

# DEMAND ANALYSIS

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People demand goods to satisfy their desire. Desires are simply imaginations, which may not be satisfied. Whereas, demand comprises the presence of resources and willingness to spend those resources to satisfy the desire.

In the words of **Penon**, "Demand implies three things (i) desire to possess a thing (ii) means for purchasing it, and (iii) willingness to use those means for purchasing it".

In simple words, demand is an effective desire towards a commodity.

## THE MEANING OF DEMAND

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Demand for a commodity refers to the quantity of a commodity which a consumer is willing to buy at a given price in a given period of time.

According to **Benham**, "The demand for anything, at a given price, is the amount of it, which will be bought per unit of time at that price"

Similarly, **Bobber** wrote down, "By demand we mean the various quantities of a given commodity or service which consumers would buy in one market in a given period of time at various prices."

Thus, the demand for a commodity or service is the amount of it that a consumer will purchase or will be ready to purchase at various given prices at a given moment of time.

On the basis of above definitions, the following characteristics of demand can be drawn.

- (i) **Difference between desire and demand** : Mere desire for a commodity does not constitute demand for it, if it is not backed by the ability and willingness to pay.
- (ii) **Relationship between demand and price** : Consumer's demand for a commodity can not be decided without stating the price of that commodity. It is the price of the commodity which decides the amount demanded for a commodity.
- (iii) **Demand at a point of time** : The amount demanded must refer to some period of time. Not only this, the amount demanded and the price must refer to a particular date.

## DEFINITIONS OF LAW OF DEMAND

According to **Marshall**, "The amount demanded increases with a fall in price and diminishes with rise in price".

**Ferguson** explains the law of demand in these words, "According to the Law of Demand, the quantity demanded varies inversely with price".

Prof. **Samuelson** writes, "Law of Demand states that people will buy more at lower prices and buy less at higher prices, other things remaining the same".

In simple words, if other things which determine demand do not undergo a change, then the price and quantity demanded remains inversely related.

## ASSUMPTIONS OF THE LAW

According to **Prof. Stigler** and **Boulding** the main assumptions of the law are :

- (i) No change in tastes and preferences of consumers.
- (ii) Consumer's income must remain the same.
- (iii) The prices of the commodity related to the commodity in demand should not change.
- (iv) There should be no change in the wealth of the consumers or their tastes.

### Explanation of the Law :

The relationship between the price and quantity demanded can be illustrated through a demand schedule and a demand curve. The demand schedule is the tabular presentation of price and quantity demanded. And the graphical plotting of this price quantity demanded relationship is known as demand curve. Demand schedule is classified as individual demand schedule and market demand schedule.

**Individual demand** schedule refers to the prices and quantities demanded of a commodity by an individual.

A market consists of all those individuals who want to buy a given commodity. According to **Liebhafsky**, "**Market Demand** schedule is defined as the quantities of a given commodity which all consumers will buy at all possible prices at a given moment of time." The addition of all individual demand schedules gives us market demand schedule.

The following table shows the individual demand schedules of consumer A and B and the market demand schedule where there are two consumers.

Table 1

Price per Quintal (₹)	Quantity Demanded by Consumer A	Quantity Demanded by Consumer B	Total Market Demand
30	5	10	15
20	10	20	30
10	15	30	45

**Demand Curve** : Demand curve is the graphical presentation of demand schedule. In the words of **R.G. Lipsey**, "This curve which shows the relation between the price of a commodity and the amount of that commodity the consumer wishes to purchase is called Demand Curve".

The demand schedules given in the table 1 are depicted graphically as figures 1 (a), (b) & (c). In these figures, the price of the commodity is measured along the Y axis and the quantity demanded is measured along the X axis. Different combinations of price and quantity demanded for consumer A and consumer B are shown in fig. (a) & (b) as points P, Q & R. By joining these points we get a curve  $DD_A$  in fig. (a) and  $DD_B$  in fig. (b). These are the demand curves of consumer A and consumer B respectively.

Market demand curve is illustrated in figure (c). The total quantities demanded by both the consumers at various given prices are shown in this figure by points P, Q & R and by joining these points we get market demand curve. The demand curve slopes downward to the right because more quantity is demanded at lower price and less is demanded at higher price. There are certain reasons for the downward or negative slope of the demand curve.

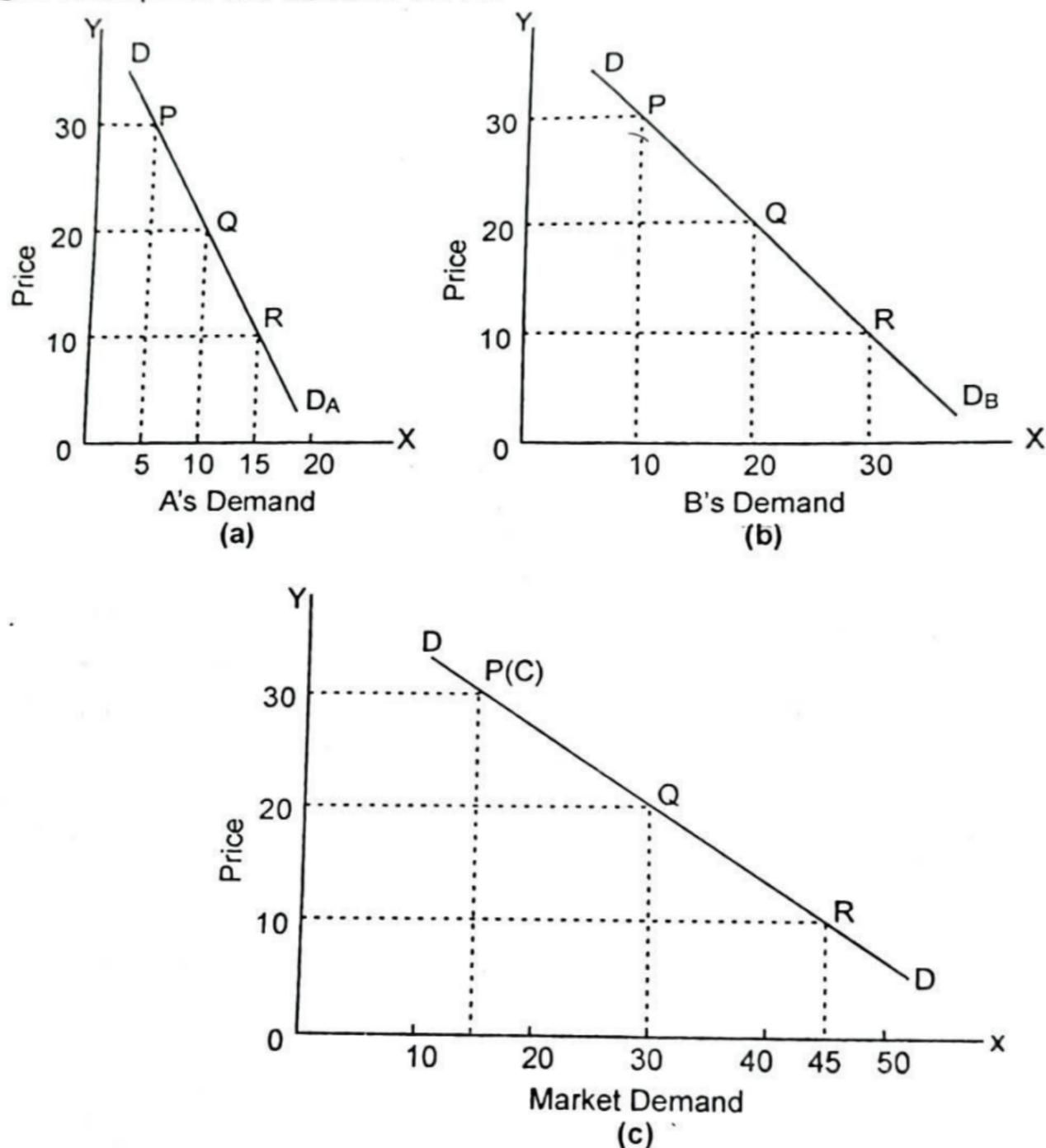


Fig. 1

## REASONS FOR LAW OF DEMAND

Following are the main causes responsible for the inverse relationship between price and quantity demanded.

(i) **Law of diminishing marginal utility**: The cardinal utility approach to consumer's demand is based on the assumption that the marginal utility of a commodity goes on falling as the consumer purchases more and more of the commodity. If the price of a commodity falls, the consumer buys more of the commodity.

commodity and his marginal utility from the commodity goes down to a level where the marginal utility of the commodity is equal to the price of the commodity.

(ii) **Change in the number of consumers** : When the price of a particular commodity falls then many other consumers who were not consuming that commodity earlier, start purchasing the commodity because now it is within their reach. The reverse would happen for the rise in prices.

(iii) **Substitution effect** : When a commodity becomes cheaper due to the fall in its price, the consumer starts substituting this commodity for the other commodities whose price remains the same. As a result of this substitution effect, the quantity demanded of that commodity whose price has fallen, rises.

(iv) **Income effect** : As the price of a commodity falls, the consumer has to spend lesser amount of money to get the same amount of commodity. In other words, consumer's real income or purchasing power increases. This is called income effect of change in price of a commodity. This increase in real income induces the consumer to buy more of that commodity. Thus, a fall in price is resulted in an increase in quantity demanded and vice-versa.

**Exceptions to the Law of Demand** : There are certain exceptions of Law of Demand these are given below :

- (i) **Inferior goods or Giffin goods** : The fall in price of inferior good may not increase its demand, because the consumer will divert the extra purchasing power in purchasing the superior good. **Sir Robert Giffin** observed that the law of demand did not apply in case of **British workers' demand for bread**. As the price of bread fell in the market, the British workers could purchase the same amount of bread with less money. The money income saved thereby was spent on purchasing more of meat, a superior commodity for the British workers. After the name of Robert Giffin such goods in whose case there is a direct price-demand relationship are called Giffin goods.
- (ii) **Conspicuous consumption** : This exception to the law of demand is associated with the name of American economist **Thorstein Veblen** who propounded the doctrine of conspicuous consumption. A rich man's desire for distinction is satisfied better when the articles of distinction are high priced and the poorer man cannot buy them. Diamonds are the good example of this case. Diamond is considered as an article of distinction because it is high priced commodity. The price of diamonds has a direct relationship with the quantity demanded for the rich people. On the other hand, the demand for diamonds fall with a fall in price.
- (iii) **Expectation of rise and fall in price in future** : If people expect a rise in price, they may purchase larger quantity of that good even at higher price. Expectation of fall in price divert them towards lesser quantity of that particular good at present even at reduced price.
- (iv) **Ignorance on the part of consumers about quality** : Some times people judge the quality of the commodity from its price. When the price of a commodity is less, it may be considered inferior and consumers purchase lesser amount of it. But when its price goes up, they consider it to be superior and may purchase more of it than before.
- (v) **Emergency** : In times of emergency like flood, famine or war, the households do not behave in the normal way and consequently law of demand does not operate.

## ANALYSIS OF CHANGE IN DEMAND

Change in the price of a commodity may result in the change of demand for that commodity. It is also possible that the change in demand may occur due to factors other than price. Changes in demand for a commodity can be shown through the demand curve in two ways.

quantity  $OL$  is demanded at the downward shifted curve  $D''D''$  at the same price  $OP$ . The higher quantity  $ON$  is due to the increase in demand and the lesser quantity  $OL$  is related to the decrease in demand.

## ELASTICITY OF DEMAND

The law of demand states that there is an inverse relationship between quantity demanded and price of the commodity. The law of demand indicates the direction of the change in quantity demanded in response to the change in price. But, it did not explain by how much or to what extent the quantity demanded of a commodity will change in response to a change in price. This explanation is provided by the concept of elasticity of demand.

### Elasticity of Demand

**Meaning :** The responsiveness of demand to change in price or other determinant factors of demand is measured through elasticity of demand. Elasticity of demand can be mainly of three types :

- (i) Price elasticity or responsiveness of demand to change in price.
- (ii) Income elasticity is the responsiveness of demand to change in consumer's income.
- (iii) Cross elasticity is the responsiveness of a commodity  $X$  to changes in the price of a related commodity  $Y$ .

**Price Elasticity of Demand :** It is the price elasticity which is usually referred as elasticity of demand. According to Prof. Alfred Marshall "The elasticity (or responsiveness) of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price and diminishes much or little for a given rise in price".

In the words of Prof. Boulding, "Elasticity of demand measures the responsiveness of demand to change in price".

As said above, the price elasticity of demand explains the response of quantity demanded of a commodity to changes in its price, other determinant factors remain unchanged.

## DEGREES OF PRICE ELASTICITY OF DEMAND

Different commodities have different elasticities of demand. Some commodities have more elastic demand while others have relatively less elastic demand. Some particular values of elasticity of demand are graphically shown follow :

(1) **Completely or perfectly inelastic demand :** In this case the demand curve is vertical straight line parallel to Y-axis. The value of elasticity of demand is equal to zero. It means the quantity demanded remain total unaffected. Whatever the changes in price may be, the demand remains the same.

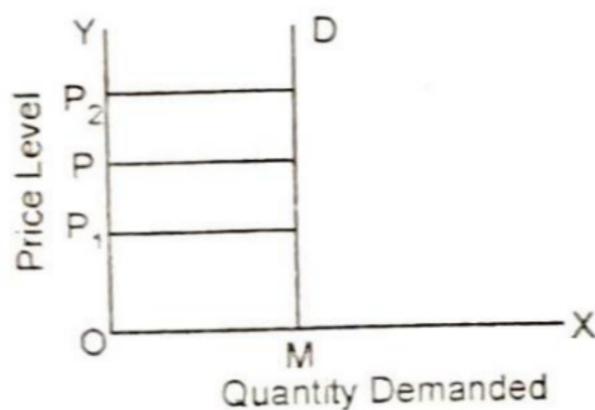


Fig. 4 : Perfectly Inelastic Demand

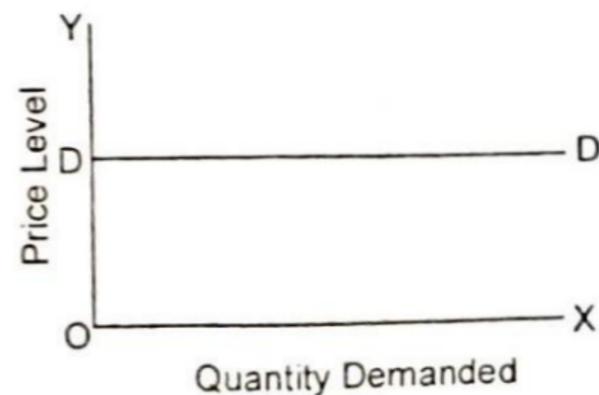
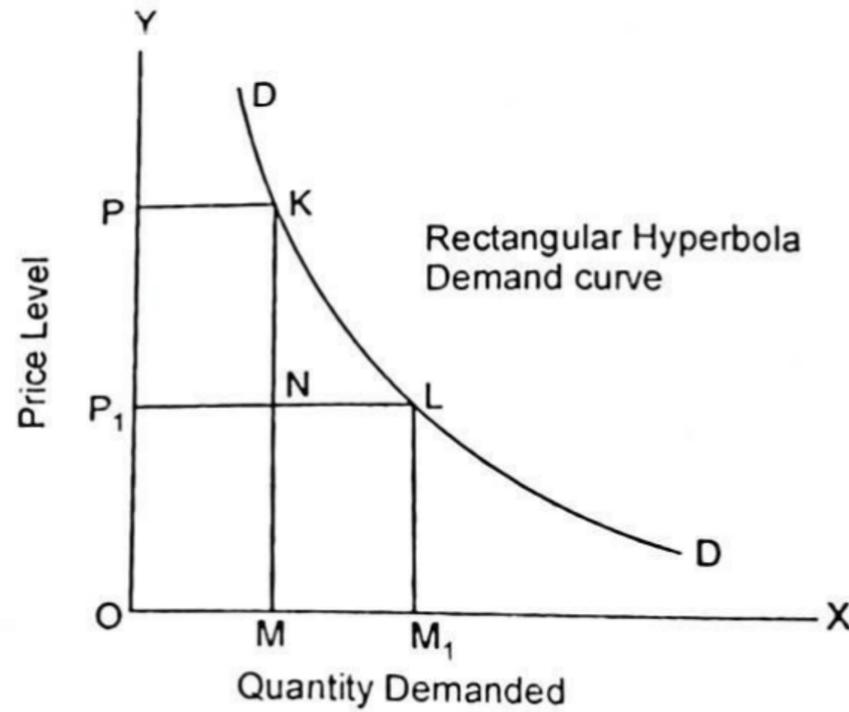


Fig. 5 : Perfectly Elastic Demand

**(2) Perfectly elastic demand :** Demand for a commodity is said to be perfectly elastic when the demand for it may increase or decrease to any extent for a small change in price. In this case the demand curve is shown in the form of horizontal straight line parallel to X-axis. The value of elasticity of demand is equal to infinity.

**(3) Unitary elastic demand :** Elasticity of demand equal to one or unit elasticity of demand is shown in the figure 6. If the percentage change in quantity demanded equals to the percentage change in the price then the numerical measurement of elasticity will be equal to one.

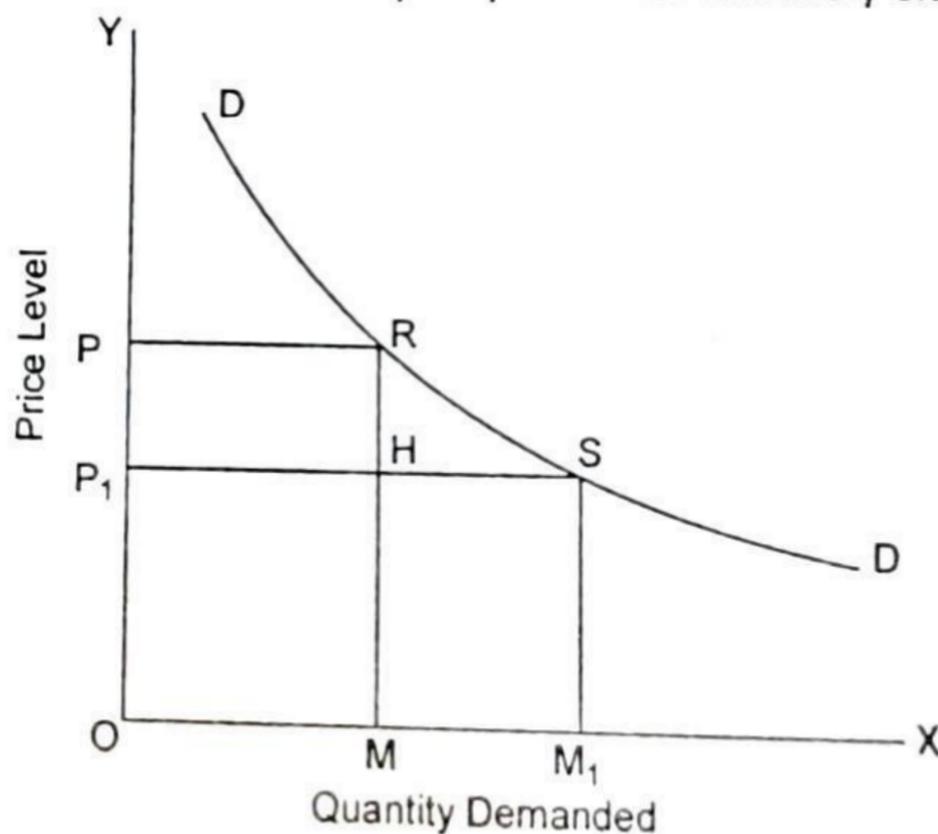


**Fig. 6 : Unitary Elastic Demand**

The area of rectangles under the demand curve will always be equal. It means that the total expenditure of the consumer on the commodity remains the same even when the price changes. Such a demand curve is known in mathematics as a rectangular hyperbola.

In the diagram,  $DD$  is the demand curve. When the price is  $OP$ , the total expenditure made on the good is equal to area of rectangle  $OMKP$  and when price falls to  $OP_1$  the total expenditure is equal to the area of rectangle  $OM_1LP_1$ . The area  $OMNP_1$  is common in both the rectangles  $OMKP$  and  $OM_1LP_1$ . It can be seen from the figure that the remaining areas  $P_1NKP$  and  $MM_1LN$  are equal to each other. It means that for any change in price the total outlay made on the good has remained the same.

**(4) Elastic demand or more than unit elastic demand :** When the price elasticity of demand is greater than one, then the demand for the commodity may be called relatively elastic. In this case, a small change



**Fig. 7 : More than Unit Elastic Demand**

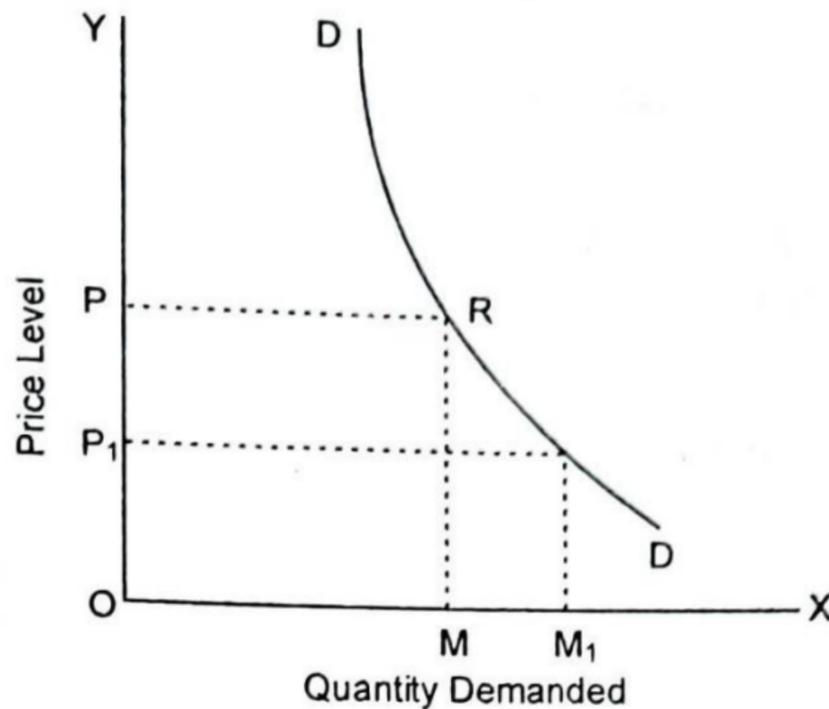


Fig. 8 : Less than Unit Elastic Demand

in price leads to a greater change in quantity demanded. In the figure 7,  $DD$  is the demand curve. At the price  $OP$  the quantity demanded is  $OM$  and the total expenditure made on the good is  $OPRM$ . When the price of the good falls to  $OP_1$  the quantity demanded increases to  $OM_1$  and the rectangle  $OP_1SM_1$  shows the total expenditure made on the commodity. It is clear from the figure that the rectangle  $OP_1HM$  is common in both the rectangles and the remaining areas in the two rectangles are  $P_1HRP$  and  $MHSM_1$ . The area of rectangle  $MHSM_1$  is greater than the area of rectangle  $P_1HRP$ . It indicates that the expenditure on the good at  $OP_1$  price is greater than the expenditure at price  $OP$ . That is, with the fall in price, the total expenditure has increased. Hence the price elasticity of demand is here greater than unity.

(5) **Inelastic demand or less than unit elastic demand** : The demand elasticity between zero and one may be termed as relatively inelastic demand. In such cases, a considerable change in price does not lead to much change in the demand. The figure 8 depicts that with the fall in price the total expenditure made on the good declines. At price  $OP$  the total expenditure is equal to the area of rectangle  $OPRM$  and when the price falls to  $OP_1$  the expenditure made on the commodity is equal to the area of rectangle  $OP_1SM_1$ . The area of rectangle  $OPRM$  is greater than the area of rectangle  $OP_1SM_1$ . Thus, the price elasticity of demand is here less than unity.

## MEASUREMENT OF PRICE ELASTICITY OF DEMAND

Elasticity of demand can be measured through three popular methods :

(1) **Proportionate method of measurement** : Price elasticity of demand is a measure of the relative change in quantity demanded of a commodity in response to a relative change in its price, Mrs. Robinson has precisely defined as "proportionate change in quantity demanded in response to a small change in price, divided by the proportionate change in price".

Thus, price elasticity

$$e_p = \frac{\text{Proportionate change in demand}}{\text{Proportionate change in price}}$$

or

$$= \frac{\text{Change in demand}}{\text{Original demand}} \div \frac{\text{Change in price}}{\text{Original price}}$$

$$e_p = \frac{\text{lower segment of demand curve}}{\text{upper segment of demand curve}}$$

In the figures 9 (a), (b) given above, a straight line demand curve and a curve convex to the origin are illustrated in the (a) and (b) part of the diagram. In figure (a) we extend both the sides of straight line demand curve. It touches the X-axis at the point M and Y axis at the point N. The point P on the demand curve NM lies at the centre of this straight line demand curve, which means the distance from the point to X-axis is equal to the distance to the Y-axis.

$$\begin{aligned} \text{Elasticity of demand at point } P &= \frac{PM}{PN} \text{ (because } PM \text{ equal to } PN) \\ &= 1 \end{aligned}$$

Similarly, at the point  $P_1$  the elasticity of demand is equal to  $\frac{P_1M}{P_1N}$  which means the elasticity is greater than one since the distance to X-axis from point  $P_1$  i.e.,  $P_1M$  is greater than  $P_1N$ , the distance to Y-axis from the same point  $P_1$ . Elasticity at another point  $P_2$  is measured as  $P_2M / P_2N$  which is less than unity since  $P_2M$  is lesser than  $P_2N$ .

In figure 9 (b), to measure the elasticity at point  $P_1$  on the convex demand curve, we draw a tangent NM at point  $P_1$ . The elasticity is found easily as  $P_1M / P_1N$ . It is the ratio of the distance along the tangent to the X-axis divided by the distance to the Y-axis.

## FACTORS AFFECTING PRICE ELASTICITY OF DEMAND

There are number of factors affecting the price elasticity of demand. The main factors are as follows

**(1) Availability of substitutes :** The price elasticity of demand for those commodity which have close substitutes, is more elastic. If there is an increase in the price of the commodity, people will start using other commodity.

**(2) Nature of commodity :** The demand of necessities is inelastic and those of comforts and luxuries of life are elastic. Those commodities which are essential for life, are demanded at any price. Demand for commodities like salt, food grains etc. does not change much in response to the change in price. If the price of luxury good rises, its purchase can be dispensed with because it is not an essential commodity.

**(3) Number of uses :** If a commodity can be put to several uses its demand tends to be elastic. Even a fall in its price induces the consumer to put it to less urgent uses.

**(4) Postponement of consumption :** The demand for commodities, whose consumption can be postponed for sometime is elastic. Demand for those commodities, whose consumption can not be postponed, is inelastic.

**(5) Level of income of the consumers :** Price elasticity of demand also depends on level of income. People with high income are less affected by price changes than the people with low incomes. A rich man will not curtail his consumption of a particular commodity even its price rises significantly. But a poor person can not do so.

**(6) Habitual necessities :** If consumers are habituated of some commodities, the demand for such commodities are usually inelastic, because they will use them even when their price goes up. Cigarette smoking and consumption of liquor are such examples because the demand of these commodities do not diminish due to the rise in their prices.

(7) **Prevailing price level** : Elasticity of demand tends to be great at high prices. In other words demand is elastic at higher prices and inelastic at lower prices.

(8) **Joint demand** : Price elasticity of demand for a commodity also depends upon the nature of price elasticity of jointly demanded commodities. The elasticity of demand for ink depends on the nature of elasticity of demand for fountain pens.

(9) **Time period** : Elasticity of demand varies with the length of time periods. Demand is elastic in the long period and inelastic in the short period. Because in short period, generally demand does not change immediately due to the change in prices.

(10) **Future expectations about price change** : Future expectations about a fall in price of a particular commodity affects the demand of the commodity adversely which means elastic demand and expectation about a rise in price means inelastic demand.

## INCOME ELASTICITY OF DEMAND

The responsiveness of the demand to the change in income, if other determinants of demand remain the same, is known as Income Elasticity of demand. According to **Watson**, "Income elasticity of demand means the ratio of the percentage change in the quantity demanded to the percentage change in income."

Thus, income elasticity of demand

$$e_y = \frac{\text{Proportionate change in demand}}{\text{Proportionate change in income}}$$
$$= \frac{\Delta q}{q} \div \frac{\Delta Y}{Y} = \frac{\Delta q}{\Delta Y} \times \frac{Y}{q}$$

where  $e_y$  is income elasticity of demand,  $\Delta q$  is the change in demand,  $q$  is the original demand,  $Y$  is the original income and  $\Delta Y$  change in income.

### Types of Income Elasticity

(1) **Zero income elasticity** : It means the quantity demanded is quite unresponsive to the change in income. When the demand for a good does not respond to the change in income, the income elasticity is said to be completely inelastic or equal to zero.

(2) **Positive income elasticity** : When an increase in income leads to the increase in quantity demanded, then the income elasticity will be more than zero. This is the case of positive income elasticity.

(3) **Negative income elasticity** : The income elasticity is said to be negative for those goods whose income elasticity is less than zero and in such cases increase in income will lead to the fall of quantity demanded of the goods. Goods with negative income elasticity are known as inferior goods.

## CROSS ELASTICITY OF DEMAND

Cross elasticity of demand is the responsiveness of demand for a commodity to a change in price of a related commodity. In the words of **Liebhafsky**, "The cross elasticity of demand is a measure of the responsiveness of purchases of  $Y$  to change in the price of  $X$ ". **Prof. Ferguson** observes, "The cross elasticity of demand is the proportional change in the quantity of  $X$  demanded resulting from a given relative change in the price of the related good  $Y$ ".

Thus, cross elasticity of demand of X for Y

$$e_{xy} = \frac{\text{Proportionate change in demand of X}}{\text{Proportionate change in price of Y}}$$

Symbolically,

$$e_{xy} = \frac{\Delta q_x}{q_x} \div \frac{\Delta P_y}{P_y} = \frac{\Delta q_x}{DP_y} \times \frac{P_y}{q_x}$$

where  $e_{xy}$  is the cross elasticity of demand of x for y,  $\Delta q_x$  change in the quantity demanded of X,  $q_x$  original quantity demanded of X,  $\Delta P_y$  change in the price of Y and  $P_y$  original price of Y.

### Types of Cross Elasticity of Demand

(1) **Positive Cross Elasticity** : It means that the increase in price of Y leads to an increase in quantity demanded of X, the cross elasticity demand of X for Y is said to be positive. In this case both commodities X and Y are good substitutes.

(2) **Negative Cross Elasticity** : When the rise in price of Y results in fall in quantity demanded of X, then the cross elasticity of demand will be negative. This is the case of complementary goods.

## ≡ SUPPLY

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In a market economy, while buyers of a product constitute the demand side of the market, sellers of the product make the supply side of the market.

### Meaning of Supply

The quantity of a commodity offered for sale in the market at a particular price at given time is known as supply. In the words of **Prof. Meyers**, "Supply as a schedule of the amount of a good that would be offered for sale at all possible prices at any one instant of them or during any period of time, for example a day, a week and so on, in which conditions of supply remain the same".

### Factors affecting supply or determinants of supply

As we aware of the positive relationship between the price of the commodity and quantity supplied. The higher the price, the more will be the supply of the commodity.

(1) **Price of the commodity** : At a higher price, a producer offers more quantity of commodity for sale and at lower price, less quantity of commodity.

(2) **Price of the related goods** : If the price of substitutes go up the demand for the commodity in question will increase encouraging its production. In case of complementary goods, the price rise of one commodity will increase the supply of other commodity.

(4) **Prices of factors of production** : Higher prices of factors of production increase the cost of production and damage the sales and production. Cheaper factors of production increase the supply and demand for the commodity produced by such factors.

(5) **State of technology** : The use of better technology reduces the cost of production and increases productivity for increasing the supply. Out-dated technology blocks the supply of goods and results in more wear and tear during the production process.

(6) **Future expectation** : If the producers expect the prices to rise in the future, less supply will be made in present. If prices are expected to fall in future, present supply will increase.

(7) **Government policy** : If Government imposes higher taxes on the production and sale of commodities such as excise duty and sales tax, producers will reduce production, thereby reducing the

supply. If the Government provides economic aid through subsidies, the producers will supply more goods to the market.

(8) **Natural factors** : Nature plays an important role in the production of agricultural goods. Natural calamities affect agricultural production adversely, limiting the supply of these goods.

(9) **Means of transport and communication** : With the growth of means of transport and communication, the transportation of goods becomes easy and the information regarding demand, supply and prevailing prices are easily available. These facilities increase the supply of goods.

(10) **Foreign trade** : Import of machines, raw materials and expert services, increase the supply through higher productivity in the country. Exports of goods, decrease the supply of commodities in the local market. Import of goods also make available more goods.

## LAW OF SUPPLY

Law of supply establishes the relation between the price of the commodity and its supply. Other things remain the same the supply of a commodity increases with an increase in its price and decreases with a fall in price. The relationship between price and supply is direct and positive.

**Assumptions of the law of supply** : The law of supply like the law of demand assumes other things remaining the same. It considers the following factors remaining constant to establish, direct and positive relationship between price and quantity supplied.

- (1) No change in the prices of factors of production.
- (2) No change in the prices of related goods.
- (3) No change in the state of technology.
- (4) No change in Government Policy about taxation and subsidies.
- (5) Producers do not expect any change in the price of the commodity in near future.

### **Explanation of the Law :**

The direct relation between price and quantity supplied, summarised in the table form is known as supply schedule. It has two aspects

- (1) Individual supply schedule
- (2) Market supply schedule

**Individual supply schedule** presents the quantities of a commodity offered for sale in the market at various price levels by an individual firm/producer. Table 1 shows a firm's supply schedule.

Price per unit (₹)	Supply of Firm A (Quintals)	Supply of Firm B (Quintals)
20	100	120
40	150	200
60	200	280

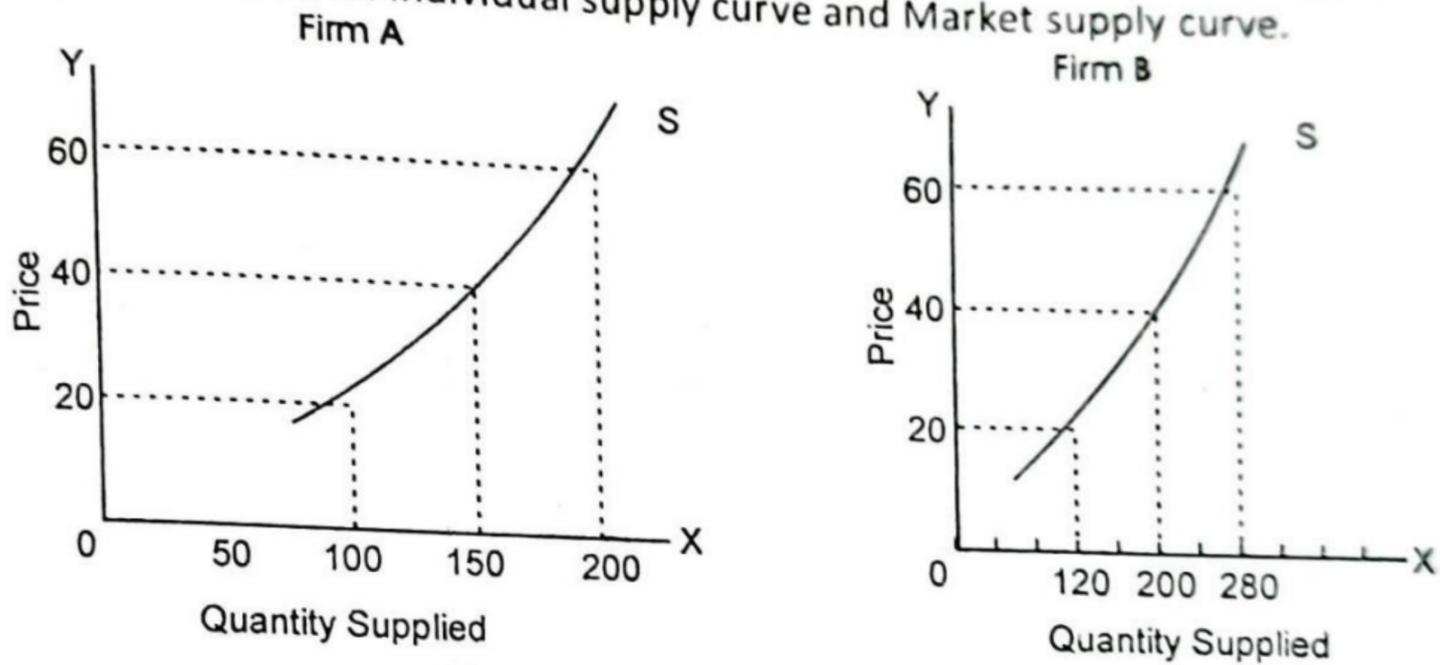
**Table 1. Individual Supply Schedule**

**Market supply schedule** shows the market supply of a commodity at different price levels. It is the sum of all individual supply schedules in the market producing the commodity. Table 2 depicts the aggregate supply of the market.

Price per unit (₹)	Supply of Firm A (in Quintals)	Supply of Firm B (in Quintals)	Market supply (in Quintals)
20	100	120	220
40	150	200	350
60	200	280	480

**Table 2. Market Supply Schedule**

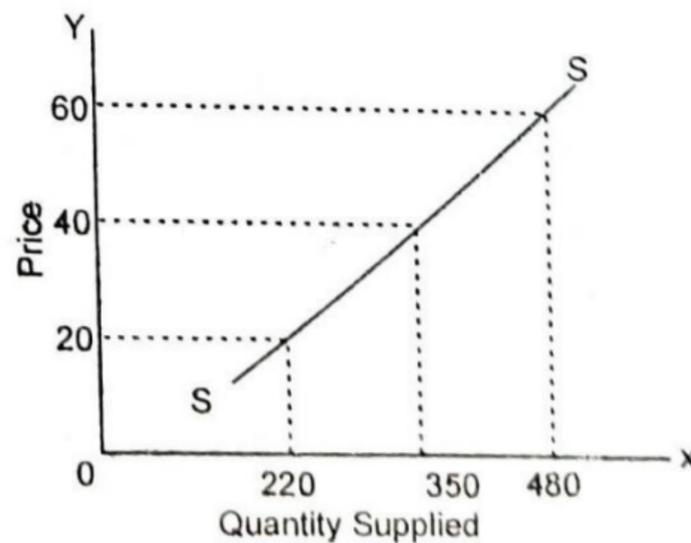
**Supply curve :** The graphic representation of supply schedule is known as supply curve. Like the supply schedules, there can be an Individual supply curve and Market supply curve.



**Fig. 1 : Individual Supply Curve**

Individual supply curve is depicted with the help of data given in individual supply schedule. Diagram 1 shows the individual supply curve based on the data given in individual supply schedule.

**Market supply curve** is the horizontal summation of individual supply curves of firm A and B. It is based on the market supply schedule given in the table 2.



**Fig. 2 : Market Supply Curve**

Both the supply curves have a positive slope since there is a positive relationship between price and supply made by firms in the market. Comparing to the individual supply curves the market supply curve is quite elastic. This is because of two reasons. Firstly, firms already present in the market sell more and more as price rises. Secondly, with the rise in price, more firm are attracted to the market to sell. But the ultimate thing which affects the supply of a commodity, is the cost of production. Because the firms

supply more commodity at higher prices just to get more profit and it depends upon the cost of production and price.

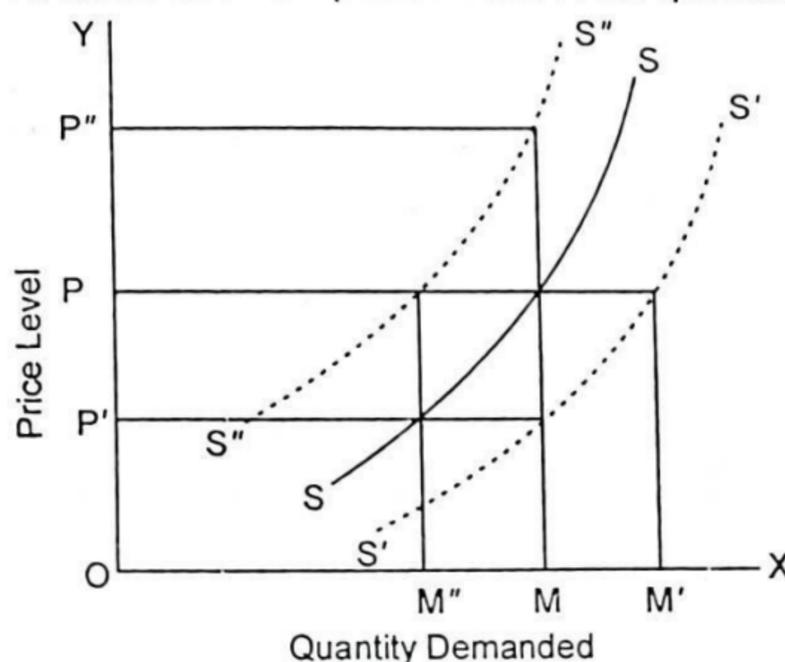
**Change in Supply :** There are two aspects of change in supply.

(1) Extension and contraction in supply.

(2) Increase and decrease in supply.

**(1) Extension and contraction in supply :** The most important factor for bringing about change in supply is change in price. Rise in price increases the supply of the commodity and a fall in price decreases the quantity supplied of the commodity.

**(2) Increase and decrease in supply :** When the amount supplied rises without any change in prices, or the same amount is supplied at lower price, it is called increase in supply. On the other hand, if same amount is supplied at higher price or lower quantity is offered at same price, it is called decrease in supply. As shown in the following figure the original supply curve is  $SS$  and at  $OP$  price,  $OM$  quantity of the commodity is supplied. If the supply curve shifts from  $SS$  to  $S'S'$  position, the quantity supplied increases from  $OM$  to  $OM'$  at the same price  $OP$ . At this  $S'S'$  supply curve the previously supplied quantity  $OM$  can be obtained at a lower price  $OP'$ . This shift in supply curve shows the increase in supply. On the other hand, if the supply curve shift from  $SS$  to  $S''S''$  position the same quantity  $OM$  can be obtained at higher



**Fig. 3 : Increase and Decrease in Supply**

price  $OP''$  or at the same price  $OP$  the quantity supplied is reduced to  $OM''$ . This shift in supply curve from  $SS$  to  $S''S''$  position explains decrease in supply.

## **REASONS FOR THE LAW OF SUPPLY**

The main reasons are as follows :

**(1) Change in stock :** With price rise more quantity is supplied out of the old stock while lesser supply is made with the fall in price. There is increase in the present stock. The inventories are released with price rise.

**(2) Profit and loss :** Rising prices generally result in higher profits and increased production. On the other hand, lower prices resulting in losses, decrease the supply. This discourages producers who decide to produce smaller quantities. Therefore, production is suppressed at lower price.

(3) **Entry and exit of the firms** : Rising prices accompanied by higher profits induce new firms to join the industry, and thereby increasing the supply. In case of loss, existing firms try to quit the industry and supply is reduced. This happens because inefficient firms who do not hope to earn any profit at a low price exit from the market.

(4) **Incentive for innovation** : Advanced technology is used through scientific researches. It reduces the cost of production.

## EXCEPTIONS OF THE LAW OF SUPPLY

(1) **Future expectation about the change in prices** : If the firm expects fall in the price in future, the firm will supply more despite the fall in prices. To avoid loss in future, the supplier behaves against the law of supply.

(2) **Increase of agricultural goods** : The supply of agricultural goods is regulated by rainfall, fertility of the land and weather conditions in place of prices.

(3) **Perishable goods** : Since these goods can not be stored for a long period, the supply of these goods does not hold the same relationship with price as the law of supply illustrates.

(4) **Goods for auction** : These goods being limited in quantity are purchased with a specific period of time. The law does not operate in their case.

(5) **Disposal of old stock** : To clear the back log of old stock, the supplier are interested in sale without bothering about the prices. The money blocked in their storage does not attract any profit.

(6) **Rare goods** : Rare goods such as old coins, artistic goods, rare literature etc. fetch abnormal price despite their limited supply.

(7) **Backward countries** : These countries lack in productive capacity and supply remains limited in face of rising prices.

## ELASTICITY OF SUPPLY

The law of supply indicates the tendency of change in supply due to change in price. Elasticity of supply may be taken to be a measure of the rate at which supply changes as a result of a change in price. According to **Prof. Samuelson**, "Elasticity of supply is defined as a measure of the degree of responsiveness of supply to the change in price." It is the percentage change in quantity supplied with given percentage change in price

$$e_s = \frac{\text{Proportionate Change in quantity supplied}}{\text{Proportionate change in price}}$$

Symbolically,

$$= \frac{\Delta S}{S} \div \frac{\Delta P}{P}$$
$$e_s = \frac{\Delta S}{\Delta P} \times \frac{P}{S}$$

where  $e_s$  is the elasticity of supply,

$\Delta S$  denotes to the change in supply

$\Delta P$  is the change in price

$S$  the original supply and,

$P$  denotes to the original price.









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