

Demand Analysis

Introduction

Demand and Supply are the two main concepts in Economics. Experts are of the opinion that entire subject of economics can be summarized in terms of these two basic concepts. Hence the knowledge about demand and supply are of great importance to a student of Economics.

Understand the concept of demand and its features.

The term demand is different from desire, want, will or wish. In the language of economics, demand has different meaning. Any want or desire will not constitute demand

Demand = Desire to buy + Ability to pay + Willingness to pay + time + price

The term demand refers to total or given quantity of a commodity or a service that are purchased by the consumer in the market at a particular price and at a particular time

The demand for any commodity is its quantity which consumers are able and willing to buy at various prices during a given period of time

The following are some of the important quality of demand-

- It is backed up by adequate purchasing power.
- It is always at a price.
- It should always be expressed in terms of specific quantity
- It is created in the market.
- It is related to a person, place and time.

Consumers create demand. Demand basically depends on utility of a product. There is a direct relation between the two i.e., higher the utility, higher would be demand and lower the utility, lower would be the demand.

Demand schedule

The demand schedule explains the functional relationship between price and quantity variations, **It is a list of various amounts of a commodity that a consumer is willing to buy (and so seller to sell) at different prices at one instant of time.** It is necessary to note that the demand schedule is prepared with reference to the price of the given commodity alone. We ignore the influence of all other determinants of demand on the purchase made by a consumer.

Individual demand schedule

When the price-demand relationship of single person is shown through table is called **individual demand schedule**. In other words the table showing various quantities of commodity that could be bought by the single consumer per period of time at various prices of commodity, keeping other factors constant is known as **individual demand schedule**

The following **individual demand schedule** shows that people buy more when price is low and buy less when price is high.

Price (in Rs.)	Quantity demanded in Units
5.00	200
4.00	300
3.00	400
2.00	500
1.00	600

Market Demand Schedule

When the demand schedules of all buyers are taken together, we get the aggregate or market demand schedule. In other words, **the total quantity of a commodity demanded at different prices in a market by the whole body consumers at a particular period of time is called market demand schedule.** It refers to the aggregate behavior of the entire market rather than mere totaling of individual demand schedules. Market demand schedule is more continuous and smooth when compared to an individual demand schedule.

Price (Rs.)	A	B	C	Total Market Demand
5.00	100	200	300	600
4.00	200	300	400	900
3.00	300	400	500	1200
2.00	400	500	600	1500
1.00	500	600	700	1800

The study of the market demand schedule is of great importance to a business manager on account of the following reasons:

1. It helps to make an intelligent forecast of the quantity to be sold at different prices.
2. It helps the business executives to know the various quantities that are likely to be demanded at different prices.
3. It helps to study the effect of taxes on the total demand for goods in the market.
4. It helps to forecast the percentage of profits due to variation in prices and to arrange production well in advance.
5. It helps the monopolist to manipulate prices to stimulate demand for a product.
6. It helps the managers to estimate its production plan in accordance with the market demand.

Demand Curve

A demand curve is a locus of points showing various alternative price – quantity combinations. **In short, the graphical presentation of the demand schedule is called as a demand curve.**

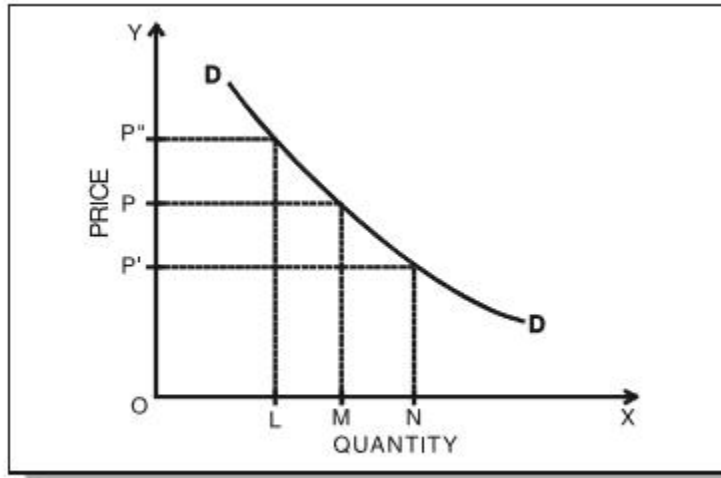


Fig. 1

Presents the functional relationship between quantity demanded and prices of a given commodity. The demand curve has a negative slope or it slope downwards to the right. The negative slope of the demand curve clearly indicates that quantity demanded goes on increasing as price falls and vice versa.

Demand curve are of two types:

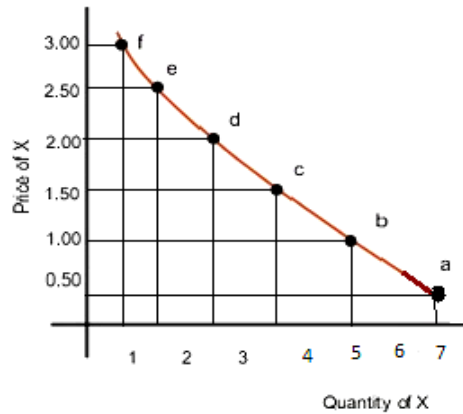
1. Individual demand curve
2. Market demand curve

1. Individual demand curve: individual demand curve represents the graphical presentation of various quantities of commodity demanded by a single consumer per period of time at various prices of commodity, keeping all the other factors constant.

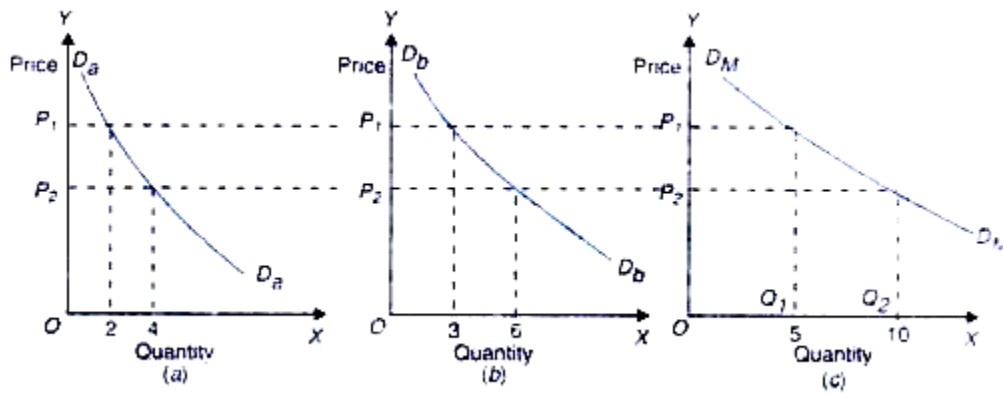
Demand Schedule

Point	Price [Rs per unit]	Quantity demanded of X
a	0.50	7.0
b	1.00	5.0
c	1.50	3.5
d	2.00	2.5
e	2.50	1.5
f	3.00	1.0

Demand Curve



2. Market demand curve: Market Demand curve represents the diagrammatic presentation of various quantities of commodity demanded by all the existing consumers per period of time at various prices of commodity, keeping all the other factors constant. It is a summation of all consumers purchasing the commodity at all various price levels .



Reasons of downwards sloping demand curve:

1. law of diminishing marginal utility
2. A product becomes cheaper.[Price effect]
3. Purchasing power of a consumer would go up.[Income effect]
4. Cheaper products are substituted for costly products [substitution effect].

The Law Of Demand

It explains the relationship between price and quantity demanded of a commodity. It says that demand varies inversely with the price.

The law can be explained in the following manner: **“Other things being equal, a fall in price leads to expansion in demand and a rise in price leads to contraction in demand”**.

The law can be expressed in mathematical terms as **“Demand is a decreasing function of price”**. Symbolically, thus **$D = F(p)$**

where, D represent Demand, P stands for **Price** and F denotes the Functional relationships.

The law explains the cause and effect relationship between the independent variable [price] and the dependent variable [demand].

Important Features of Law of Demand

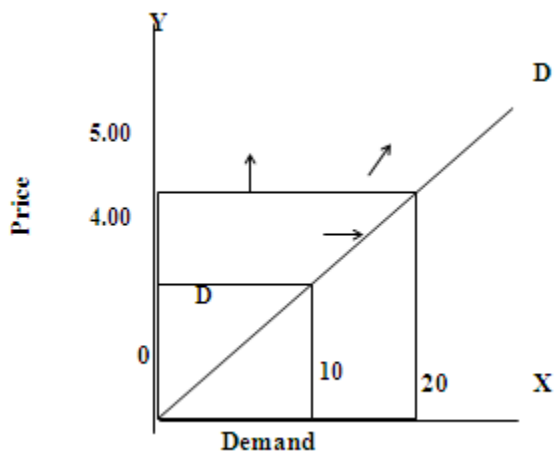
1. There is an inverse relationship between price and demand.
2. Price is an independent variable and demand is a dependent variable
3. It is only a qualitative statement and as such it does not indicate quantitative changes in price and demand.
4. Generally, the demand curve slopes downwards from left to right.

The operation of the law is conditioned by the phrase **“Other things being equal”**. It indicates that given certain conditions certain results would follow. The inverse relationship between price and demand would be valid only when tastes and preferences, customs and habits of consumers, prices of related goods, and income of consumers would remains constant.

Exceptions To The Law Of Demand

Generally speaking, customers would buy more when price falls in accordance with the law of demand. **Exceptions to law of demand states that with a fall in price, demand also falls and with a rise in price demand also rises**. This can be represented by rising demand curve. In other words, the demand curve slopes upwards from left to right. It is known as an exceptional demand curve or unusual demand curve.

It is clear from the diagram that as price rises from Rs. 4.00 to Rs. 5.00, quantity demanded also expands from 10 units to 20 units.



Following are the exception to the law of demand

1. Giffen's Paradox

A paradox is a foolish or absurd statement, but it will be true. Sir Robert Giffen, an Irish Economist, with the help of his own example (inferior goods) disproved the law of demand. The Giffen's paradox holds that **"Demand is strengthened with a rise in price or weakened with a fall in price"**. He gave the example of poor people of Ireland who were using potatoes and meat as daily food articles. When price of potatoes declined, customers instead of buying greater quantities of potatoes started buying more of meat (superior goods). Thus, the demand for potatoes declined in spite of fall in its price.

2. Veblen's effect

Thorstein Veblen, a noted American Economist contends that there are certain commodities which are purchased by rich people not for their direct satisfaction, but for their 'snob – appeal' or 'ostentation'. **Veblen's effect states that demand for status symbol goods would go up with a rise in price and vice-versa.** In case of such status symbol commodities it is not the price which is important but the prestige conferred by that commodity on a person makes him to go for it. More commonly cited examples of such goods are diamonds and precious stones, world famous paintings, commodities used by world figures, personalities etc. Therefore, commodities having 'snob – appeal' are to be considered as exceptions to the law of demand.

3. Fear of shortage

When serious shortages are anticipated by the people, (e.g., during the war period) they purchase more goods at present even though the current price is higher.

4. Fear of future rise in price

If people expect future hike in prices, they buy more even though they feel that current prices are higher. Otherwise, they have to pay a still high price for the same product.

5. Speculation

Speculation implies purchase or sale of an asset with the hope that its price may rise or fall and make speculative profit. Normally speculation is witnessed in the stock exchange market. People buy more shares

only when their prices show a rising trend. This is because they get more profit, if they sell their shares when the prices actually rise. Thus, speculation becomes an exception to the law of demand.

6 Conspicuous necessities

Conspicuous necessities are those items which are purchased by consumers even though their prices are rising on account of their special uses in our modern style of life.

In case of articles like wrist watches, scooters, motorcycles, tape recorders, mobile phones etc customers buy more in spite of their high prices.

7. Emergencies

During emergency periods like war, famine, floods cyclone, accidents etc., people buy certain articles even though the prices are quite high.

8. Ignorance

Sometimes people may not be aware of the prices prevailing in the market. Hence, they buy more at higher prices because of sheer ignorance.

9. Necessaries

Necessaries are those items which are purchased by consumers whatever may be the price. Consumers would buy more necessities in spite of their higher prices.

Determinants of Demand

- **The *price of the product.***
- **The *income available to the household.***
- **The *consumers amount of accumulated wealth.***
- **The *prices of related products available to the household.***
- **The *consumer's tastes and preferences.***
- **The *consumer's expectations about future income, wealth, and prices.***

Thus, several factors are responsible for bringing changes in the demand for a product in the market. A business executive should have the knowledge and information about all these factors and forces in order to finalize his own production marketing and other business strategies.

Demand function

The demand function is an algebraic expression of the relationship between demand for a commodity and its various determinants that affect this quantity.

Demand function is a comprehensive formulation which specifies the factors that influence the demand for a product other than price. **The market demand function may be expressed mathematically thus:**

$$D_x = f(P_x, P_r, M, T, A, U)$$

Where

- D_x = Quantity demanded for commodity x
- f = functional relation
- P_x = Price of commodity x
- P_r = Prices of related commodities i.e. substitutes and complementary goods
- M = The money income of the consumer
- T = The taste of the consumer
- A = The advertisement effect
- U = Unknown variables

The knowledge of demand function is more important for a firm than the law of demand. Demand function explains the various factors and forces other than price that would affect the demand for a commodity in the market.

Changes in Demand and Quantity Demanded

In economics the terms change in quantity demanded and change in demand are two different concepts.

Change in quantity demanded refers to change in the quantity purchased due to increase or decrease in the price of a product. In such a case, it is incorrect to say increase or decrease in demand rather it is increase or decrease in the quantity demanded.

On the other hand, change in demand refers to increase or decrease in demand of a product due to various determinants of demand, while keeping price at constant.

Changes in quantity demanded can be measured by the movement of demand curve, while changes in demand are measured by shifts in demand curve. The terms, change in quantity demanded refers to expansion or contraction of demand, while change in demand means increase or decrease in demand.

1. Expansion and Contraction of Demand:

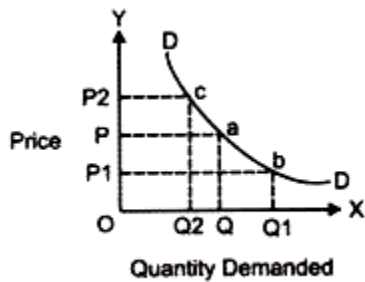
The variations in the quantities demanded of a product with change in its price, while other factors are at constant, are termed as expansion or contraction of demand.

Expansion of demand refers to the period when quantity demanded is more because of the fall in prices of a product.

However, contraction of demand takes place when the quantity demanded is less due to rise in the price of a product.

For example, consumers would reduce the consumption of milk in case the prices of milk increases and vice versa. Expansion and contraction are represented by the movement along the same demand curve. Movement from one point to another in a downward direction shows the expansion of demand, while an upward movement demonstrates the contraction of demand.

Figure demonstrates the expansion and contraction of demand:



: Expansion and Contraction of Demand

When the price changes from OP to OP1 and demand moves from OQ to OQ1, it shows the expansion of demand. However, the movement of price from OP to OP2 and movement of demand from OQ to OQ2 show the contraction of demand.

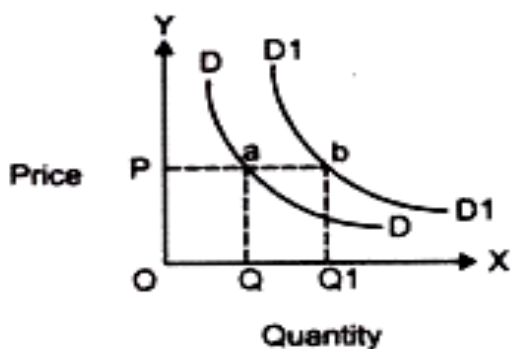
2. Increase and Decrease in Demand:

Increase and decrease in demand are referred to change in demand due to changes in various other factors such as change in income, distribution of income, change in consumer's tastes and preferences, change in the price of related goods, while Price factor is kept constant Increase in demand refers to the rise in demand of a product at a given price.

On the other hand, decrease in demand refers to the fall in demand of a product at a given price. For example, essential goods, such as salt would be consumed in equal quantity, irrespective of increase or decrease in its price. Therefore, increase in demand implies that there is an increase in demand for a product at any price. Similarly, decrease in demand can also be referred as same quantity demanded at lower price, as the quantity demanded at higher price.

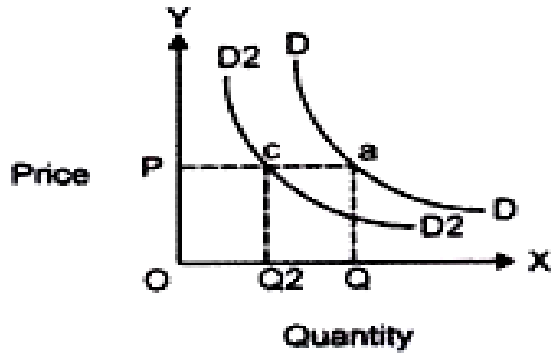
Increase and decrease in demand is represented as the shift in demand curve. In the graphical representation of demand curve, the shifting of demand is demonstrated as the movement from one demand curve to another demand curve. In case of increase in demand, the demand curve shifts to right, while in case of decrease in demand, it shifts to left of the original demand curve.

Figure-shows the increase and decrease in demand:



The movement from DD to D1D1 shows the increase in demand with price at constant (OP). However, the quantity has also increased from OQ to OQ1.

Figure-shows the decrease in demand:



In Figure the movement from DD to D2D2 shows the decrease in demand with price at constant (OP). However, the quantity has also decreased from OQ to OQ2.