

# Introduction to Economics

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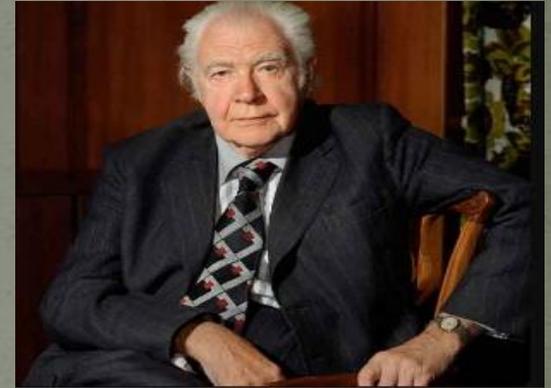
# Dedicated to Great Economists



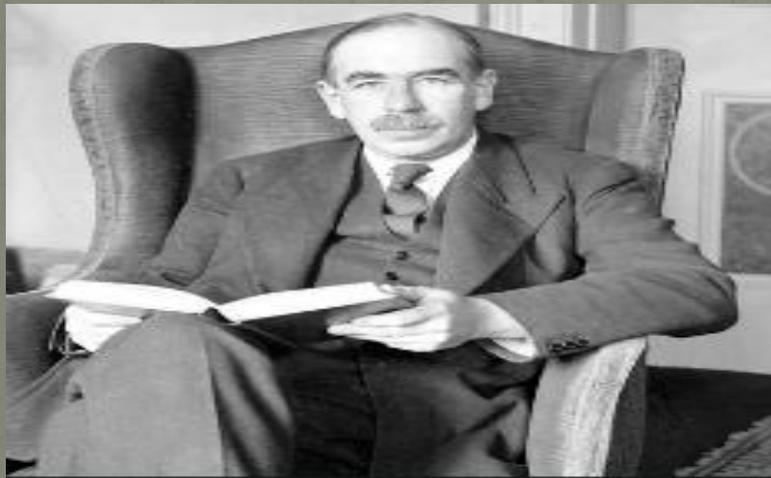
Adam Smith



Alfred Marshall



Lionel Robbins



J.M. Keynes



Paul Samuelson

# Schools of Economics

Schools	Head of the School	Definition of Economics	Book & Year of Publication
Classical	Adam Smith	Wealth Definition	<i>"An enquiry into the Nature &amp; Causes of the Wealth of Nations"</i> (1776)
Neo-Classical	Alfred Marshall	Welfare Definition	<i>"Principles of Economics"</i> (1920)
Neo-Classical	Lionel Robbins	Scarcity Definition	<i>"An Essay on the Nature &amp; Significance of Economic Science"</i> (1931)
Keynesian	Lord J.M Keynes	Controlled	<i>"The General Theory on Employment ,Interest And Money"</i> (1936)
Modern	Paul A. Samuelson	Growth Definition	Economics (1948)

# Scope of Economics

- Economics-An Art or Science
- Positive Economics & Normative Economics

# Central Problems of Economy

What to produce?

How to produce?

For whom to produce?

Where to produce?

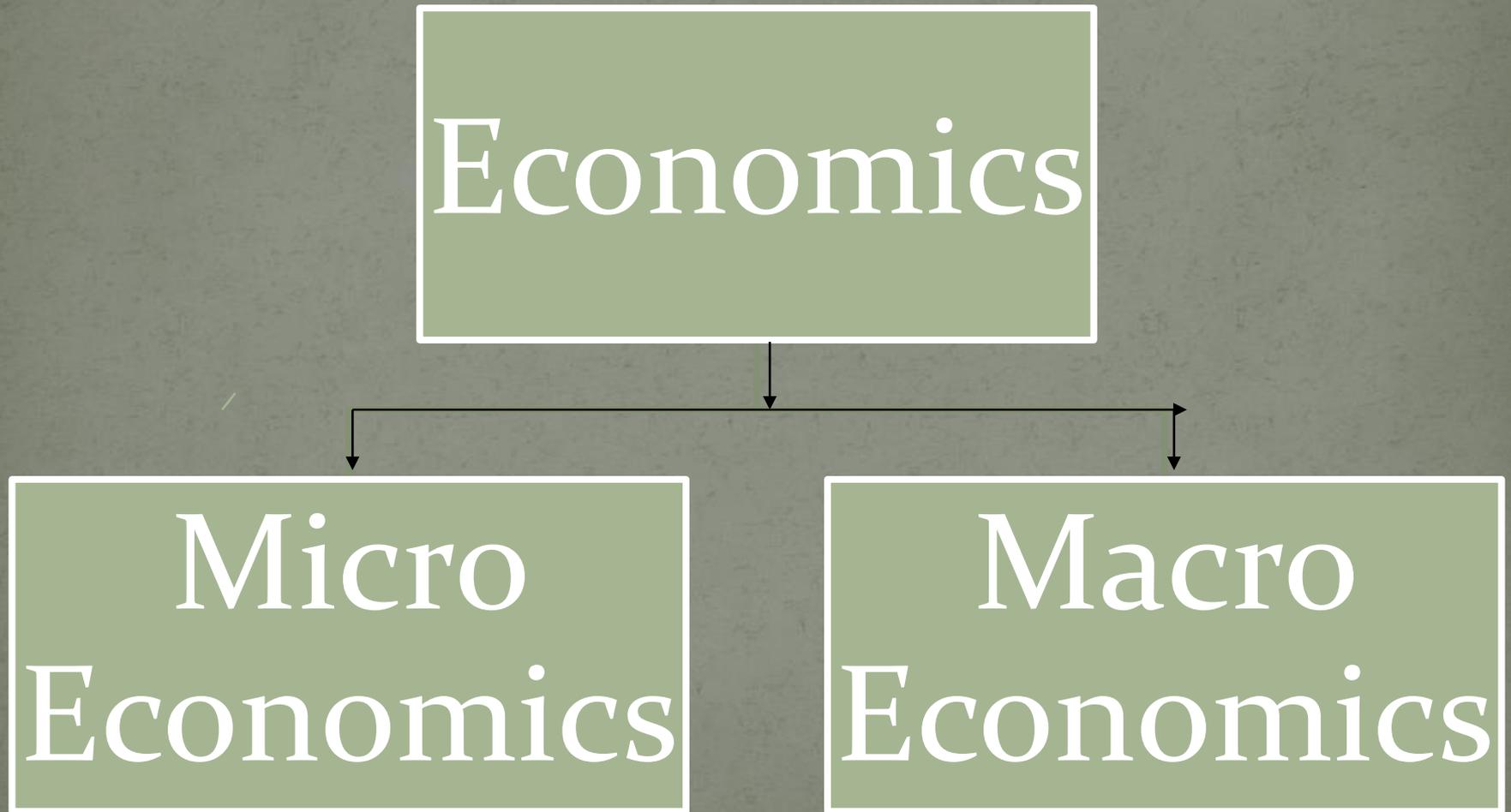
# Approaches to Economic Analysis

- Micro Analysis & Macro Analysis
- Equilibrium Analysis-
  1. Static Equilibrium
  2. Dynamic Equilibrium
  3. Comparative Static Equilibrium

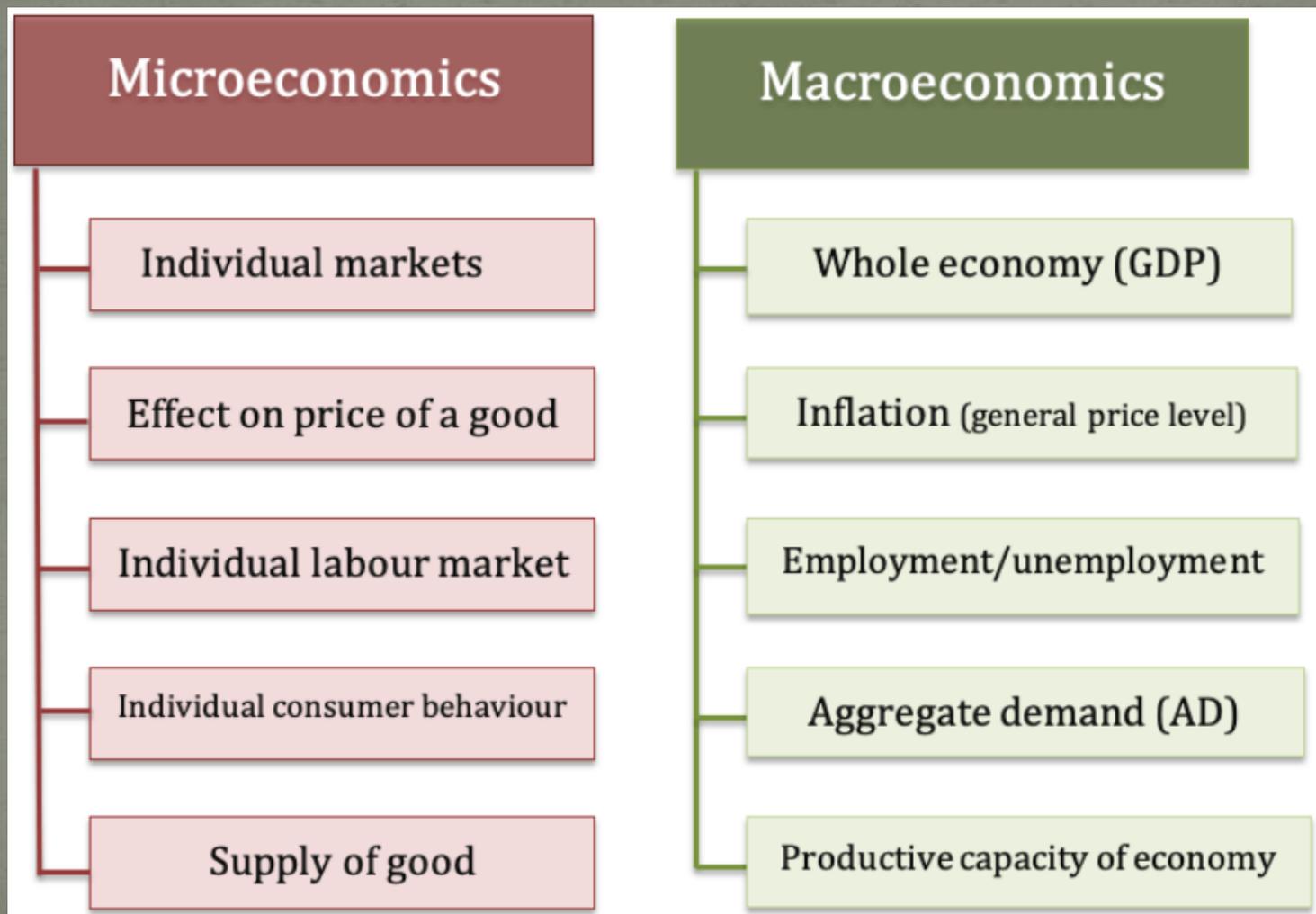


Prof. Paul A. Samuelson has aptly remarked, *"There is really no opposition between micro and macro economics. Both are vital. You are less than half-educated if you understand one while being ignorant of the other."*

# Ramification of Economics

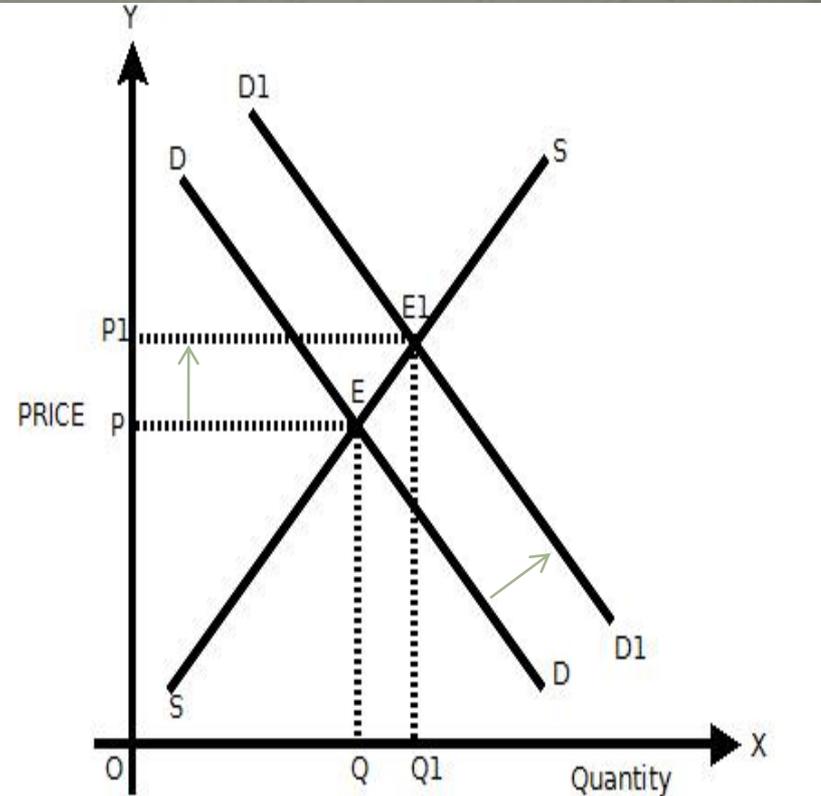
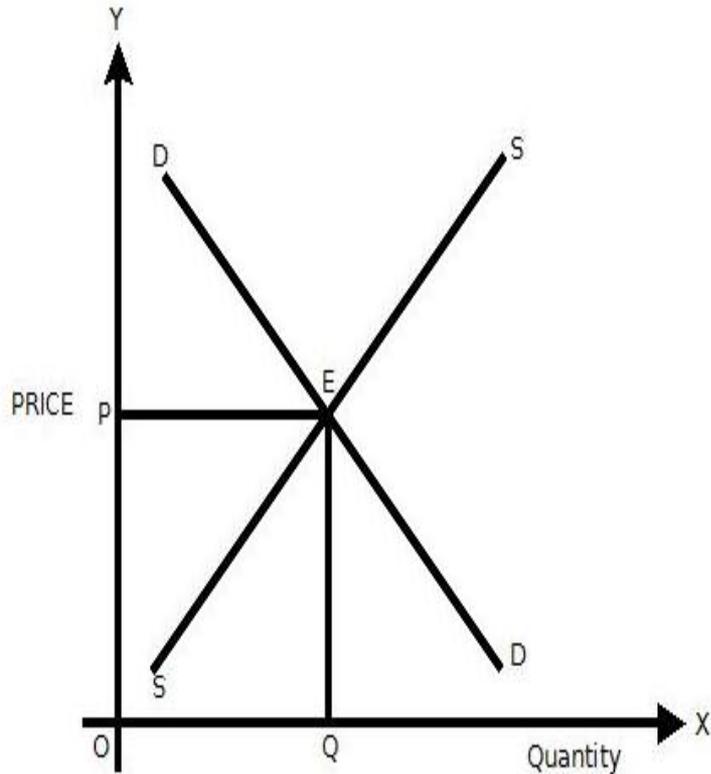


# Micro Economics V/s. Macro Economics



# Types of Equilibrium

Static , Dynamic & Comparative Static



# Economic Systems

1. Traditional Economy.
2. Market Economy.
3. Command Economy.
4. Mixed Economy.
5. Totalitarian Economy.



# Key Difference between Market Economic System & Command Economic System

Features	Market Economy	Command Economy
Role of Government	Laissez Faire policy	Control by Government
Objective / Motives	Profit maximization	Welfare maximization
Resource Allocation	Individual Consumers & producers	Through Central planning
Ownership of Resources	Privately owned	State owned
Price Mechanism	Free market forces	Administrative pricing.
Competition	Free competition among consumers & producers.	Absence of Competition.
Income distribution	Bargaining strength of market players of consumers & producers.	Share to be distributed by State to various sectors of the economy.
Savings & Investments	Determined by individuals & firms	Determined by State.
Sovereignty	Producers & Consumers	State

# Methodology of Economics

- Deduction V/s. Induction Method

Deductive Method descends from the general to the particular while the Inductive method mounts from particular to the general principles.

# Markets & Prices

- What is Market?
- What are types of Market?
- Competitive V/s Non competitive Markets
- What is meant by Market Price?

# Chapter –II

## **Demand & Supply**

- What is Demand?

Desire + Willingness + Ability to purchase.

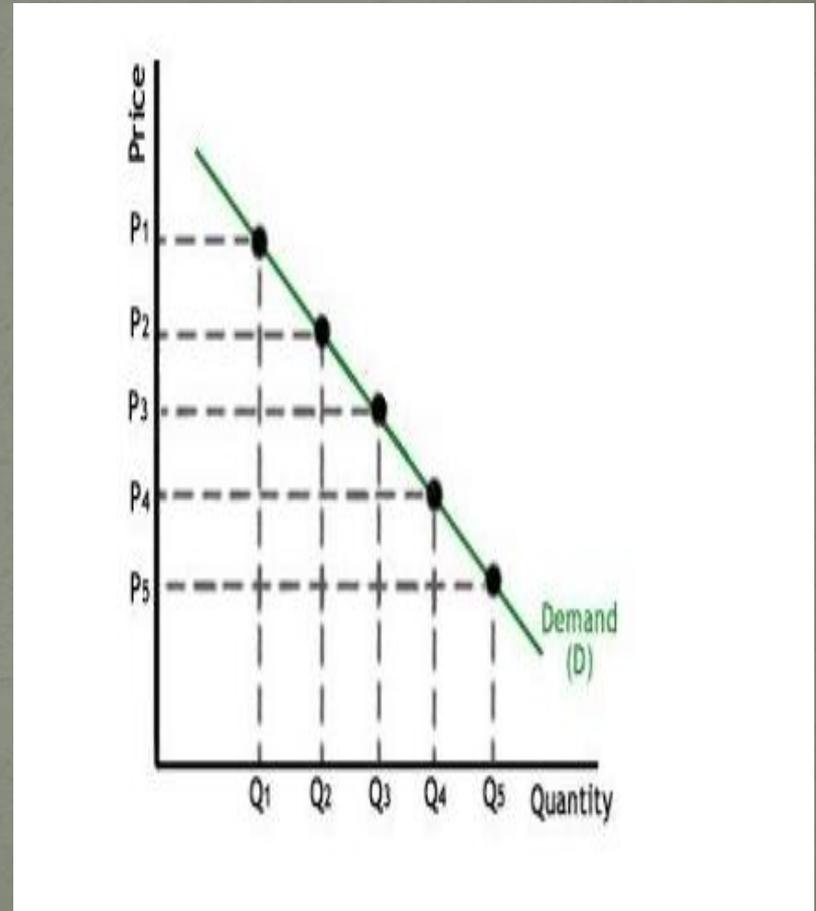
- What is Supply?

An amount of goods offered in a market at a given price.

Expansion & Contraction in Demand & Supply Curves  
V/s. Increase & decrease in Demand & Supply Curves

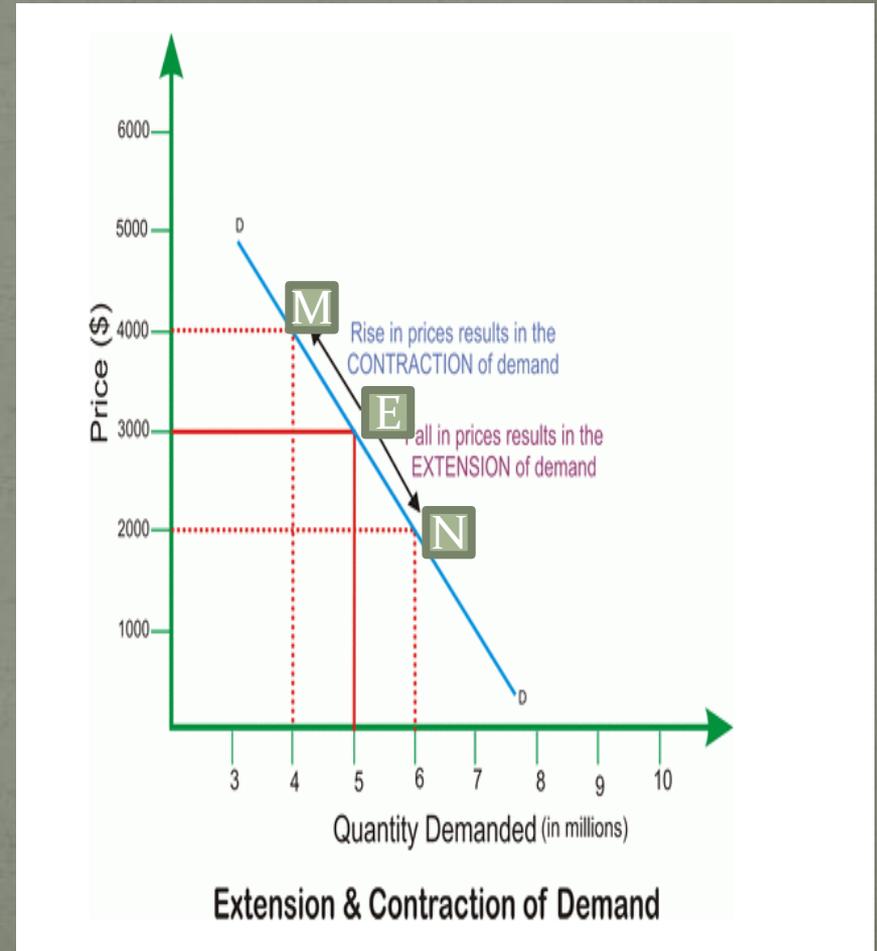
# What is Demand?

- In economics, demand is the quantity of a good that consumers are willing and able to purchase at various prices during a given period of time. The relationship between price and quantity demanded is known as the demand curve.
- In general sense of the term, 'demand' means the desire, the need, the want or the requirement for a commodity. In an economic sense, demand refers to the desire for a commodity. This desire is a combination of the ability and willingness to pay for it.



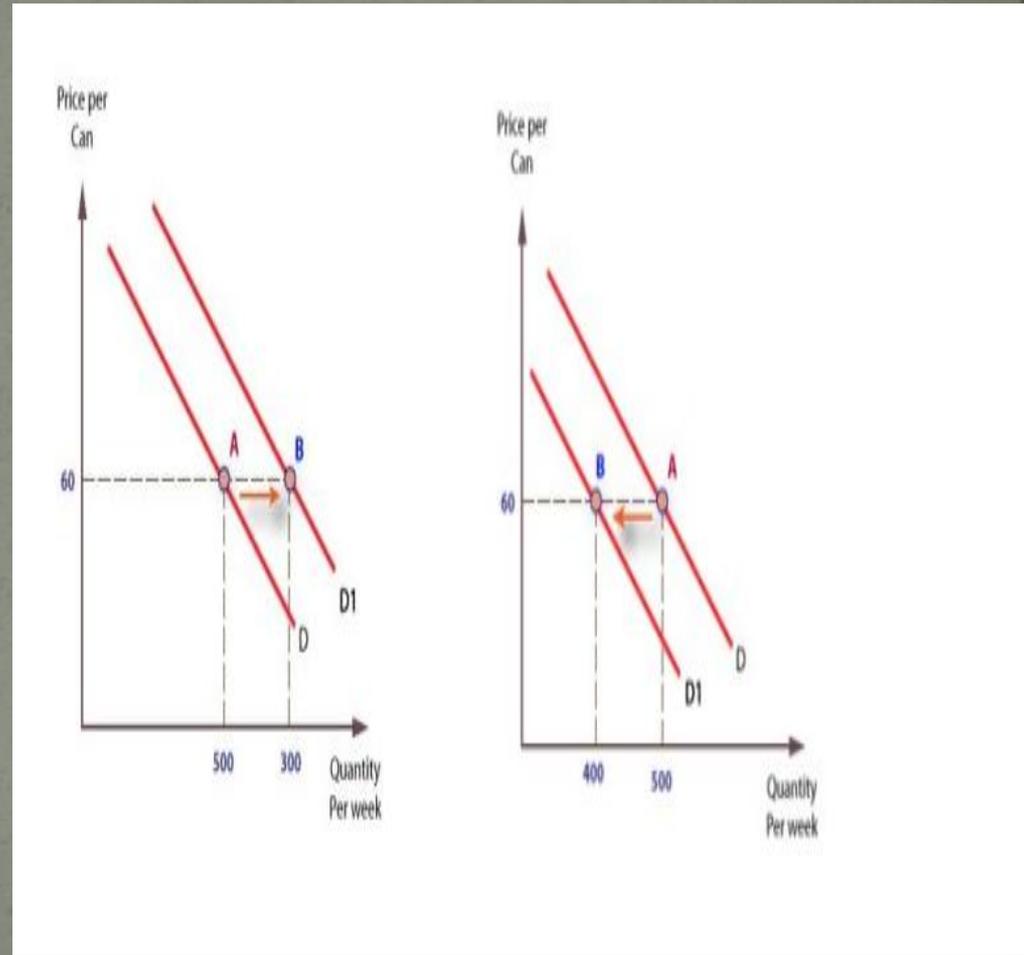
# Expansion & Contraction in Demand

- The change in the quantity demanded can be due to various factors affecting the demand. However, when the quantity demand change is due to the price changes, it is called “Change in Quantity Demanded”.
- Further, a reduction in the quantity demanded due to increase in price leads to “Contraction” whereas an increase in quantity demanded due to a decrease in price is called “Expansion or Extension”. The changes happen along the demand curve itself.



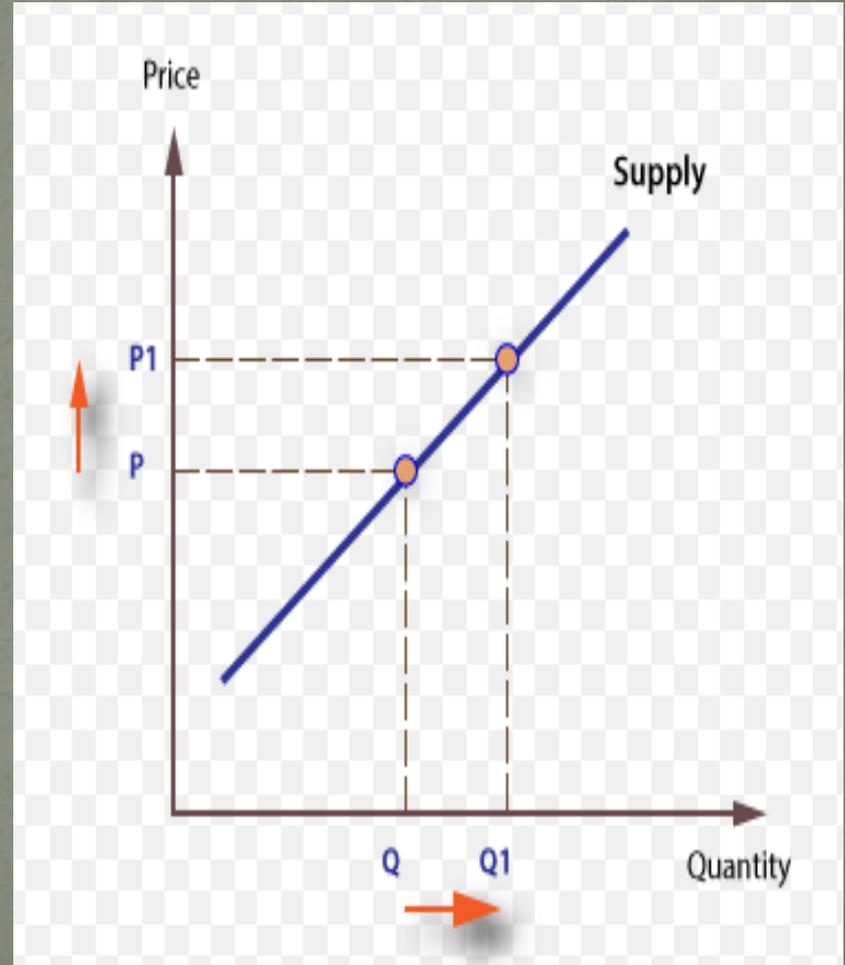
# Increase & Decrease in Demand

- The shift in the demand curve or the change in the demanded can be due to any other factors affecting the demand, while the price is constant is called “Change in Demanded”.
- Reduction in demand due to change in variables other than price leads to “Decrease in Demand”, whereas, on the other hand, increase in demanded due to change in variables other than price is called “Increase in Demand”.



# What is Supply?

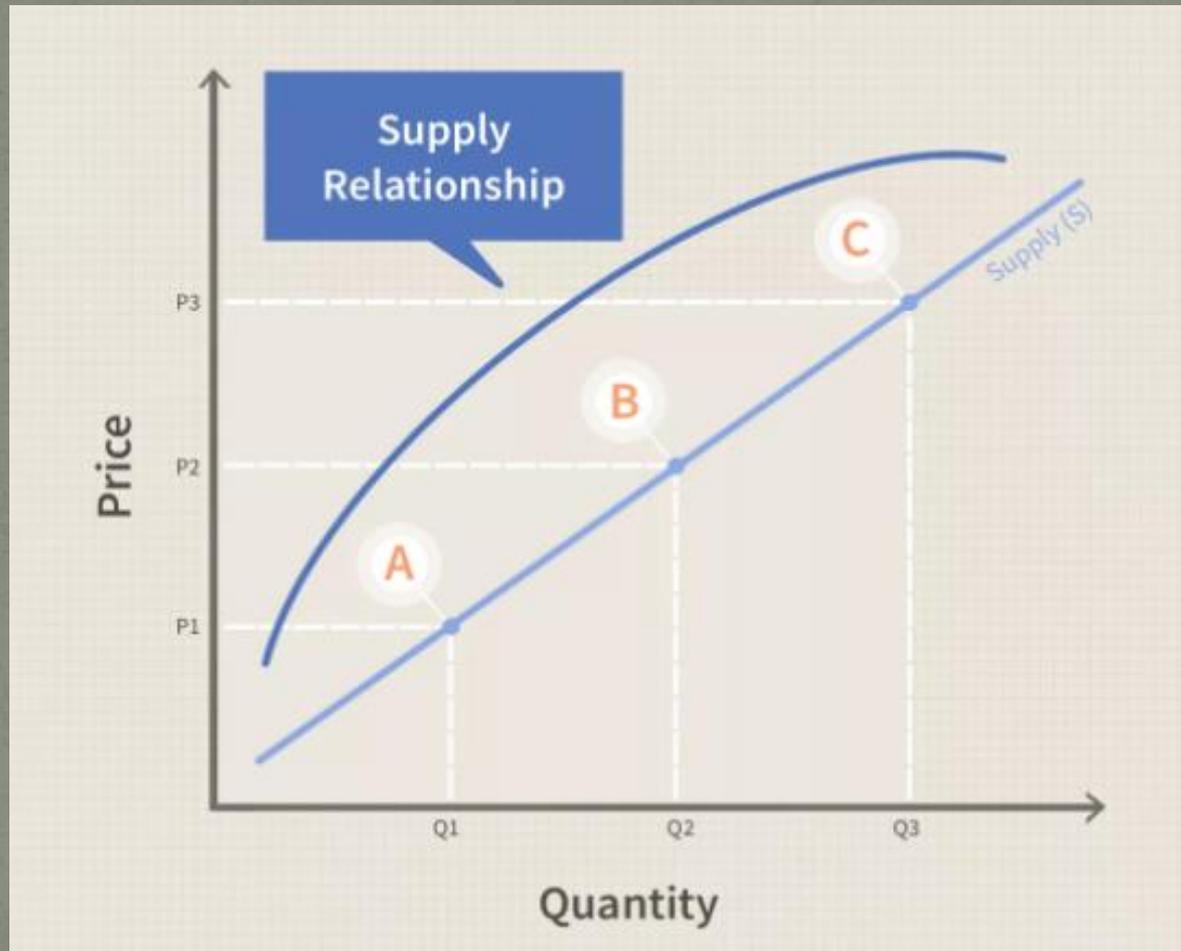
- Supply means the amount of goods & services offered by producers in a market at different price levels at a certain period of time



# Law of Supply

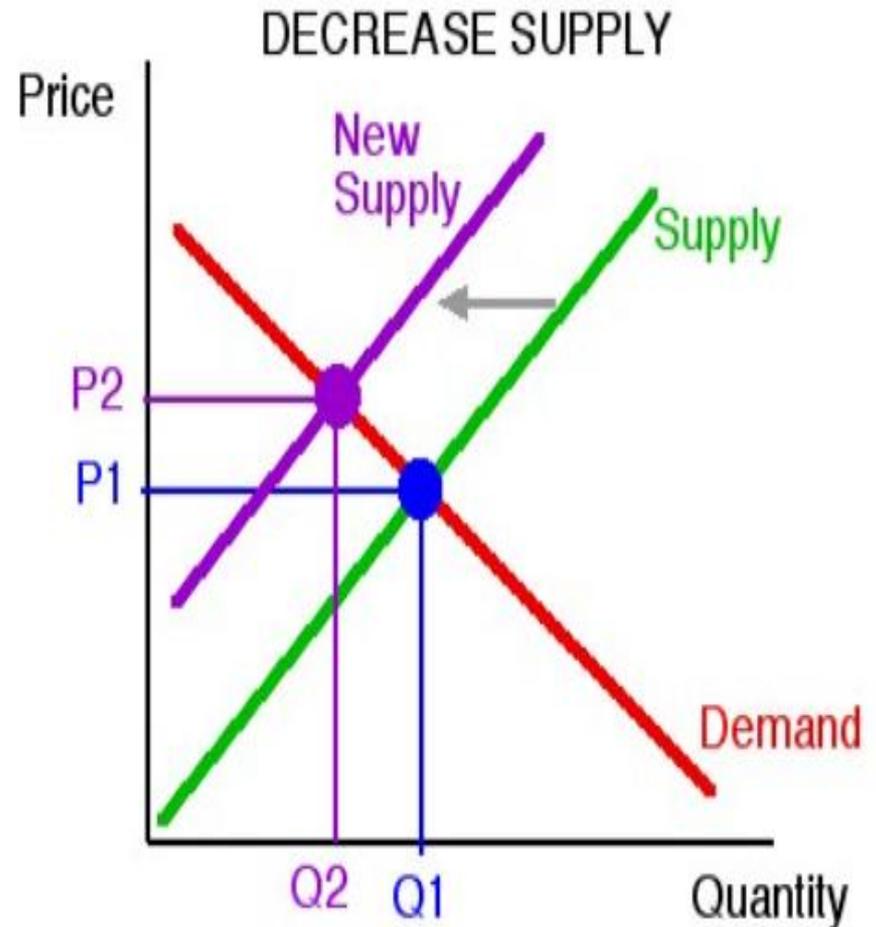
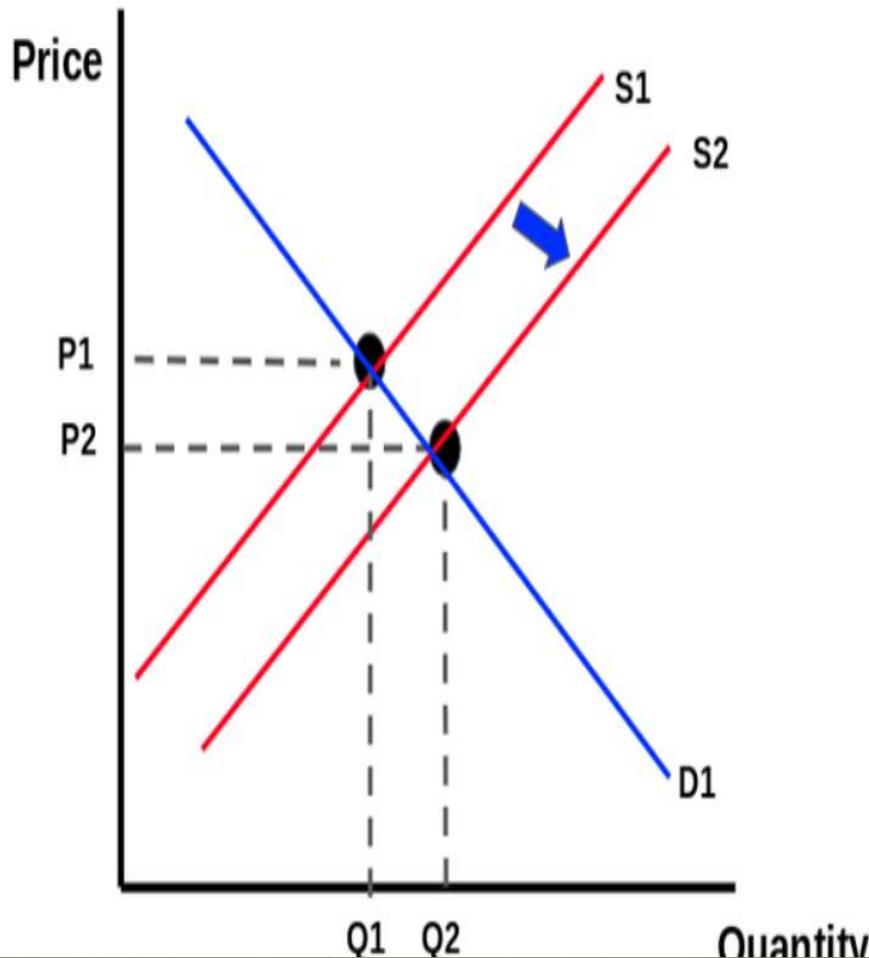
- The law of supply is the micro economic law that states that, all other factors being equal, as the price of a good or service increases, the quantity of goods or services that suppliers offer will expand, and vice versa.
- The law of supply says that as the price of an item goes up, suppliers will attempt to maximize their profits by increasing the quantity offered for sale.

# Diagrammatical Explanation of Law of Supply



Prepared By : Dr. Dhaval J. Pandya

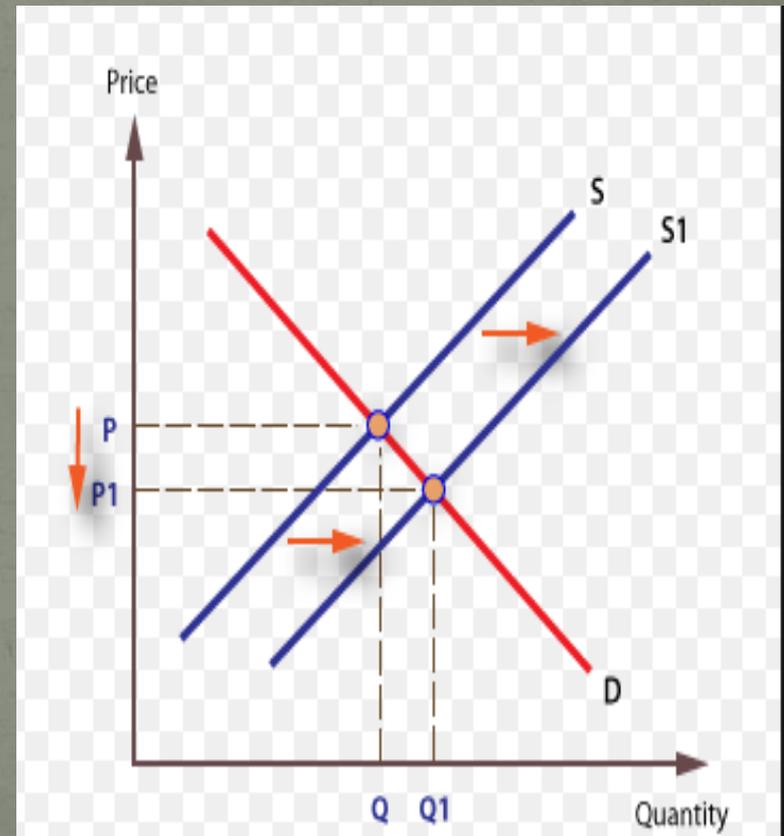
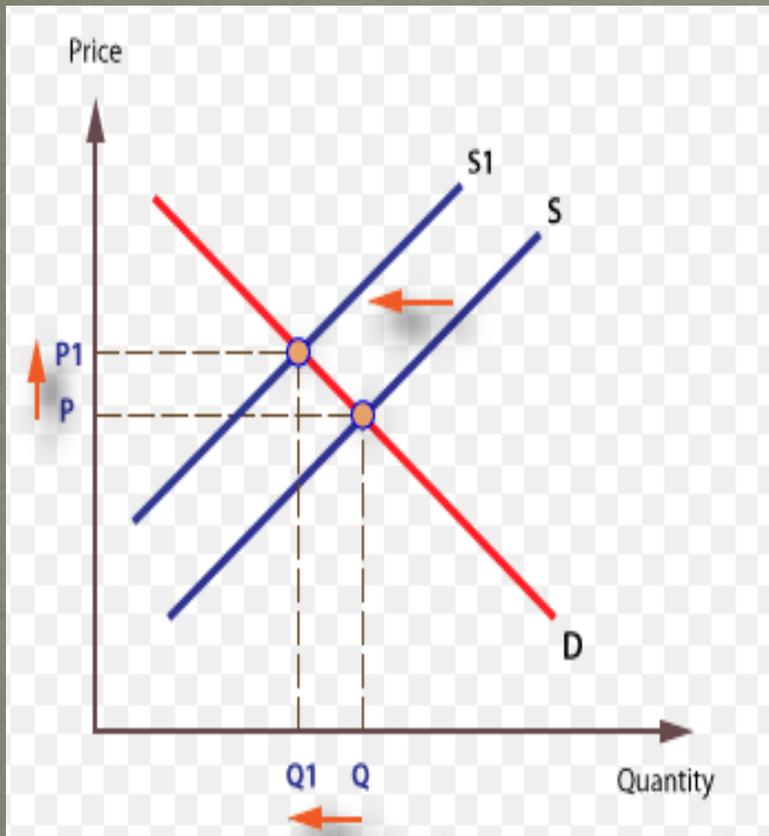
# Increase & Decrease in Supply



# Elasticity of Supply

- The law of supply indicates the direction of change—if price goes up, supply will increase. But how much supply will rise in response to an increase in price cannot be known from the law of supply. To quantify such change, we require the concept of elasticity of supply that measures the extent of quantities supplied in response to a change in price.
- Elasticity of supply measures the degree of responsiveness of quantity supplied to a change in own price of the commodity. It is also defined as the percentage change in quantity supplied divided by percentage change in price.
- Symbolically it can be expressed as ,  
$$E_S = \Delta Q/Q \div \Delta P/P = \Delta Q/\Delta P \times P/Q$$

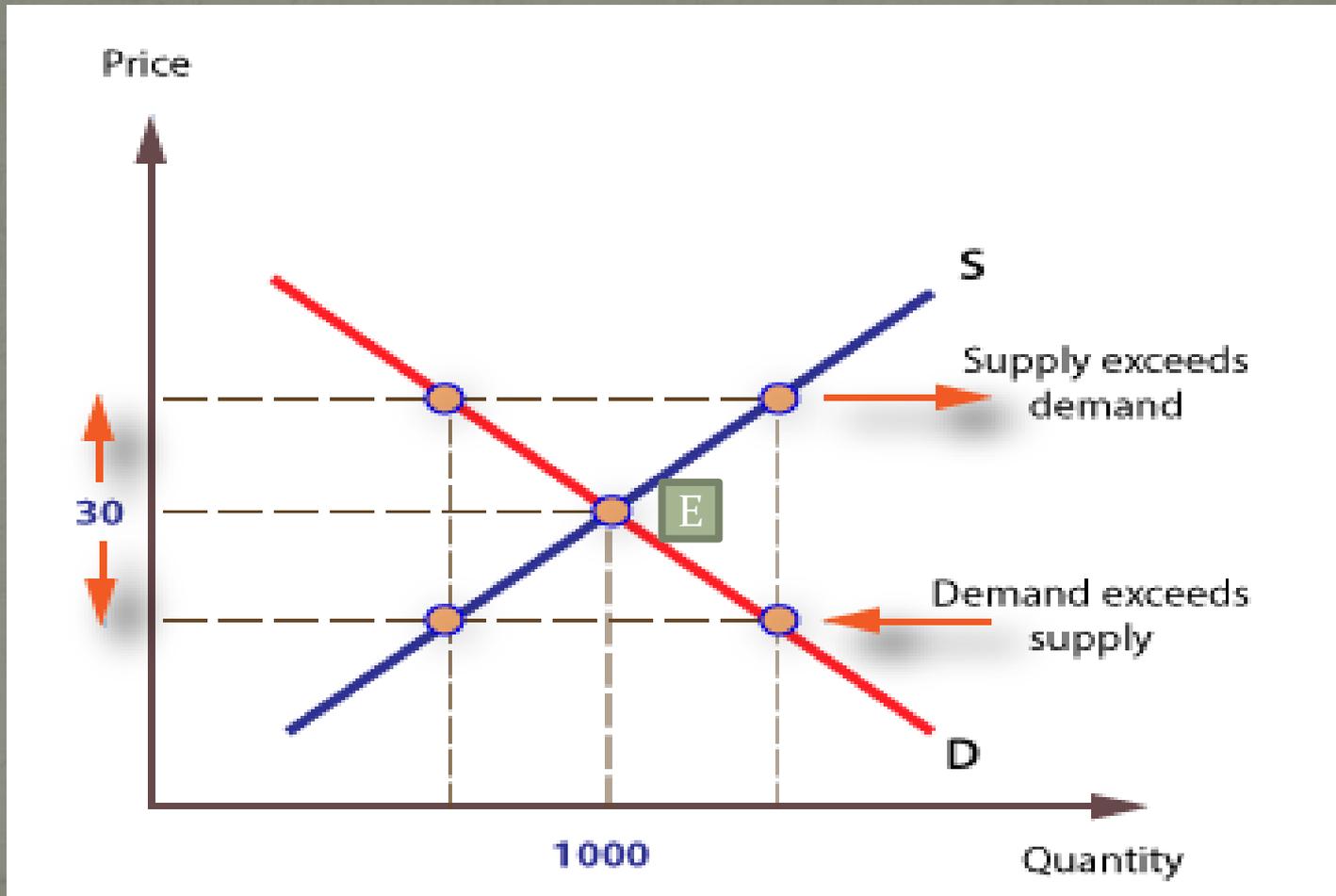
# Shift in Supply Curve



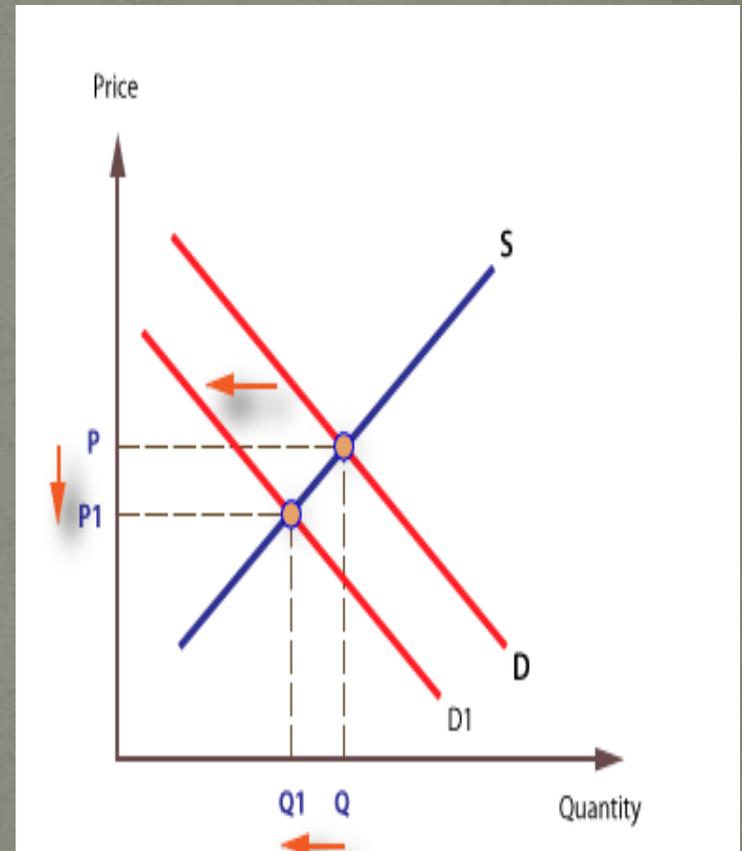
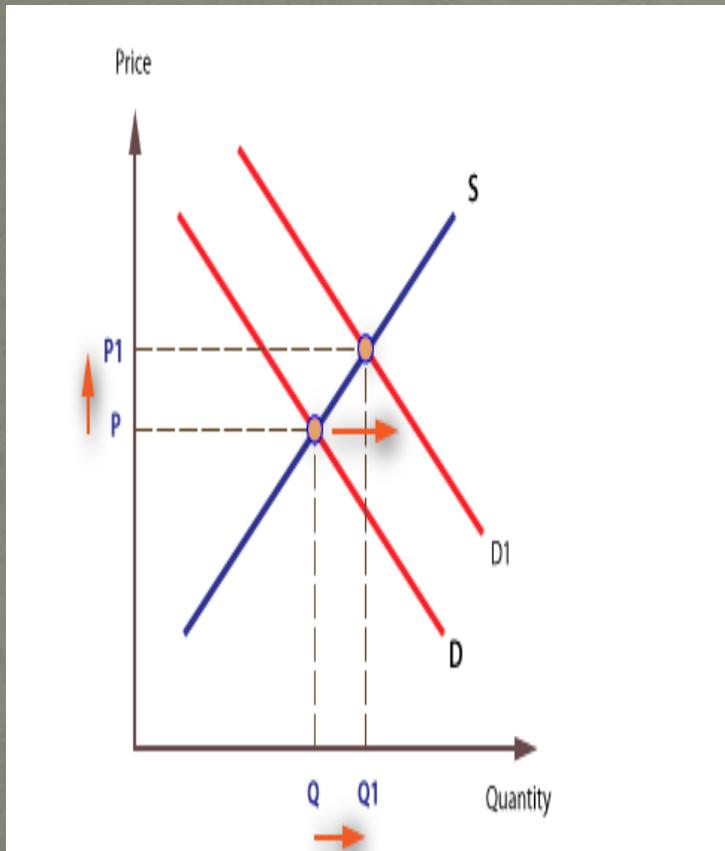
# The Market Mechanism

- Market mechanism is a tendency in a free market for price to change until the market clears i.e., until quantity supplied & the quantity demanded are equal.
- Different Cases of changes in Market equilibrium.

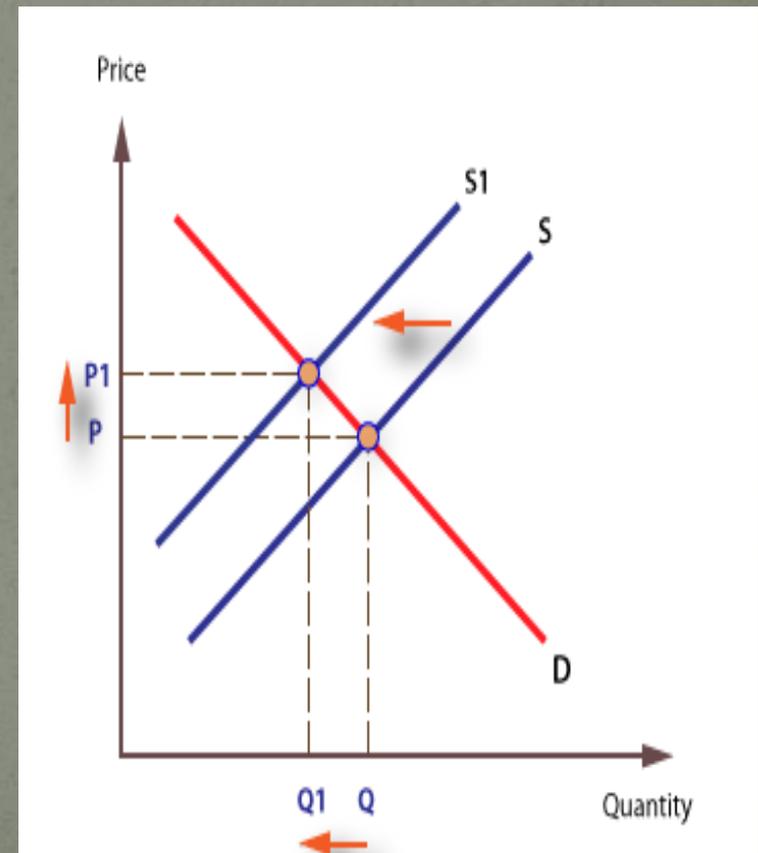
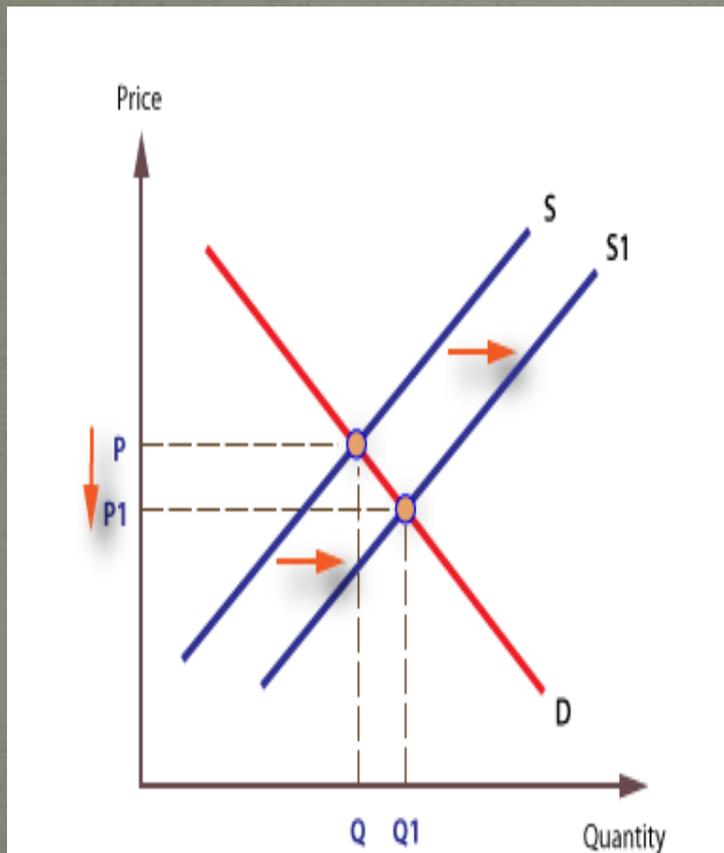
# Market Mechanism



# Shifts in Demand Curve



# Shift in Supply Curve



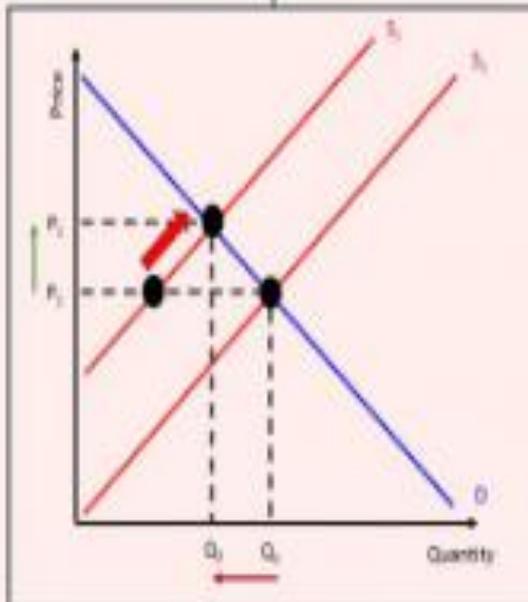
# Price Mechanism

## The Price Mechanism

How the interaction of demand and supply determine the price and quantities of the goods that get produced.

### Incentive Function

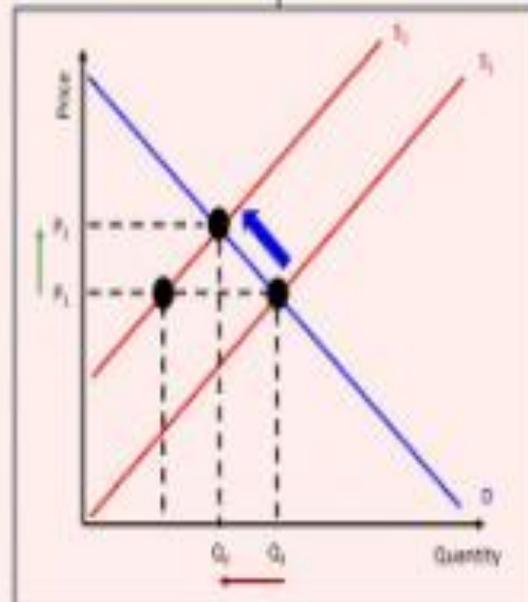
Prices provide economic agents with incentives to alter their behaviour.



Higher price incentivises firms to provide more

### Rationing Function

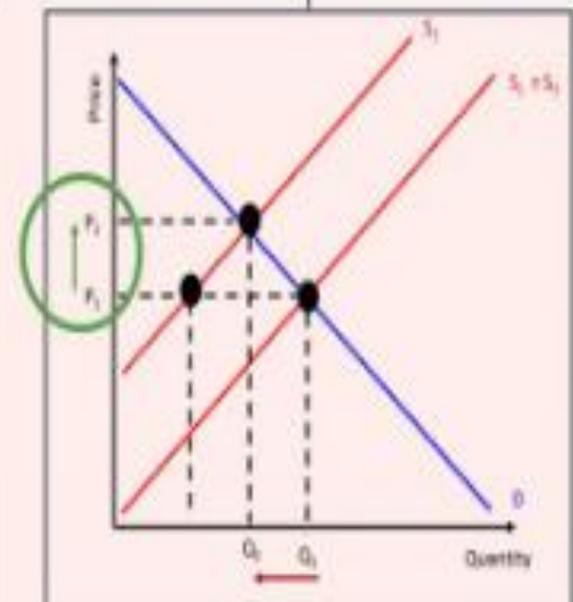
Prices allocate economic resources which are in finite supply.



Higher price rations lower supply by forcing some consumers out of market

### Signalling Function

Prices signal information to economic agents about a specific market.



Higher price signals to all agents the change in market conditions

# Chapter –III

## Elasticities of Demand & Supply

### □ Elasticity of Demand :

A degree of responsiveness or sensitiveness in the quantity demanded due to factors affecting demand is known as elasticity of demand.

### □ Elasticity of Supply:

A degree of responsiveness or sensitiveness in the quantity supplied due to factors affecting supply is known as elasticity of supply.

# Types of Elasticity of Demand

- Broadly there are four types of elasticity of demand.

1. Price Elasticity of Demand ( $E_p$ )

2. Income Elasticity of Demand ( $E_y$ )

3. Cross Elasticity of Demand ( $E_c$ )

4. Advertisement Elasticity of Demand ( $E_a$ ).

# Price Elasticity of Demand

Price Elasticity of Demand:

A Degree of sensitiveness or responsiveness of proportionate change in quantity demanded to the proportionate change in price level is known as price elasticity of demand.

Formula :

$$E_p = \frac{\text{Proportionate change in } Q/d.}{\text{Proportionate change in price}}$$

# Types of Elasticity

<https://www.economicdiscussion.net/elasticity-of-supply/elasticity-of-supply-meaning-types-measurement-and-determinants/17023>

Elasticity	Degree
Perfectly elastic	$E_d = \infty$
Perfectly inelastic	$E_d = 0$
Unitary elastic	$E_d = 1$
Relatively elastic	$E_d > 1$
Relatively inelastic	$E_d < 1$

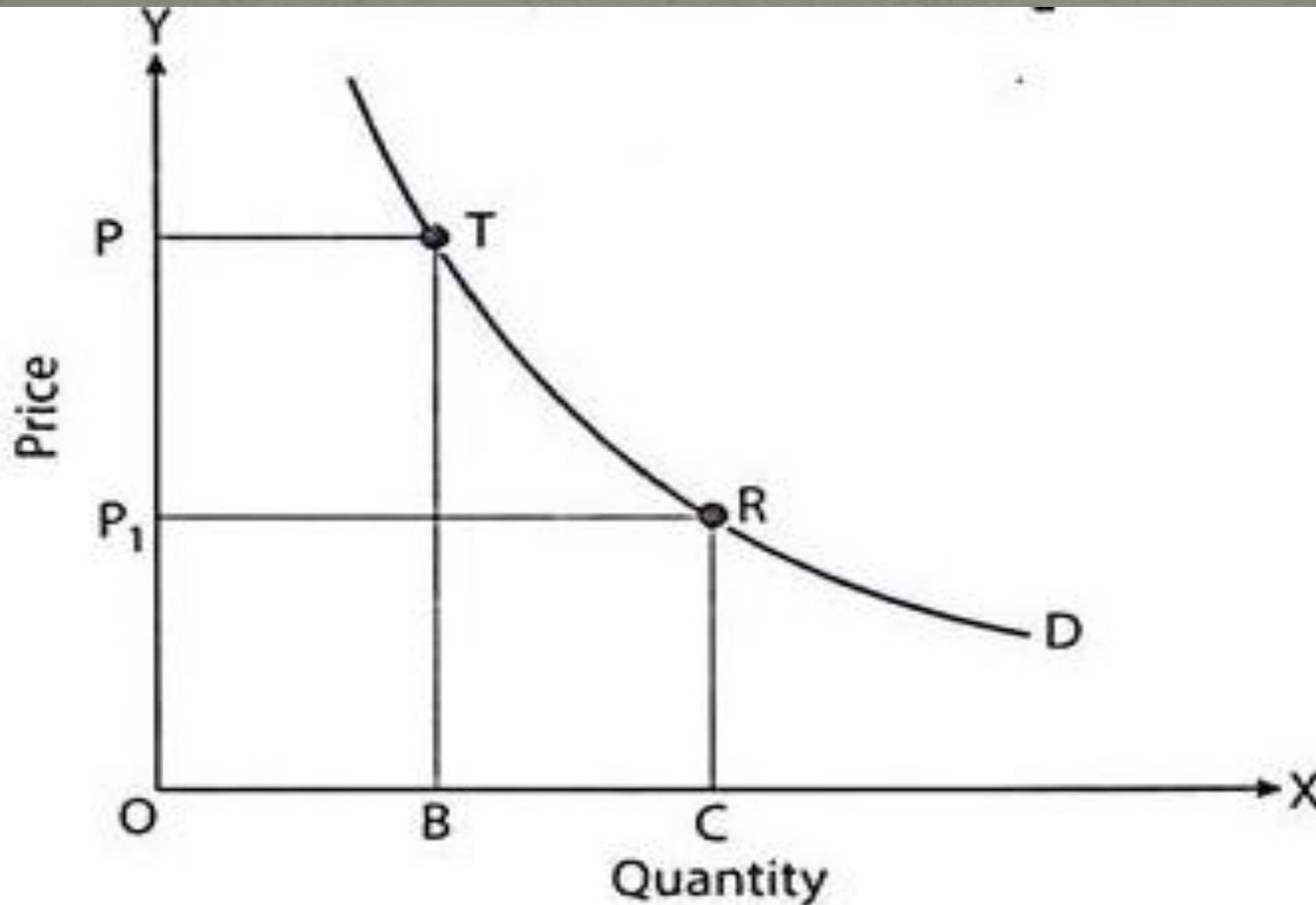
# Price Elasticities of Demand

Price elasticity of demand is mainly classified in five types namely-

Type(s)	Symbolic Expression	Description
Perfectly Elastic Demand	$E_p = \infty$	Infinity
Perfectly Inelastic Demand	$E_p = 0$	Zero
Unitary Elastic Demand	$E_p = 1$	One/Unit
Relatively Elastic Demand	$E_p > 1$	Greater than Unit
Relatively Inelastic Demand	$E_p < 1$	Less than Unit

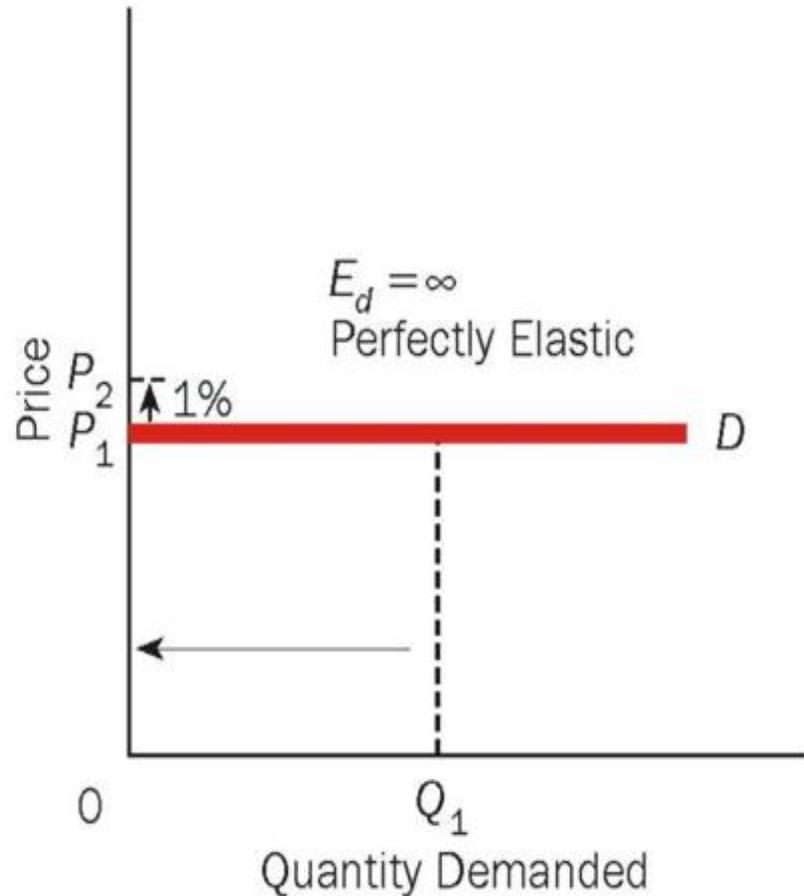
# Types of Elasticity of Demand

## Unitary Elastic Demand ( $E_p = 1$ )

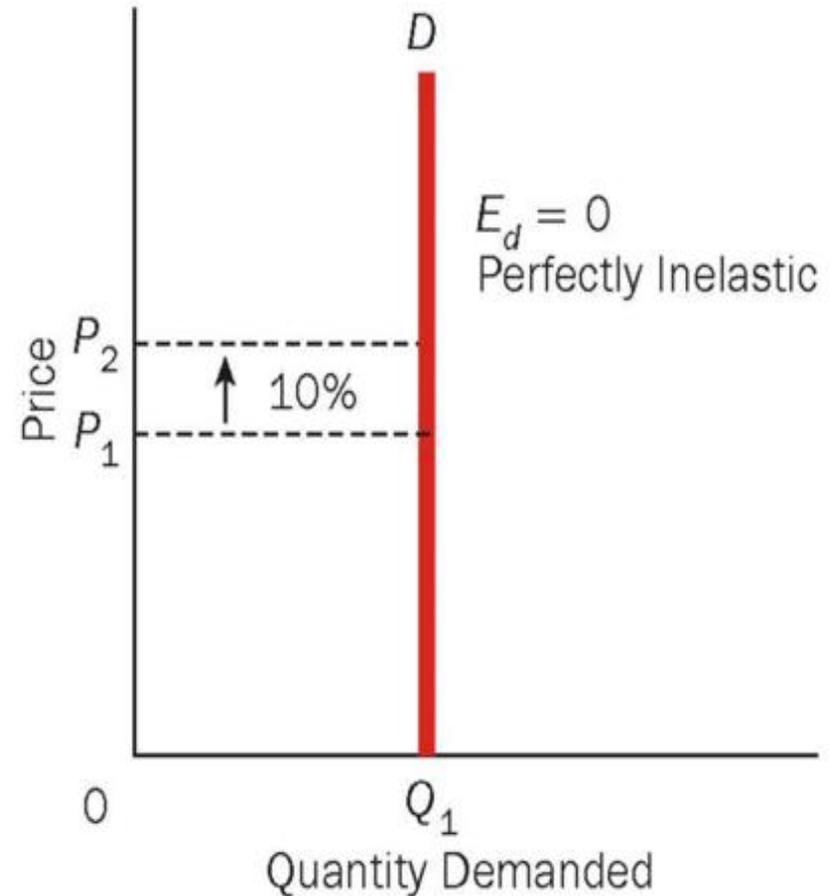


# Types of Elasticity of Demand

## Perfectly Elastic Demand

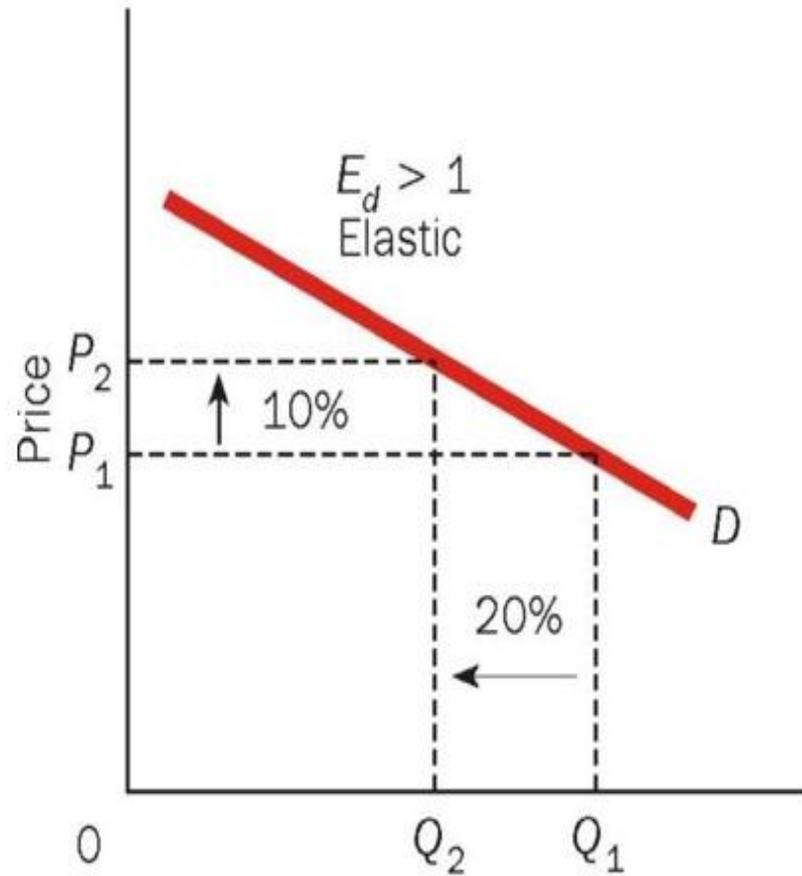


## Perfectly Inelastic Demand

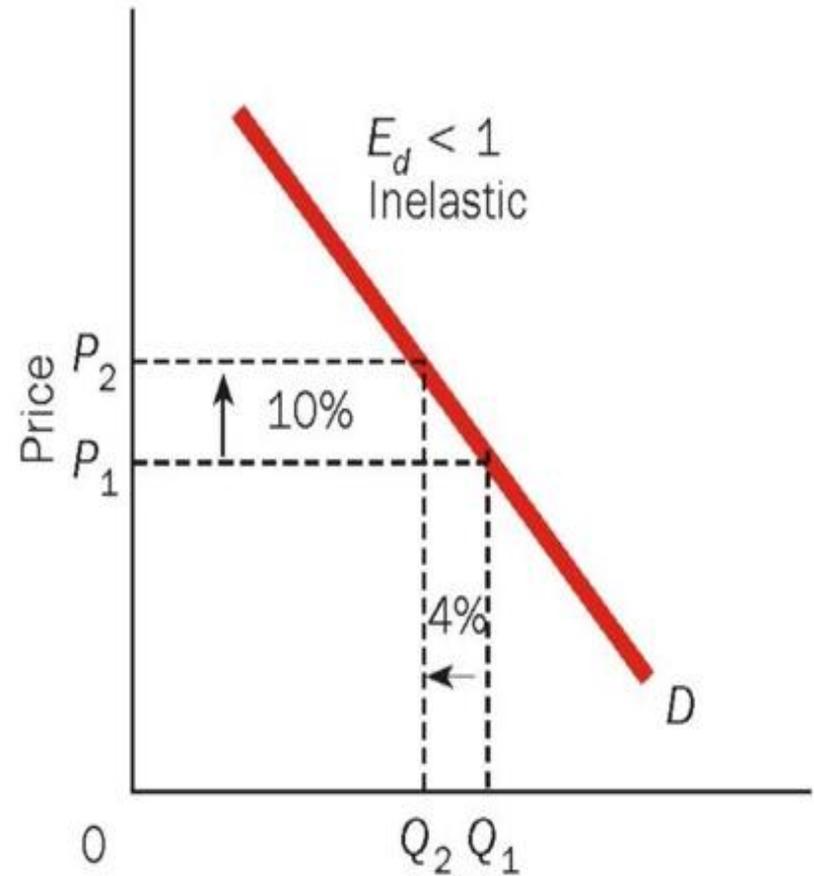


# Types of Elasticity of Demand

Relatively Elastic Demand



Relatively Inelastic demand



# Elasticity, Price Change & Change in TR

Elasticity Co-efficient	Change in Price	Change in TR
$E_p = 0$	Increase	Increase
	Decrease	Decrease
$E_p < 1$	Increase	Increase
	Decrease	Decrease
$E_p = 1$	Increase	No Change
	Decrease	No Change
$E_p > 1$	Increase	Decrease
	Decrease	Increase
$E_p = \infty$	Increase	Decrease to Zero
	Decrease	Infinite Increase * (*Subject to Size of Market)

# Income Elasticity of Demand

- A Degree of sensitiveness or responsiveness of proportionate change in quantity demanded to the proportionate change in income is known as income elasticity of demand.
- Formula:

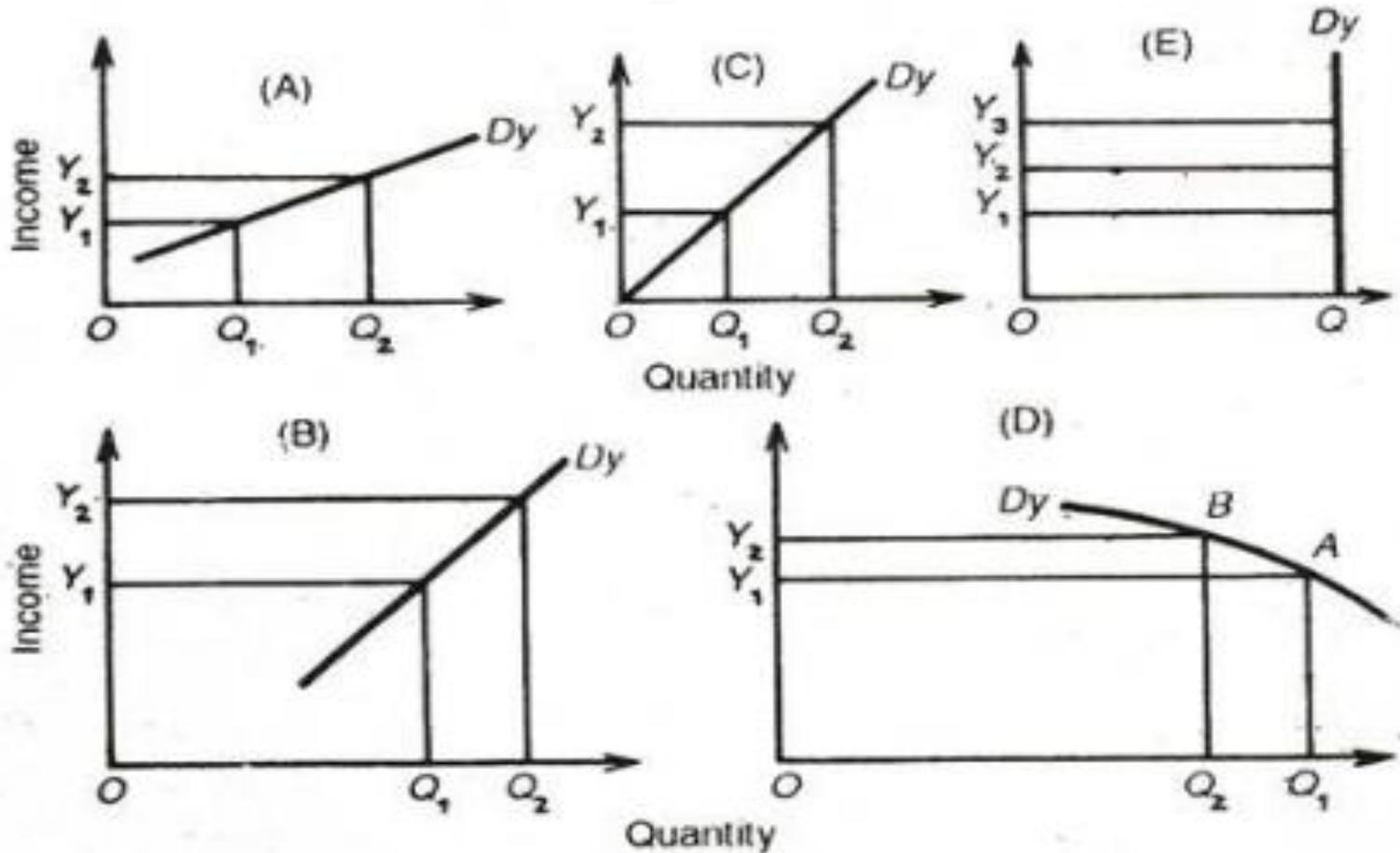
$$E_y = \frac{\text{Proportionate Change in } Q/d.}{\text{Proportionate Change in Income}}$$

# Types of Income Elasticity of Demand

- Broadly there are three types of income elasticity of demand.

Type(s)	Symbolic Expression	Description Shape of Demand Curve
1. Positive Income Elasticity	$E_y = +ve$	Upward sloping demand curve
a. Equal to Unit	$E_y = 1$	45. Upward sloping curve
b. Greater than Unit	$E_y > 1$	Flat
c. Less than Unit	$E_y < 1$	Steep
2. Negative Income Elasticity	$E_y = -ve$	Downward Sloping curve
3. Zero Income Elasticity	$E_y = 0$	Parallel to Y axis

# Diagrammatical Representation



# Income- Elasticities

Consumer Goods	Co-efficient of Income Elasticities	Effect on Sales
Essential Goods	$E_y < 1$ (Less than Unity)	Less than proportionate change in Sale
Comforts	$E_y = 1$ (Almost equal to Unity)	Almost proportionate change in Sale
Luxurious	$E_y > 1$ (Greater than Unity)	More than proportionate Increase in Sale

# Cross Elasticity of Demand

- A Degree of sensitiveness or responsiveness of proportionate change in quantity demanded of one product due to the proportionate change in price of a related product is known as cross elasticity of demand.

- Formula:

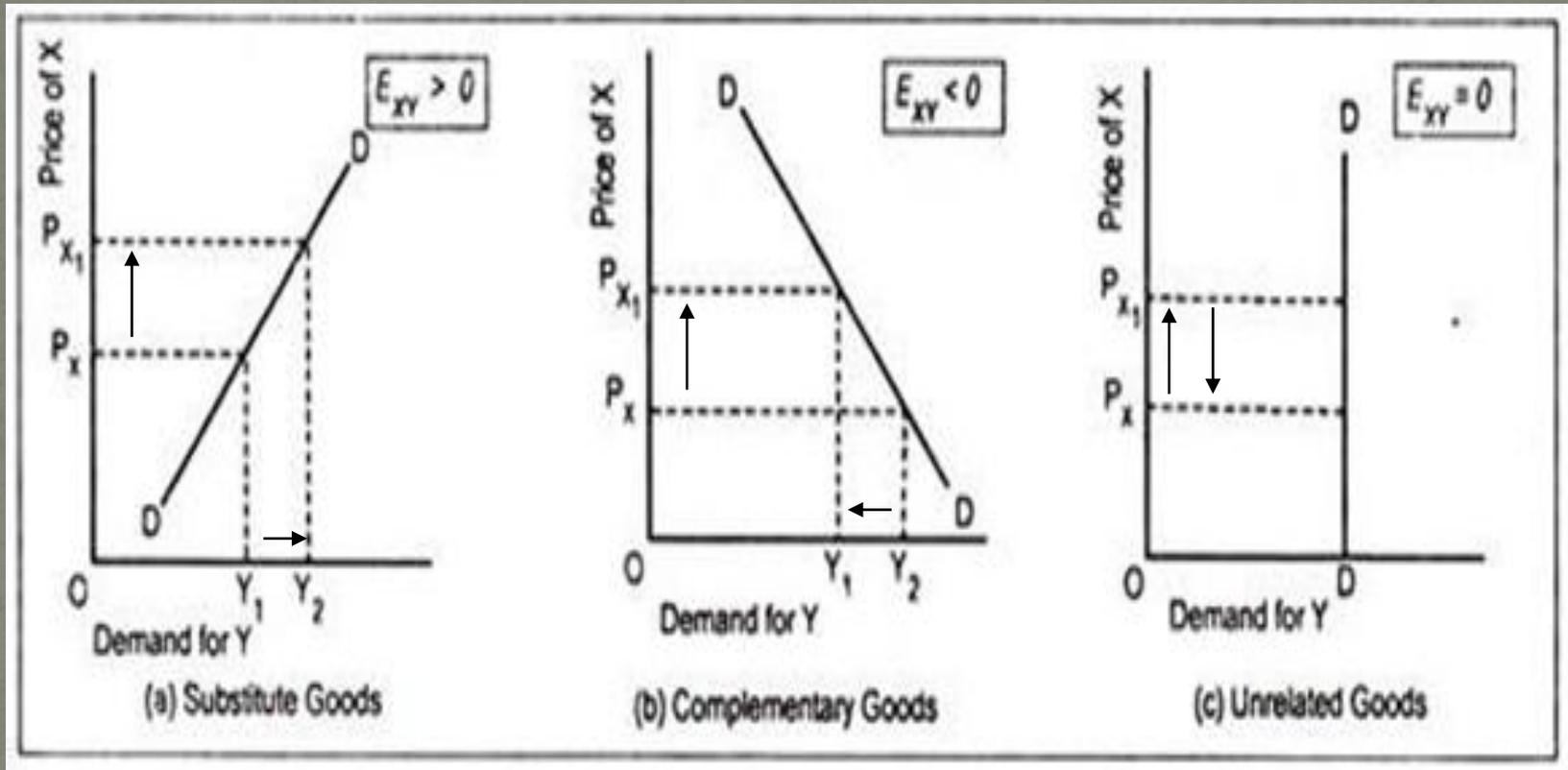
$$E_c = \frac{\text{Proportionate Change in Q/d. of X product}}{\text{Proportionate Change in price of Y product}}$$

# Cross Elasticity of Demand

- The cross elasticity of various products are different viz.,

Product	Cross Elasticity of demand
Substitute products	Positive
Complimentary products	Negative
Neutral Products	Zero

# Diagrammatical Representation



# Advertisement Elasticity of Demand

- A Degree of sensitiveness or responsiveness of proportionate change in quantity demanded (sales) of a product due to the proportionate change in expenses incurred on its advertisement is known as advertisement elasticity of demand.

- Formula:

$$E_a = \frac{\text{Proportionate Change in Q/d. of a product}}{\text{Proportionate Change on expenditure made on its advertisement}}$$

# Interpretation of Advertisement Elasticity

Elasticities	Interpretation
$E_a = 0$	Sales do not respond to the advertisement expenditure.
$E_a > 0$ but $< 1$ $E_a < 1$	Increase in total sales is less than proportionate to the increase in advertisement expenditure.
$E_a = 1$	Sales increase in proportion to increase in expenditure on advertisement.
$E_a > 1$	Sales increase at a higher rate than the rate of increase of advertisement expenditure.

# Determinants of Advertisement Elasticity

1. The level of total sales.
2. Advertisement by the rival firms.
3. Cumulative effect of past advertisement.
4. Other factors  
(like change in product's price, consumers' income, growth of the substitute & their prices etc.)

# Methods for Measuring Price Elasticity of Demand

- Percentage Method/ Proportionate method/ Ratio Method.
- Total Outlay method.
- Point method.
- Arc method.

Percentage Method/ proportionate method/ Ratio Method.

$$E_p = \Delta Q / Q * P / \Delta P$$

OR

$$E_p = \% \Delta Q / \% \Delta P$$

# Total Outlay Method

		<i>Price</i> <i>Rs.</i>	<i>Quantity</i> <i>(Units)</i>	<i>Total</i> <i>Revenue (TR)</i>	<i>Elasticity</i> <i>of Demand (e)</i>
1.	Original	2	10	20	—
	Change	4	5	20	$e = 1$
2.	Change	1	20	20	(unit)
		4	4	16	$e > 1$
3.	Change	1	24	24	(elastic)
		4	6	24	$e < 1$
		1	16	16	(inelastic)

We may now summarise the total outlay method as follows:

**Table 6.3: Total Revenue Method**

<i>Price</i>	<i>Total Revenue (TR)</i>	<i>Type of Elasticity (e)</i>
1. Increases	Constant	$e = 1$
Decreases	Constant	(Unitary)
2. Increases	Decreases	$e > 1$
Decreases	Increases	(Relatively elastic)
3. Increases	Increases	$e < 1$
Decreases	Decreases	(Relatively inelastic)

# Point Method / Geometric Method

## Point Elasticity Method or the Geometric Method

Marshall also suggested another method called the point elasticity method or geometrical method for measuring price elasticity at a point on the demand curve.

The simplest way of explaining the point method is to consider a linear (straight-line) demand curve. Let the straight-line demand curve be extended to meet the two axes, as in Figure 6.4. When a point is plotted on the demand curve like point *P* in Figure 6.4, it divides the curve into two segments. The point elasticity is, thus, measured by the ratio of the lower segment of the curve below the given point to the upper segment of the curve above the point.

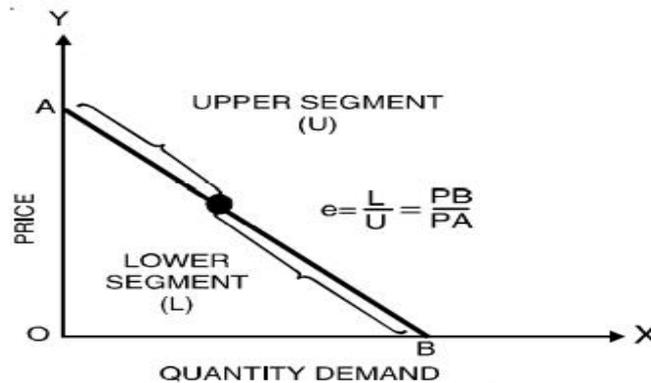


Fig. 6.4: Point Method

For brevity, we may again put that:

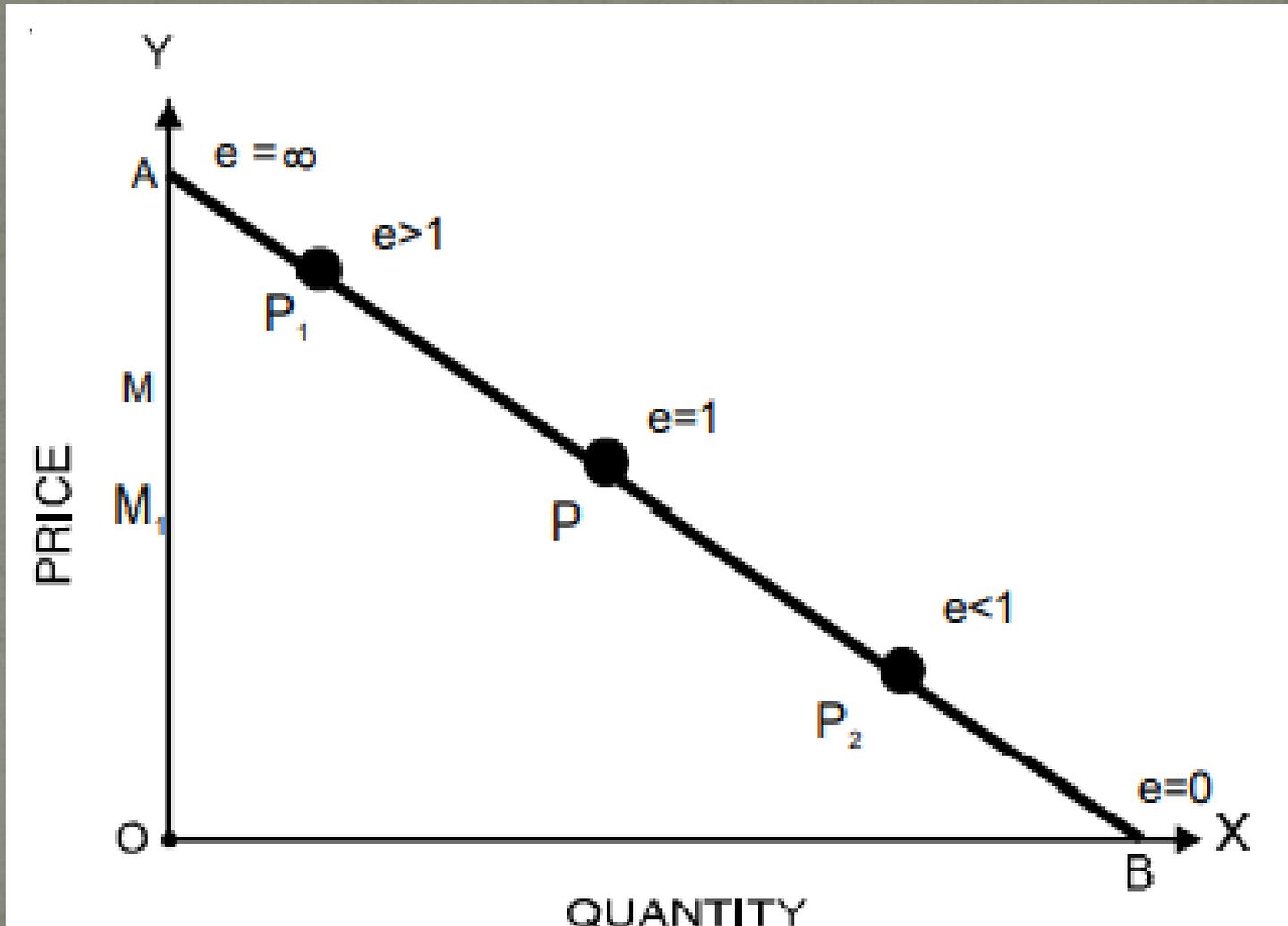
$$\text{Point Elasticity} = \frac{\text{Lower segment of the curve below the given point}}{\text{Upper segment of the demand curve above the point}}$$

or, to remember through symbols, we may put as:

$$e = \frac{L}{U}$$

where, *e* stands for point elasticity, *L* stand for lower segment, and *U* for the upper segment.

# Point Method



# Arc Method

- To calculate the price elasticity of demand over some portion of demand curve rather than at a point, the concept of arc elasticity of demand method is used.

$$e_{\text{arc}} = \frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

where,

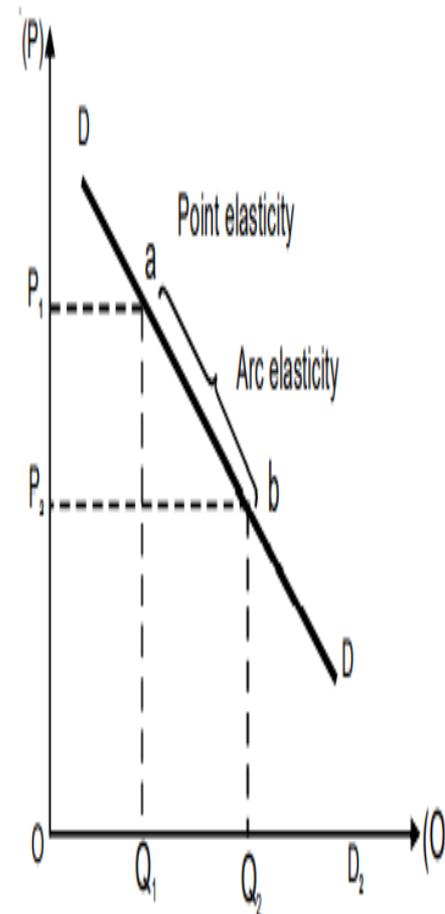
$P_1$  = original price,

$P_2$  = new price,

$Q_1$  = original quantity demand,

$Q_2$  = new demand,

$\Delta P = P_2 - P_1$ ;  $\Delta Q = Q_2 - Q_1$



# Determinants of price elasticity of demand

1. Degree of necessity.
2. Proportion of consumer's income spent on the goods.
3. Existence of substitute.
4. Habits.
5. Several uses of commodity.
6. Postponement.
7. Time.
8. Range of prices.

# Factor affecting price elasticity of demand

When the demand for a commodity is elastic or inelastic will depend on a variety of factors. The major factors affecting elasticity of demand are:

- **Nature of commodity.** According to the nature of satisfaction the goods give, they may be classified into luxury, comfort or necessary goods. **In general, luxury and comfort goods are price elastic, while necessary goods are price inelastic.** Thus, for example, the demand for foodgrains, cloth, salt, etc., is generally inelastic while that for radio, furniture, car, etc., is elastic.
- **Availability of substitutes.** **Where there exists a close substitute in the relevant price range, its demand will tend to be elastic. But in respect of commodities having no substitutes, their demand will be somewhat inelastic.** Thus, for example, demand for salt, potatoes, onions, etc., is highly inelastic as there are no close or effective substitutes for these commodities. On the other hand, commodities like tea, coffee or beverages such as Thums-Up, Mangola, Gold Spot, Fanta, Sosyo, etc., having a wide range of substitutes, have a more elastic demand in general.
- **Number of uses.** **Single use goods will have generally less elastic demand as compared to multi-use goods**, e.g., for commodities like coal or electricity having a composite demand, elasticity is relatively high. With the fall in price, these commodities may be demanded increasingly for various uses. It may be elastic in some of the uses, and may be inelastic in some other uses, e.g., coal is used by the railways and consumers as fuel. But the former's demand is inelastic as compared to the latter's. Technically, thus, the demand for a multi-use commodity in those uses where marginal utility is high, will be inelastic while in those uses where the marginal utility is low, the demand will be elastic.

# Suggested Readings

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Any Questions ??

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