

UNIT – II

DEMAND

MEANING of DEMAND

Demand means desire for an object. Demand is effective only if it is backed by the purchasing power of money. Further there must be willingness to buy a commodity. Thus demand in Economics means the desire backed by the willingness to buy and the purchasing power to pay. Economists call this demand as effective demand.

DEFINITION OF DEMAND

According to **Stonier and Hague**,” Demand in Economics means demand backed up by enough money to pay for the goods demanded.”

TYPES OF DEMAND

1. **PRICE DEMAND** : Price demand refers to the various quantity of goods and services that a consumer would purchase of a given time at various prices in the market. It expresses the relationship between price and quantity of goods purchased. Thus the amount demanded is a function of price in the case of price demand.
2. **INCOME DEMAND**: Income demand refers to the various quantities of goods and services which consumers purchase at the various levels of income. Income demand expresses the relationship between income and quantity demanded. In the case of income demand, demand is the function of income and not prices.
3. **CROSS DEMAND**: Cross demand refers to the quantity of a good or a service which a consumer buys with reference to the change in the price of other inter-related goods rather than with reference to the price of the good in question. For example, a change in the price of tea will affect the demand for coffee.

LAW OF DEMAND

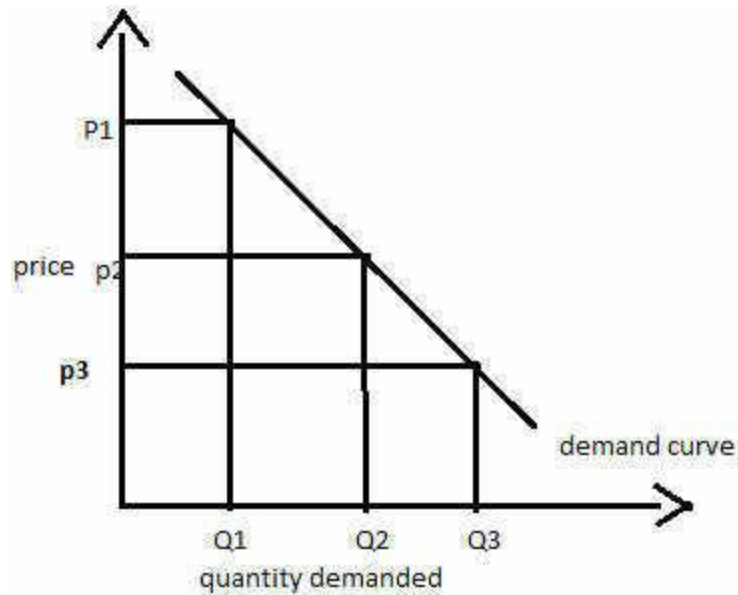
Marshall states the Law of Demand thus: “the amount demanded increases with a fall in price and diminishes with a rise in price.” This means that quantity demanded of a commodity expands with a fall in price and contracts with a rise in price. The demand thus tends to vary inversely with its price. The law of demand expresses the inverse relation between the price and demand of a commodity. It may be added that the law explains the functional relation between the price and demand of a commodity. Demand is the function of price. It can be expressed as $D = f(P)$. Here D is demand and P is price.

The law may be explained with the help of a table and a diagrammatic representation.

Individual Demand Schedule

Price of pen in Rupees	No. of pens demanded
5	10
4	20
3	30
2	40
1	50

In the table as the price of pen falls from Rs. 5 to Rs. 1, the demand for pen has expanded from 10 to 50 and vice versa.



In the above diagram, quantity demanded is taken along the X axis and price is taken along the Y axis. DD1 is the demand curve. When the price is $pP1$, the quantity demanded is $Q1$. When the price falls to $P2$, the quantity demanded increases to $Q2$. When the price falls further to $P3$, the quantity demanded increases to $Q3$. From this it is clear that when price decreases, the demand increases and when price increases, the demand decreases. The demand curve DD1 has a negative slope. It slopes downward from left to right.

ASSUMPTIONS

1. There is no change in consumer's tastes and preferences.
2. Consumer's income remains constant.
3. Prices of other goods should not change.
4. There should be no substitutes for the commodity.
5. The commodity in study should not confer any distinction.
6. The demand for the commodity should be continuous without any interruption.

Given these conditions, the law operates; otherwise the law fails to operate. Mostly these assumptions are fulfilled in the short period and not in the long period. Hence the law of demand is true in the short period.

FACTORS DETERMINING DEMAND

Sometimes the demand for goods and services changes not because of the change in price as such but because of change in conditions or factors governing demand. These conditions are known as conditions of demand.

Weather or climate changes often account for changes in demand irrespective of any change in price. For example, warm clothes are demanded more in winter and coolers and cool drinks are demanded in summer.

Changes in taste, fashion and preference more often lead to change in demand. For example, the European influence has made dhoti out of fashion among the Indians. Hence the Indians now prefer pant. The demand for pant cloth is therefore, more than the demand for dhoti.

Change in size and composition of population: As the population increases, the demand for goods automatically increases without any reference to price level. Again the demand for goods changes according to the composition of population. If there are more babies for instance in a country, the demand for baby foodstuff and toys increases more than other things.

Money and its distribution: When the supply of money increases, the demand for goods increases and vice versa. Similarly when the wealth and income are equally distributed, the demand increases more than the demand when they are unequally distributed.

Money and real income: When the money income, particularly the real income increases people buy more without minding the price level. On the contrary, when their income is less, they buy less.

Inter-related goods: In the case of inter-related goods like substitutes and complements demand changes without reference to the change in price. For example, the demand for tea increases because of the rise in the price of coffee. Similarly in the case of complements like coffee powder, milk and sugar, if the demand for coffee powder increases, the demand for milk and sugar automatically increases.

Prosperity and Depression: Prosperity and depression too influence demand. In times of prosperity, generally the demand for goods rises and during depression demand is very dull.

ELASTICITY OF DEMAND

Meaning

Elasticity of demand means the responsiveness of the demand to a given change in price. It explains the rate or the degree by which the demand changes to a given change in price.

Definition

In the words of **Meyers**, “ The elasticity of demand is a measure of relative change in the amount purchased in response to relative change in price on a given demand curve.”

TYPES OF ELASTICITY OF DEMAND

1. PRICE ELASTICITY OF DEMAND

Price Elasticity: Marshall was the first to define price elasticity of demand. According to Lipsey, “ Elasticity of demand may be defined as the ratio of percentage change in price.”

KINDS OF PRICE ELASTICITY

Perfectly or Infinitely Elastic Demand: When an infinite small change in price leads to an infinitely large change in the amount demanded, there will be perfectly or infinitely elastic demand.

Perfectly Inelastic or Zero Elastic Demand: is one in which whatever the change in price, there is absolutely no change in demand.

Unitary Elastic Demand: When the change in demand is exactly proportionate to the change in price, price elasticity of demand is unity.

Relative Elastic demand: is one in which the demand changes more than proportionately to the change in price.

Relative inelastic demand: if the change in demand is less than proportionate to the change in price, price elasticity of demand is less than unity.

2. INCOME ELASTICITY OF DEMAND

According to **Benham**," Income elasticity of demand is the percentage increase in a person's demand for a good due to percentage increase in his real income or more generally, the percentage increase in the amount demanded divided by the percentage good." This means that income elasticity of demand is the ratio of the percentage change in quantity demanded for the percentage change in income.

$$E_y = \text{Proportionate change in quantity demanded} / \text{Proportionate change in income.}$$

KINDS OF INCOME ELASTICITY

Zero income elasticity of demand is one in which the given increase in the money income of the consumer does not evoke any increase in quantity demanded of a commodity. In this case, $E_y = 0$.

Negative income elasticity refers to a situation in which the increase in the money income of the consumer leads to a decrease in the quantity purchased of a commodity. This is true in the case of inferior goods. The value of income elasticity will be less than zero.

Unitary income elasticity of demand is one in which the given increase in the consumer's income leads to an equal percentage increase in the money spent on the commodity. In the case of unitary income elasticity the value of $E_y = 1$.

Income elasticity of demand is greater than one when the consumer spends a greater proportion of his income on the commodity, when he grows richer with larger income.

Income elasticity of demand is less than one when the consumer spends lesser proportion of his increased income on the purchase of a commodity.

3. CROSS ELASTICITY OF DEMAND

The cross elasticity of demand is the relation between percent change in the quantity demanded of a good to the percentage change in the price of a related good. It is the ratio of proportionate change in the quantity demanded of B to a give change in the price of A.

$$E_{ba} = \frac{\text{Percentage change in quantity demanded of B}}{\text{Percentage change in price of A}}$$

TYPES OF CROSS ELASTICITY OF DEMAND

The cross elasticity very much depends upon the relation between goods that are in cross demand. If two goods are closely related like perfect substitutes eg. tea and coffee the cross elasticity of demand is positive.

In the case of complementary or jointly demanded goods like pen and ink the cross elasticity of demand is negative.

On the contrary, if goods are unrelated ie. they are not substitutes at all, the cross elasticity of demand will be zero.

METHODS OF MEASURING ELASTICITY OF DEMAND

There are four methods to measure price elasticity of demand. They are

1. PERCENTAGE METHOD

It is one of the satisfactory methods of measuring elasticity of demand. It measures elasticity of demand by comparing the ratio of percentage change in amount demanded to the percentage change in price of a commodity.

$E_d = \text{Relative change in amount demanded} / \text{relative change in price.}$

It is also known as formula method or coefficient of price elasticity method.

$E_d = 1$, when the percentage change in demand/the percentage change in price
i.e. $20\%/20\% = 1$

E_d is greater than one, when the percentage change in demand/the percentage change in price i.e. $20\%/10\% = 2$

E_d is less than one, when the percentage change in demand/ the percentage change in price i.e. $20\%/40\% = 0.5$

$E_d = \text{infinity}$, when the percentage change in demand / the percentage change in price i.e. $\text{infinity}/0\% = \text{infinity}$.

$E_d = 0$, when the percentage change in demand / the percentage change in price i.e. $0\%/10\% = 0$.

2. TOTAL OUTLAY METHOD

According to this method, elasticity can be measured by comparing the total expenditure of a purchaser both before and after the change in price. Total outlay is equal to price multiplied by quantity demanded. According to this method, elasticity will be measured thus:

Elasticity is unity or one, if the total outlay does not change with any change in price.

Elasticity is greater than unity or 1, if the total outlay increases with a fall in price and decreases with a rise in price.

Elasticity is less than unity or 1, if the total outlay increases with a rise in price and decreases with a fall in price.

Price in Rupees	Quantity Demanded	Total Outlay Price *Quantity	Demand Elasticity
100	10	1000	Elasticity is greater than 1
120	9	1080	Elasticity is greater than 1
140	8	1120	Ed = 1
160	7	1120	Ed = 1
180	6	1080	Ed is less than 1
200	5	1000	Ed is less than 1

The total outlay method is also known as total revenue method. It indicates only the class of elasticity but not its exact numerical value.

3.POINT METHOD OR GEOMETRIC METHOD

This method is suggested by Marshall. The simple way of explaining the point method is to consider a straight line demand curve. Let the straight line demand curve be extended to meet the two axes. When the point taken on the demand curve like the point A on DD1 curve, it divides the curve into two segments or parts. The point elasticity is, thus measured by the ratio of the lower segment of the curve below the given point to the upper segment.

Point elasticity = Lower segment of the demand curve below the given point/upper segment of the demand curve above the given point.

By the point method we can measure the elasticity of demand not only in a straight line demand curve but even when the demand curve slopes.

Point method no doubt gives the exact numerical value of elasticity. But its weakness is that it can be used only when the demand curve is known either by observation or calculation. When the demand curve is not certain we have to use some other method.

4. ARC METHOD OR ARC ELASTICITY METHOD

We can use point method to measure elasticity of the demand curve but to measure elasticity between points, we have to use another method known as Arc Method. According to Baumol, "Arc elasticity is a measure of average responsiveness to price change exhibited by the demand curve over some infinite stretch of the demand curve." Any two points on a demand curve make an arc.

DETERMINANTS OF ELASTICITY OF DEMAND

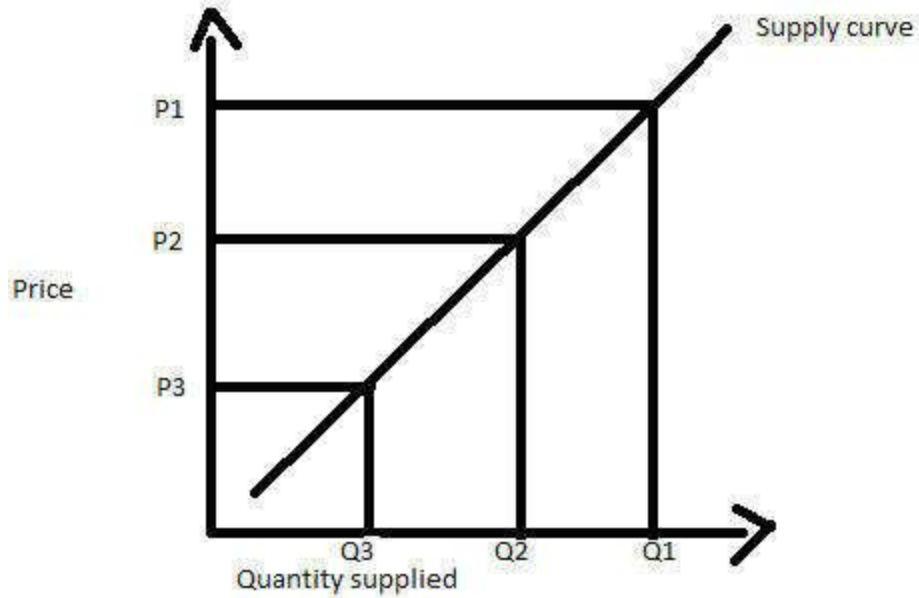
1. **Nature of the commodity:** By nature of commodities economists refer to the necessities, comforts and luxuries. The demand for necessities of life is inelastic. The demand for necessities of efficiency like milk, eggs tonics etc., and for comforts like fan cushion, chair etc., is moderately elastic. The demand for luxuries is more elastic because demand for such goods changes greatly with a small change in price.
2. **Substitutes:** Goods which have close substitutes like tea and coffee have more elastic demand. But goods which have no substitutes like salt, onion etc. have inelastic demand.
3. **Variety of uses:** Goods which have variety of uses like steel, coal, electricity etc. have elastic demand. But demand is inelastic for those goods which can be put to only one use. Thus multi-use goods have elastic demand and single-use goods have inelastic demand.
4. **Different Uses:** Elasticity of demand for certain goods is different for different uses. For example, the demand for wheat for human consumption is inelastic but for feeding cattle the demand is elastic.
5. **Complements or Jointly demanded goods:** Complements or jointly demanded goods have elastic demand because the price of such goods like pen, ink, paper etc., move in the same direction.

6. **Deferred Consumption:** Goods, the consumption of which can be postponed have elastic demand. For example, the consumption of cloth, umbrella , bicycle etc., can be postponed. But goods like food, fruits, medicine have to be consumed at once. They have therefore inelastic demand.
7. **Raw Materials and finished products:** The demand for raw materials is generally inelastic because without which manufacturing is difficult. But the demand for finished goods is elastic.
8. **Perishable and durable goods:** The demand for perishable goods is inelastic while the demand for durable goods is elastic.
9. **Time Factor:** The shorter the time in which the consumer buys a commodity, less elastic is the demand for the product. And longer the time for the consumer to buy a product, higher is the elasticity of demand.
10. **Level of Prices:** The demand is inelastic for higher and lower prices because people are accustomed to buy high priced and low priced articles at higher and lower prices. But for medium price the demand is elastic.

Law of Supply

Definition: Law of supply states that other factors remaining constant, price and quantity supplied of a good are directly related to each other. In other words, when the price paid by buyers for a good rises, then suppliers increase the supply of that good in the market.

Description: Law of supply depicts the producer behavior at the time of changes in the prices of goods and services. When the price of a good rises, the supplier increases the supply in order to earn a profit because of higher price.



The above diagram shows the supply curve that is upward sloping (positive relation between the price and the quantity supplied). When the price of the good was at P3, suppliers were supplying Q3 quantity. As the price starts rising, the quantity supplied also starts rising.

Determinants of Supply

While the price is an important aspect for determining the willingness and desire to part with goods/services, many other factors determine the supply of a [product](#) or service as discussed below:

Price of the Good/ Service

The most obvious one of the determinants of supply is the price of the product/service. With all other parameters being equal, the supply of a product increases if its relative price is higher. The reason is simple. A [firm](#) provides goods or services to earn profits and if the prices rise, the profit rises too.

Price of Related Goods

Let's say that the price of wheat rises. Hence, it becomes more profitable for firms to supply wheat as compared to corn or soya bean. Hence, the supply of wheat will rise, whereas the supply of corn and soya bean will experience a fall.

Hence, we can say that if the price of related goods rises, then the firm increases the supply of the goods having a higher price. This leads to a drop in the supply of the goods having a lower price.

Price of the Factors of Production

Production of a good involves many costs. If there is a rise in the price of a particular factor of production, then the cost of making goods that use a great deal of that factor experiences a huge increase. The cost of production of goods that use relatively smaller amounts of the said factor increases marginally.

For example, a rise in the cost of land will have a large effect on the cost of producing wheat and a small effect on the cost of producing automobiles.

Therefore, the change in the price of one factor of production causes changes in the relative profitability of different lines of production. This causes producers to shift from one line to another, leading to a change in the supply of goods.

State of Technology

Technological innovations and inventions tend to make it possible to produce better quality and/or quantity of goods using the same resources. Therefore, the state of technology can increase or decrease the supply of certain goods.

Government Policy

Commodity taxes like excise duty, import duties, GST, etc. have a huge impact on the cost of production. These taxes can raise overall costs. Hence, the supply of goods that are impacted by these taxes increases only when the price increases. On the other hand, subsidies reduce the cost of production and usually lead to an increase in supply.

Other Factors

There are many other factors affecting the supply of goods or services like the government's industrial and foreign policies, the goals of the firm, infrastructural facilities, market structure, natural factors etc.