left[ \frac{Q_2 - Q_1}{P_2 - P_1} \times \frac{P_2 + P_1}{Q_2 + Q_1} \right] = \frac{P_2 = 100 \quad Q_1 = 50}{P_2 = 150 \quad Q_2 = 20}$$

$$\text{Arc method} = \frac{-30}{50} \times \frac{350}{70} = -2.1428$$



Q. 22.

$$P_0 = 120 \quad P_1 = 200$$

$$Q_0 = 300 \quad Q_1 = 200$$

$$\frac{-100}{80} \times \frac{320}{500} = -0.8$$

23.

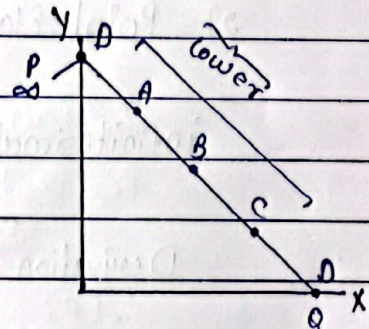
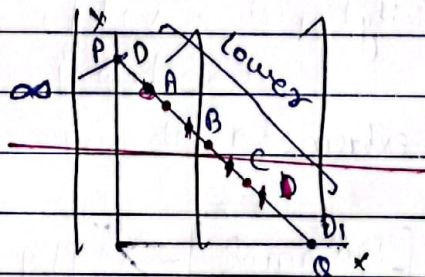
$$P_1 = 300 \quad P_2 = 200$$

$$Q_1 = 3000 \quad Q_2 = 5000$$

$$\frac{-100}{2000} \times \frac{500}{8000} = 0.125 \text{ (in)}$$

Geometric Method [use - linear Demand curve]

elastic    unit    inelastic



$$E_p = \frac{\text{Lower Segment}}{\text{Upper Segment}}$$

suppose

$$P = \frac{10}{0} = \infty$$

$$A = \frac{Q}{2} = 3 \quad E_d > 1 \quad \left[ \begin{array}{l} \text{greater} \\ \text{lower segment} > \text{upper segment} \end{array} \right]$$

$$B = \left[ \text{midpoint} \right] \quad \text{lower} = \text{upper segment}$$

$$E_d = 1 \quad \text{unitary}$$

$$C = \text{lower segment} < \text{upper segment}$$

$$E_d < 1$$

less



$\theta$  : Lower segment = 0  
Upper segment = 8

$E_p = \frac{\theta}{8} = 0$  ← Perfectly inelastic

Total outlay Method means Expenditure

Suppose

			Expenditure
1)	P = 100	Q = 20	2000
	↓ 80	↑ 25	2000

2)	P = 100	Q = 20	Exp = 2000
	↓ 125	↑ 16	2000

$E_p = 1$   
Unitary Elastic

			Exp
2)	P = 50	Q = 100	5000
	↓ P = 40	↑ Q = 110	4400 ↓

Price Effect > Quant Effect - inelastic

$E_d < 1$

Price & Exp - Direct relation  
 $E_d < 1$

			Exp
3)	P = 50	Q = 100	Exp = 5000
	↓ 40	↑ 150	= 6000 ↑

Elastic > 1  
 $E_d > 1$

Price & Exp: Inverse Relation  
 $E_d > 1$

$E_p$  या  $E_d$   
लिनव सकोई



## Revenue

Price effect	Quantity Effects	Revenue
↑ 50	100 —	5000 ↓
<u>60</u>	<u>80</u> —	4800
<u>R = ↑</u>	<u>R = ↓</u>	Rev ↓

### Indirect Relation

#### Elastic

1. Price Expenditure / Rev - Inverse  
Elastic  $> 1$   
Quantity Depen
2. Price Exp / Rev - Direct  
inelastic  $< 1$   
Price depend
3. Price - Exp / Rev - same  
Unitary Elastic  
 $Ed = 1$



# Income elasticity

% method

Proportionate method

$$E_i = 2$$

$$E_i = \frac{\% \text{ change in Demand}}{\% \text{ change in Income}}$$

$$\frac{Q_1 - Q}{Q} \times 100 \div \frac{Y_1 - Y}{Y} \times 100$$

$$\frac{\Delta Q}{Q} \times \frac{Y}{\Delta Y} \times 100$$

$$\left[ \frac{\Delta Q}{Q} \times \frac{Y}{\Delta Y} \right]$$

$$E_i = 3$$

Original quantity = 100

" Income = 10,000

New income = 8000

$$E_i = \frac{100 - 100}{100} \times 100$$

$$\frac{3}{1} = \frac{Q_1 - 100}{100} \times \frac{2000}{8000}$$

$$\frac{Q_1 - 100}{Q_1 - 3}$$

$$3 = \frac{\Delta Q}{Q} \times \frac{Y}{\Delta Y}$$

$$3 = \frac{\Delta Q}{100} \times \frac{10,000}{-2000} = -60$$

$$Q_1 - 100 = -60$$



## Proportionate Method

Ex -

Income		Demand
₹ 100,000	20%	20,000
200,000	20%	24,000

Income increase 100%

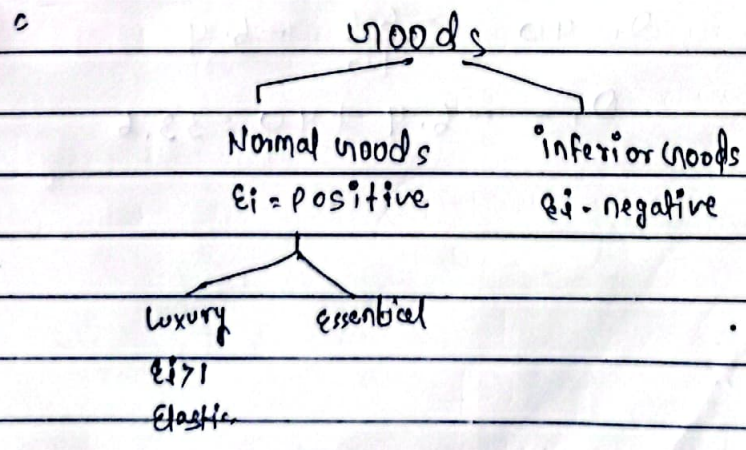
$$E_i = \frac{\% \text{ change in Demand}}{\% \text{ change in Income}}$$

$$= \frac{4000}{100000} \times \frac{100000}{20000} = 0.2$$

Income - 1000	↑ 50%	Quantity	% Spent
1500		100	
	10%	150	

Ex 1

$$\frac{50}{500} \times \frac{1000}{100} = 1$$



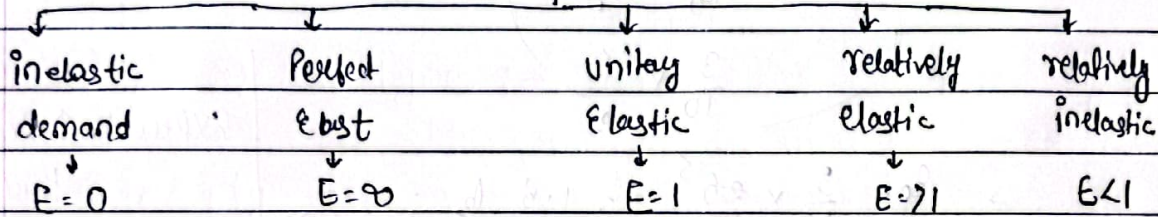


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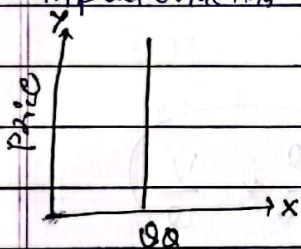
$$\frac{2000}{-100} \times \frac{500}{8000} = 1.25$$

for better understanding

### Types of Elasticity

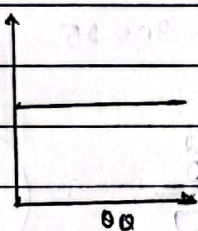


in change in variable does not have any impact on demand



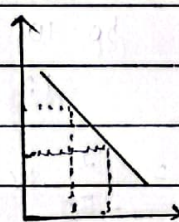
Curve will be straight Parallel to Y axis

if change is variable has huge impact on demand



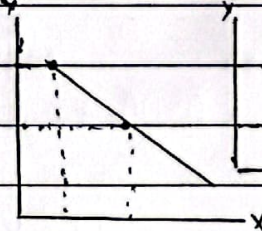
Curve will be parallel to axis

if change in variable has equal important impact on demand



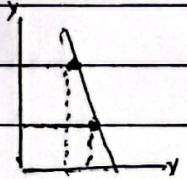
Curve will be rectangular hyperbola

if change in variable has greater impact on demand



Curve will be flat

if change in variable has less impact on demand



Curve will be steeper

#### Particulars

#### Effect on Elasticity

(1) close substitutes available

Highly elastic

(2) Petrol

inelastic

(3) Many substitutes

More elasticity

(4) Spent more on commodity

Highly elastic

(5) Necessity

inelastic

(6) Luxury goods

elastic

(7) Product can be used for multiple things

elastic

(8) Expensive & Cheap [very]

inelastic

(9) consume has habit

inelastic

(10) Tied goods

inelastic



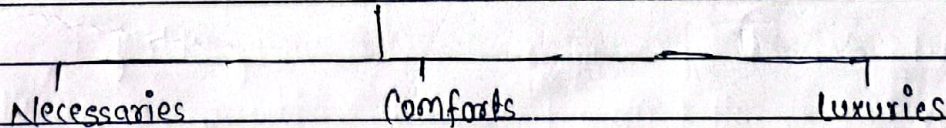
## Chapter-2 [Unit II] Theory of Consumer Behaviour

### Meaning of Human Wants

- The term 'want' refers to wish desire or motive to own or land use goods and services that give satisfaction
- wants may arise due to physical, psychological or social factors
- Since the resource are limited we need to make a choice between the urgent wants and the not so urgent wants.

Many points on Human wants so you can <sup>read</sup> 2/3 time ~~read~~  
this topic - from [ICAI - MAT]

### • Classification of wants



- Necessaries are those which are essential for living
- Necessaries are further subdivided into

- Necessaries for life or existence
- Non



Wants are of 3 types:—

1). Necessity

- Necessity for life — water, food, & clothing
- Necessity for efficiency — Good food
- Conventional Necessity — Habit

Comforts:—

Comforts make life comfortable and satisfying. Comforts are less urgent than necessities.

- Tasty and wholesome, food, good house, clothes that suit different occasions, audio-visual and labour saving equipments etc make life more comfortable.

Luxuries:—

Luxuries are those ~~want~~ wants which are

↓  
Superfluous

↓  
Expensive

They are not essential for living. Item such as expensive clothing, exclusive vintage cars, classy furniture etc.

Remember— Some people for comfort or luxury are necessity

Comfort or luxury at certain point of time become a necessity —



Utility :- कोई भी goods/service consume करने में जो Satisfaction मिलता है - That is utility

- (1) utility is want Satisfying power of Commodity
- (2) utility  $\neq$  usefulness
- (3) utility = anticipated Satisfaction
- (4) utility is a subject Context
- (5) A person can have utility without consumption eg.-gift
- (6) in Economics the concept of utility is ethically natural

### Utility

~~Utility~~

Marginal utility /	Indifference/
Cardinal Approach	Ordinal Approach
Number-1, 2, 3	Order- 1st, 2nd, 3rd

Alfred Marshall

Hicks & Allen

### Marginal utility

### Total utility

• utility derived by consuming a product is called Marginal utility  
formula -  $TU_n - TU_{n-1}$

• Assuming utility is measurable & additive sum of all Marginal utility is total utility

$$TU = MU_1 + MU_2 + \dots + MU_n$$

when TU is maximum and constant,  $MU = 0$  [zero]

when TU starts decreasing MU is Negative

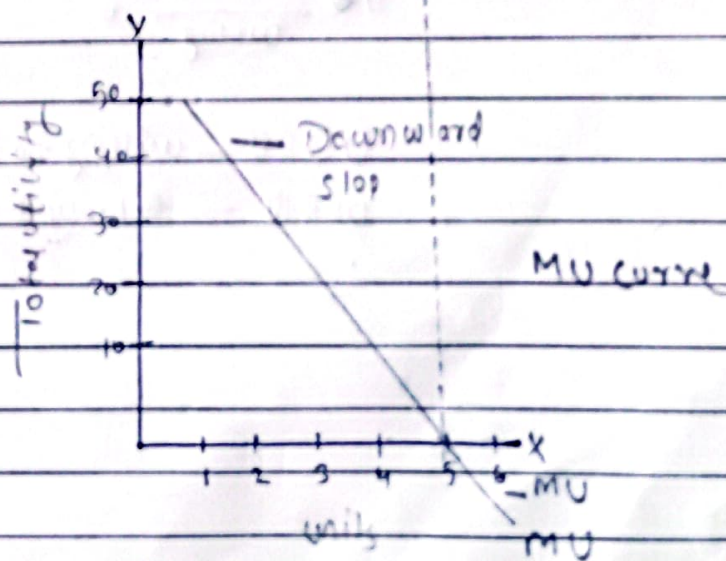
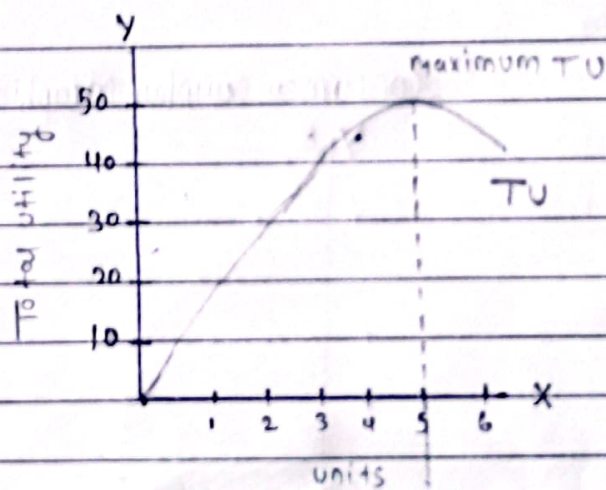


Law of diminishing Marginal utility:- [Alfred Marshall]

- As consumer increase the consumption of goods his MU decline
- As the more he have of a goods his utility from that good goes down

Equilibrium:- Maximum Satisfied  
Consumer Equilibrium [Single goods]

TU = Sum of MU maximum





Indifference Curve / Ordinal :- Hicks & Allen

- Isoutility or equal utility
- Same level of satisfaction

Indifference - Realistic

Consumer is Rational

IC curve origin to according convex hote  $\frac{e}{f}$

Reason - MRS



### Unit : 3

### Supply

Supply offer to a quantity of goods supplied at the given price.

Supply has direct relationship with price i.e if price goes up supply goes up vice-versa

### Determinants of supply

Price of commodity

Technology

Price of related goods

Factor of production cost

### Law of Supply

- If price goes up, supply goes up, other things being equal
- There is direct relationship of price and supply

### Supply schedule

Table showing

Price	Supply
10	20
20	40
30	60
40	80

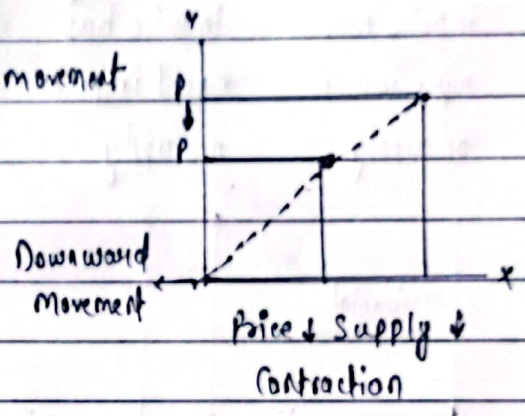
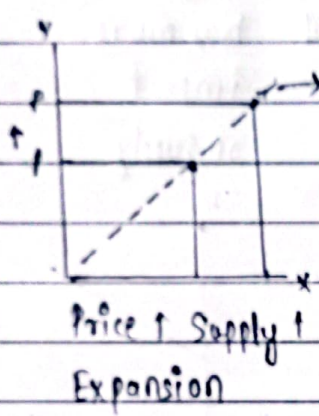


Movement / shift

Quantity Supply  
Price-supply

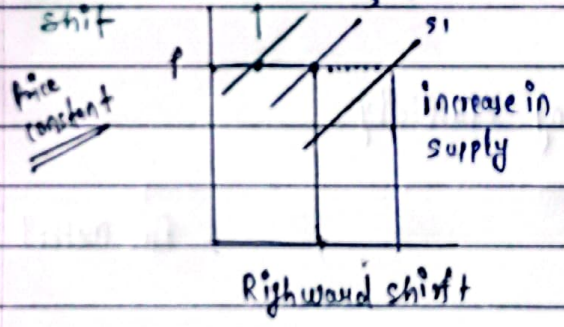
Supply  
other than price

# Increase or decrease supply



# Shift in supply curve

leftward ← decrease in supply  
shift



Elasticity of supply

↳ Degree of Responsiveness

Price elasticity  $P \uparrow S \uparrow$   
 $P \downarrow S \downarrow$

↳ Responsiveness of Quantity Supplied to change in price

$$\frac{\Delta Q}{Q} \div \frac{\Delta P}{P} = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$

$Q_x = P_1 = 50 \quad P_1 = 60$   
 $Q_1 = 100 \quad Q_2 = ?$

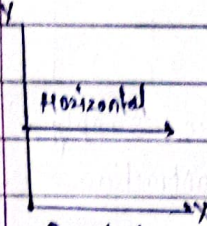
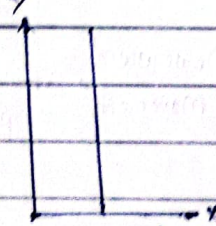
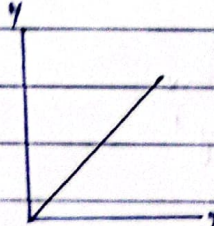
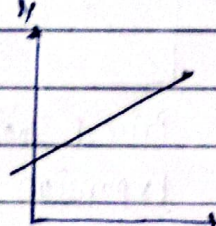
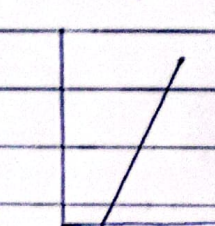
$E_s = 3$

$$E_s = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P} = 3 = \frac{Q_2}{100} \times \frac{60}{50}$$

$$Q_2 = \frac{3 \times 100 \times 50}{60} = 250$$



## Types of Elasticity

Perfectly elastic	Perfectly inelastic	unitary elastic	Relatively elastic	Relatively inelastic
$E = \infty$	$E = 0$	$E = 1$	$E > 1$	$E < 1$
which change in price has huge impact on supply	which change in price has equal impact on supply	either change in price equal impact on supply	change in price has more impact on supply	change in price has less impact on supply
				

## Measuring Elasticity

<p>% Method</p> $\frac{\% \text{ change in } Q_s}{\% \text{ change in Price}}$	<p>Arc Method</p> $\frac{Q_1 - Q_2}{Q_1 + Q_2} \times \frac{P_1 + P_2}{P_1 - P_2}$
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### # Equilibrium Quantity and Price

where  $Q_d = Q_s \rightarrow$  we call it equilibrium quantity  
 Price at e. point  $y$

