DEMAND ANALYSIS

Meaning of Demand Analysis:

Ordinarily, by **demand is** meant the **desire or want** for something. **In economics**, however demand means much more than that, it is effective demand i.e. **the amount buyers are willing to purchase at a given price and over a given period of time**. From managerial economics point of view, thus, the demand may be looked upon as follows: -

Demand is the desire or want backed up by money. Demand means effective desire or want for a commodity, which is backed up by the ability (i.e. money or purchasing power) and willingness to pay for it.

The demand does not mean simply the desire or even need for a commodity obviously, a buyer's wish for the product without possessing money to buy it or unwillingness to pay a given price for it will not constitute a demand for it for example a beggar's wish for a Bike will not constitute its potential demand, as he has no ability to pay for it.

In short

Demand = Desire + Ability to pay +Willingness to spend

Demand Estimation and Demand Forecasting

In Demand estimating manager attempts to quantify the links or relationship between the level of demand and the variables which are determinants to it and is generally used in designing pricing strategy of the firm. In demand estimation manager analyse the impact of future change in price on the quantity demanded. Firm can charge a price that the market will ready to wear to sell its product. Over estimation of demand may lead to an excessive price and lost sales whereas under estimates may lead to setting of low price resulting in reduced profits. In demand estimation data is collected for short period usually a year or less and analysed in relation to various variables to know the impact of each variables mainly the price on the demand behaviour of the customers. It is for a short period.

In Demand forecasting mangers forecast the most likely future demand of a product so that he can make necessary arrangement for the various factor of production i.e labor, raw material, machines, money etc. Demand forecasting tells the expected level of demand at some future date on the basis of past and present information. It helped in production planning, new product development, capacity enhancement or new schemes etc. Demand forecasting is generally used

for short term estimation as well as long term forecasting.

Thus, demand estimation and forecasting means when, how, where, by whom and how much will be the demand for a product or service in near future. The process of demand estimation/forecasting can be broken into two parts i.e. analysis of the past conditions and analysis of current conditions with reference to a probable future trend. It helps in estimating the most likely demand of a good or service under given business conditions.

Features of Demand Forecasting

The main features of the demand forecasting are;

- Demand Forecasting is a process to investigate and measure the forces that determine sales for existing and new products.
- It is an estimation of most likely future demand for a product under given business conditions.
- It is basically an educated and well thought out guesswork in terms of specific quantities
- Demand Forecasting is done in an uncertain business environment.
- Demand Forecasting is done for a specific period of time (i.e. the sufficient time required to take a decision and put it into action).
- It is based on historical and present information and data.
- It tells us only the approximate expected future demand for a product based on certain assumptions and cannot be 100% precise.

DETERMINANTS OF DEMAND

The main determinants of demand are the following:

1. **Price of the Product.** The price of commodity or services directly affects its demand. The fall in the price of a commodity leads to rise in its demand and rise in price leads to fall in its demand. Price is the only determinant of demand in the short run.
2. **Price of Related Goods.** Two or more goods can be complementary or substitutes of each other. The demand for a commodity is also affected by changes in price of its complementary or substitute good. If two goods are substitute for each other then the increase in price of one will result in increased demand for the other and vice-versa. E.g. Pepsi and Cocacola are substitute of each other. The rise in the price of Cocacola increases

demand for Pepsi and vice-versa.

Complementary goods are those which, are jointly demanded to satisfy a particular demand. There is opposite relationship between price of one complementary commodity and the amount demand of the other complementary commodity. If price of one complimentary rises, the demand for the other complementary falls. E.g. A fall in the price of Car will lead to increase in the demand for petrol.

3. **Level of Income.** Income is an important determinant of demand for a commodity,ordinarily, with an increase in income, demand for goods increase. There is a direct relationship between income and quantity demanded. Rich consumers usually demand more and more goods than the poor customers. Demand for luxury and expensive goods is related to the income.

4. **Taste, Habits and preferences of Consumer.** The demand for many goods also depends on consumer's taste, habit and preferences. Demand for goods changes with change in fashion, habits, customs, traditions and general life-style of the society. Demand forseveral products like ice-cream, chocolates etc. depends on taste and demand tea, cigarettes, tobacco is a matter of habits.

5. **Future trend of Prices.** If it is expected that in future the price of a commodity will go up the demand for the commodity in the present also will go up. If the prices are expected to fall then the demand would fall.

6. **Changes in Population.** Generally the demand for a commodity increases with increase in size of population, other things being equal, it is not merely the change in the size of population but the changes in the composition of population also affect the demand for certain commodities. In a country of increasing population like India where hundreds of childrens are born daily in big cities there will naturally be demand for toys, baby food and alike.

7. **State of Business.** If the country is passing through prosperity and boom conditions, there will be a marked increase in demand. When the country is passing through recession and depression then level of demand would go down.

8. **Distribution of Income and Wealth.** If the distribution of income is more equal then the demand for all normal goods will be more. If the income is so unevenly distributed that majority of population is poor then the demand for inferior and necessaries' will be larger.

9. **Availability of Consumer Credit.** If the credit facilities are available sufficiently to consumers for the purchase of high priced durable goods such as car, colour TV, scooters and alike, then their demand will increase.

10. **Different Uses.** When the price of a commodity is high, it will be used only in its more important use. As the price of the commodity falls it will be used even in less important uses. Thus, the demand increases will fall in price and vice-versa. Example of gram or electricity can be citied.

11. **Change in the number of Buyers.** With the fall in the price of a commodity the number of its purchasers increase and vice-versa. Therefore, demand increases with fall in price and decreases with fall in price and decreases with rise in price.

12. **Advertisement and Salesmanship.** In the modern market, advertisement greatly influence the demand for a commodity. Infact, the demand for many products like to toothpaste, Cosmetics etc. is greatly affected by advertisement. The best salesmanship is the one who does not merely sell what buyers want but who makes the buyers buy what he sells.

13. **Inventions and Innovations.** introduction of new goods or substitutes as a result of inventions and innovations in a dynamic modern economy tends to adversely affect the demand for the existing products.

14. **Climate and weather conditions.** demand for certain products is determined by climatic and weather conditions for example, in summers there is a great demand for cold drinks, fans, air conditioners etc.

15. **Fashions.** the demand for many products is affected by changing fashions. For example demand for jeans is based on current fashions.

16. **Customs**. demand for certain goods is determined by social customs, festivals etc., for example, during the Dipawali days there is a great demand for sweets & during Christmas cake are more in demand.

LAW OF DEMAND

The law of demand describes the general tendency of consumers behavior in demanding a commodity in relation to the changes in its price. The Law of demand expresses the relationship between price and quantity demanded of a commodity. According to the law of demand the demand of a commodity extends with fall in its price and contracts with rise in the price, other things being constant. 'Other things being constant' means that the other determinates of demand except price remain unchanged. it explains the inverse relationship between price and quantity demanded.

Statement of law of demand:- “Ceteris paribus, the higher the price of a commodity, the smaller is the quantity demanded and lower the price, larger the quantity demanded”.

Chief Characteristics of the Law of Demand

The following are the chief characteristics of the Law of Demand.

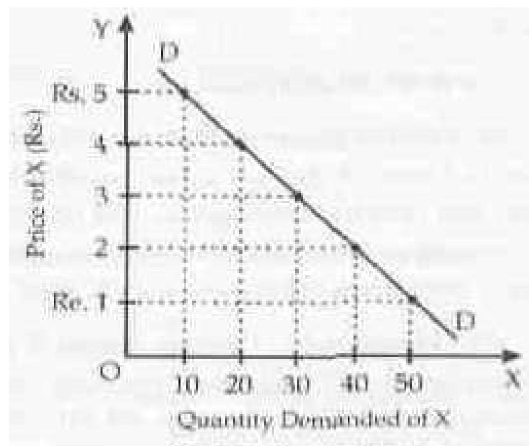
1. **Inverse Relationship.** The relationship between price and the demand of a particular commodity is inverse i.e., the demand of a commodity will fall with the increase in the price of the commodity or it will increase with the fall in-the price.
2. **Price an Independent Variable and Demand a Dependent Variable.** In the Law of Demand, price is regarded as an independent variable that affects the demand inversely. Thus, it is the effect of price on demand that is to be examined and not the effect of demand on price.
3. **It is a Qualitative Statement**. The Law of Demand simply explains the direction of change in the demand with the increase or decrease in the price of a commodity. It does not explain the quantum of change. The law is thus, a qualitative statement? and not a quantitative statement.
4. **Other thing remains the same.** The Law of Demand applies only when other things remain the same. In other words, there should be no change in factors influencing demand except price.

The law of demand can be illustrated with the help of a demand schedule. The demand schedules shows that with the fall in the price of the commodity its demand is increasing.

A market demand schedule

Price of Commodity 'X' (in Rs.)	Quantity Demanded of 'X' (in kgs.)
5	10
4	20
3	30
2	40
1	50

From the above example, we can say that with a fall in price at each stage demand tends to rise. There is an inverse relationship between price and the quantity demanded.



ASSUMPTIONS OF THE LAW OF DEMAND:

The Law of Demand is based on the following assumptions :

(1) **No change in taste, habits, preferences :** It is assumed that there is no change in the taste, habits, preferences of a rational consumer. Thus, consumers' choice of product must remain the same.

(2) **No change in the income level:** If the consumer's income rises, he will demand more though the prices of commodities rise. In such a situation, the law will not hold good.

(3) **No change in population :** The law is based on the assumption that there should be no change in population, size, sex ratio, age composition, etc.

(4) **No change in prices of related goods :** The law assumes that the prices of close substitutes and the complementary products should remain constant.

(5) **No expectation of future change in the price:** If the consumers expect high rise in the price in future, they demand more though current price is high. In such condition, the Law of Demand cannot be verified.

(6) **No change in taxation :** It is assumed that the structure of direct and indirect taxes remain constant. Thus, the disposable income of a consumer should remain the same.

(7) **No introduction of new product:** It is assumed that there is no introduction of a new product in the market. Thus, the consumer's taste, habits and preferences remain constant.

(8) **No change in technology :** The law assumes that the present technology of production remains constant.

(9) **No change in weather conditions :** Climatic and weather conditions may bring

sudden change in demand, though there is no change in the price. Therefore, it is assumed that weather conditions remain constant.

EXCEPTIONS TO THE LAW OF DEMAND

Followings are the exceptions of the law of demand :

1. **Articles of Distinction/prestigious goods:** The articles of distinction such as diamonds, gems, costly carpets, etc. are in more demand when their prices are high. The reason is that rich people measure the desirability of these articles in terms of their prices alone and consider these goods as honour possession. Therefore, rich people demand more of articles of distinction when their prices are high.
2. **Giffen Goods.** Price effect is the composite effect of 'income effect' and 'substitution effect. Giffen goods (most inferior goods) are those inferior goods for which 'income effect' of change in price is negative and is greater than the substitution effect. Therefore, the demand of Giffen goods increases with rise in price and decreases with fall in their price.
3. **Ignorance of buyers about Quality.** Many a times, buyers due inertia or out of sheer ignorance consider the price of the commodity as index of its quality. Due to this ignorance, a lower-price commodity may be considered inferior. Therefore, purchasers buy lesser quantity of the commodity at its lower price. But when the price of commodity is more, buyers consider it to be superior and thus buy more of it than before.
4. **Future changes in Prices.** Purchaser also act as speculators. When the price has increased and is expected to rise further, buyers tend to purchase more quantities of the commodity out of the apprehension of rise in price in future. Likewise when prices are expected to fall further, a reduced price may not induce the buyers to purchase more of the commodity.
5. **Necessities of Life.** We cannot reduce the consumption of necessaries of life and conventional necessaries even if their prices have increased sharply.
6. **Change in quality:** people are to demand more even at a higher price provided quality is good.
7. **Fashionable goods.** Goods that are in fashion are purchased by consumers regardless of price even at a higher price. Consumers purchases the goods which are in fashion.

Demand Distinctions: Types of Demand

a) **Direct and indirect demand:** (or) Producers' goods and consumers' goods: demand for goods that are directly used for consumption by the ultimate consumer is known as direct demand (example: Demand for T shirts). On the other hand demand for goods that are used by producers for producing goods and services. (example: Demand for cotton by a textile mill)

b) **Derived demand and autonomous demand:** when a produce derives its usage from the use of some primary product it is known as derived demand. (example: demand for tyres derived from demand for car) Autonomous demand is the demand for a product that can be independently used. (example: demand for a washing machine)

c) **Durable and non durable goods demand:** durable goods are those that can be used more than once, over a period of time (example: Microwave oven) Non durable goods can be used only once (example: Band-aid)

d) **Firm and industry demand:** firm demand is the demand for the product of a particular firm. (example: Dove soap) The demand for the product of a particular industry is industry demand (example: demand for steel in India)

e) **Total market and market segment demand:** a particular segment of the markets demand is called as segment demand (example: demand for laptops by engineering students) the sum total of the demand for laptops by various segments in India is the total market demand. (example: demand for laptops in India)

f) **Short run and long run demand**: short run demand refers to demand with its immediate reaction to price changes and income fluctuations. Long run demand is that which will ultimately exist as a result of the changes in pricing, promotion or product improvement after market adjustment with sufficient time.

g) **Joint demand and Composite demand:** when two goods are demanded in conjunction with one another at the same time to satisfy a single want, it is called as joint or complementary demand. (example: demand for petrol and two wheelers) A composite demand is one in which a good is wanted for several different uses. (example: demand for iron rods for various purposes)

h) **Price demand, income demand and cross demand:** demand for commodities by the consumers at alternative prices are called as price demand. Quantity demanded by the consumers at alternative levels of income is income demand. Cross demand refers to the quantity demanded of commodity 'X' at a price of a related commodity 'Y' which may be a substitute or complementary

to X.

- Price Demand: The ability and willingness to buy specific quantities of a good at the prevailing price in a given time period.
- Income Demand: The ability and willingness to buy a commodity at the available income in a given period of time.
- Market Demand: The total quantity of a good or service that people are willing and able to buy at prevailing prices in a given time period. It is the sum of individual demands.
- Cross Demand: The ability and willingness to buy a commodity or service at the prevailing price of the related commodity i.e. substitutes or complementary products. For example, people buy more of wheat when the price of rice increases.

Exceptional Demand Curve: The demand curve slopes from left to right upward if despite the increase in price of the commodity, people tend to buy more due to reasons like fear of shortages or it may be an absolutely essential good. The law of demand does not apply in every case and situation. The circumstances when the law of demand becomes ineffective are known as exceptions of the law. Some of these important exceptions are as under.

1. Giffen Goods:

Some special varieties of inferior goods are termed as Giffen goods. Cheaper varieties millets like bajra, cheaper vegetables like potato etc come under this category. Sir Robert Giffen of Ireland first observed that people used to spend more of their income on inferior goods like potato and less of their income on meat. After purchasing potato the staple food, they did not have staple food potato surplus to buy meat. So the rise in price of potato compelled people to buy more potato and thus raised the demand for potato. This is against the law of demand. This is also known as Giffen paradox.

2. Conspicuous Consumption / Veblen Effect:

This exception to the law of demand is associated with the doctrine propounded by Thorsten Veblen. A few goods like diamonds etc are purchased by the rich and wealthy sections of society. The prices of these goods are so high that they are beyond the reach of the common man. The higher the price of the diamond, the higher its prestige value. So when price of these goods falls, the consumers think that the prestige value of these goods comes down. So quantity demanded of these goods falls with fall in their price. So the law of demand does not hold good here.

3. Conspicuous Necessities:

Certain things become the necessities of modern life. So we have to purchase them despite their high price. The demand for T.V. sets, automobiles and refrigerators etc. has not gone down in spite of the increase in their price. These things have become the symbol of status. So they are purchased despite their rising price.

4. Ignorance:

A consumer's ignorance is another factor that at times induces him to purchase more of the commodity at a higher price. This is especially true, when the consumer believes that a high-priced and branded commodity is better in quality than a low-priced one.

5. Emergencies:

During emergencies like war, famine etc, households behave in an abnormal way. Households accentuate scarcities and induce further price rise by making increased purchases even at higher prices because of the apprehension that they may not be available. . On the other hand during depression, , fall in prices is not a sufficient condition for consumers to demand more if they are needed.

6. Future Changes In Prices:

Households also act as speculators. When the prices are rising households tend to purchase large quantities of the commodity out of the apprehension that prices may still go up. When prices are expected to fall further, they wait to buy goods in future at still lower prices. So quantity demanded falls when prices are falling.

7. Change In Fashion:

A change in fashion and tastes affects the market for a commodity. When a digital camera replaces a normal manual camera, no amount of reduction in the price of the latter is sufficient to clear the stocks. Digital cameras on the other hand, will have more customers even though its price may be going up. The law of demand becomes ineffective.

8. Demonstration Effect:

It refers to a tendency of low income groups to imitate the consumption pattern of high income groups. They will buy a commodity to imitate the consumption of their neighbors even if they do not have the purchasing power.

9. Snob Effect:

Some buyers have a desire to own unusual or unique products to show that they are different from others. In this situation even when the price rises the demand for the commodity will be

more.

10. Speculative Goods/ Outdated Goods/ Seasonal Goods:

Speculative goods such as shares do not follow the law of demand. Whenever the prices rise, the traders expect the prices to rise further so they buy more. Goods that go out of use due to advancement in the underlying technology are called outdated goods. The demand for such goods does not rise even with fall in prices

11. Seasonal Goods:

Goods which are not used during the off-season (seasonal goods) will also be subject to similar demand behaviour.

12. Goods In Short Supply:

Goods that are available in limited quantity or whose future availability is uncertain also violate the law of demand.