6

DEMAND AND LAW OF DEMAND

The concepts of demand and supply is most ancient and important in economics. Actually whole economics revolve around demand and supply. It is often said that, "Teach a parrot to say demand and supply in reply to every question, and it will be a good economist." Demand analysis is the most useful aspect of economics which includes the study of determinants of demand. law of demand, elasticity of demand and types of demand etc.

Meaning Of Demand

In general view, human being's effective desire to purchase any commodity at a particular price and time is called demand. Different economists have defined demand as following :

1. According to **Penson,** "Demand is effective desire. It implies three things : (i) desire to purchase a thing, (ii) means for purchasing it, and (iii) willingness to use these means for purchasing it."

In this definition, effective desire, which is also called wants has been assumed to be demand. Prof. Penson has given three attributes which are also the characteristics of want. It is conservative definition, in which price and time element has no effect.

2. In the words of **J. S. Mill**, "We must mean by the word of demand the quantity demanded and remember that is not a fixed quantity but, in general, various quantities according to value." This definition is wider in comparison to **Penson's** definition. Demand is worthless without price. The price and quantity are related to demand which is purchased at that price. But, this definition is incomplete due to non-consideration of time element.

3. As per **Benham**, "The demand for anything at a given price is the amount of it, which will be bought at a time at that price." This is an appropriate definition of this concept.

Demand exists on a directive time and price. The three things are necessary for demand :

(i) Effective Desire or Want
[It is (a) desire + (b) resource for desire's satisfaction + (c) readiness to pay for resources]

(ii) Particular Price

(iii) Particular Time

The demand of any commodity is the effective desire of different quantities of that commodity which a person buys at a particular price and time. Imagination about demand without price and time is worthless.

DEMAND SCHEDULE

Demand is related to quantity demanded at particular time and price. We can make a table of quantity of commodity demanded at different prices. The table of quantity demanded of commodity at different prices is called demand schedule. Demand schedule is of two types :

(1) Individual Demand Schedule, and

(2) Market Demand Schedule.

(1) Individual Demand Schedule : This schedule shows the quantities demanded at different prices. How much purchase would be made by a consumer in terms of quantities at different price, is shown by individual demand schedule. Given example may be considered is this regard :

Example of Individual Demand Schedule

Price per Kg. (₹)	Demand of Units (Kgs.)
1	1,000
2	800
3	700
4	600
5	400

It is clear from above table that as price of commodity is increasing, its demand is decreasing. When the price of commodity is ₹ 1 per Kg. then its demand is of 1,000 Kgs. and at ₹ 2, ₹ 3, ₹ 4, ₹ 5, its demanded quantity reduces to 800, 700, 600, 400 Kgs. respectively.

(2) Market Demand Schedule : We can make market schedule with the help of individual demand schedule. This schedule shows total quantity demanded of a commodity at different prices at a particular time. For example, in a market there are only 3 individuals, the market demand schedule in such case can be made by combining individual demand schedule of them.

Price per Kg. (₹)	Individual Demand (Kgs.)			Market Demand (Kgs.)
	X	Y	Z	
1	100	80	70	250
2	80	70	60	210
3	60	50	50	160
4	50	40	30	120
5	40	30	20	90

It is clear from the above schedule that last column states the total demand of whole market which is made from the sum of X, Y and Z.

Demand Schedule has following characteristics :

1. Demand schedule is made by assuming demand condition as same or the income, interest of consumer, price of substitutes etc are same.

2. Making imaginary demand schedule is easy but to make actual demand schedule is a complex activity.

3. Market demand schedule is more simple and continuous in comparison of individual demand schedule.

4. Demand schedule states the behaviour of individual consumer or market.

5. Demand schedules are greatly affected by time.

Difference between individual and market schedule : Following are the main difference in them :

1. According to **Marshall,** market demand schedule are more continuous and smooth then individual demand schedule. Its reason is that, an individual can behave in an inappropriate or irregular way but, in case of, market demand, the differences in the individual behaviour in group get clubbed.

2. Making individual demand schedule is easy but due to difference in the wealth and individual views, it is difficult to make market demand schedule.

3. The practical significance of individual demand schedule is less, but market demand schedule greatly affects the determination of price policy, taxation policy and monetary policy of the country.

Demand Curve : When demand schedule is presented in diagrammatical form, it is called demand curve or line. This curve is of two type, individual demand curve and market demand curve. The curve based of individual demand schedule is called individual demand line and the demand curve based on market demand schedule is called market demand line.

LAW OF DEMAND

The law of demand is one of the fundamental and popular law of economics. This law states the opposite relationship of price and quantity demanded. There is an inverse relationship between the price of a commodity and its quantity demanded. The increase in the price of commodity gives reduction to its quantity demanded and decrease in price of commodity gives increase in the quantity demanded. The demand changes in the opposite direction to the price. This is the law of demand.

In the words of **Marshall,** "There is one general law of demand-the greater the amount is to be sold, the smaller must be the price at which it is offered in order that it may find purchasers. In other words, the amount demanded increases when a fall in price, and diminishing when a rise in price."

As per **Samuelson,** "When the price of a good is raised, less of it will be demanded. People will buy more at lower prices."

It is clear from above definitions that there is a reverse relationship between price of commodity and price. Demand changes opposite to the price. This is the reason so that demand curve slopes downward to the right. The relationship between demand and price can also be described in algebraic way as;

$$\boxed{D = f(P)}$$

Here, D represents demand, P represents price and f represents function. It means demand is the function of price, or demand depends upon price. Demand changes opposite of quantity. But, law of demand in qualitative statement and not quantitative. Law of demand states the quality of change in quantity demanded according to change in price but it does not state how much quantity of demand will change. Like, if there is an increase in price of the commodity by 50% then there will be decrease is quantity but would it be of what %, this can not be stated. Law of demand can be shown through a schedule :

Price per unit (₹)	Demand of Mangoes
1	100
2	80
3	50
4	30
5	20

It can also be shown through diagram. In diagram OX line shows the quantity demanded of mangoes and OY line shows price of mangoes. It is convention is economics to show on the horizontal line (OX) the quantity and on the vertical line (OY) the price. DD is demand curve which is downward sloping to right.

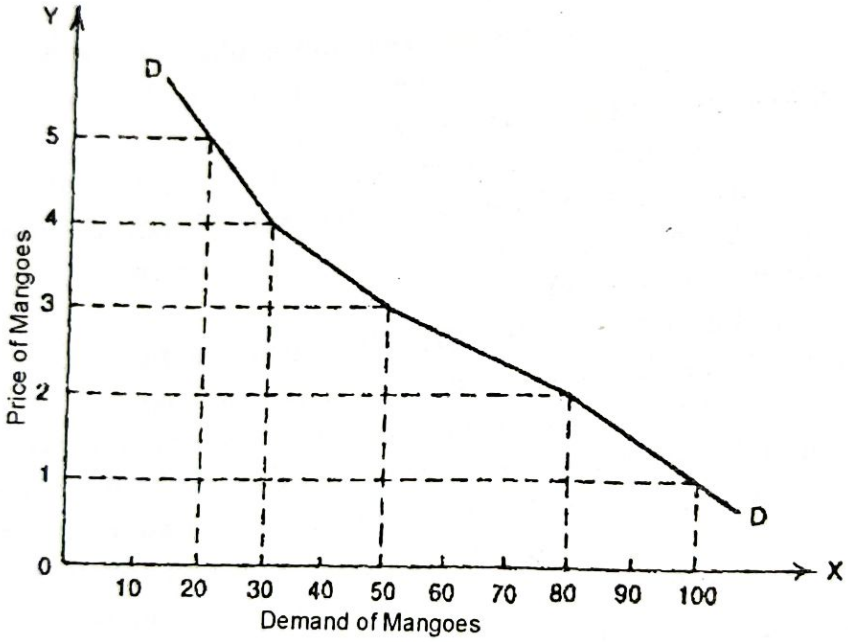

Diagram-1

ASSUMPTIONS OF THE LAW

Following are the main assumptions of law of demand :

1. There should not be any change in consumer's interest, nature and fashion.
2. Income of consumer should be constant.
3. There should be no substitutes of commodity available in the market.
4. Price of other related goods should be constant.

5. The commodity which are bought, should not be prestigious goods.
6. There should not be any prospect of future increase in commodity's price.
7. There should be no change in total wealth of the consumer.
8. There should not be any change in population.

Reasons For The Application Of Law Of Demand

OR

Why Do Demand Curves Slope Downward To The Right ?

Most of the demand curves fall downward from left to right. This characteristic states that more quantity on high price of commodity are sold. Due to the inverse relationship between demand and price its shope is negative. But why so ? This can be explained through following reasons :

1. Law of Diminishing Marginal Utility : Law of demand is based on law of diminishing marginal utility. A customer considers the price of any commodity according to its marginal utility. As per law of diminishing marginal utility, as the quantity is purchased or used by the consumer the utility derived from additional unit diminishes. That is why, consumer will buy more units of commodity only at low price. In reverse, where consumer is getting less quantity of commodity, its utility will be more for him and consequently he will be ready to pay high price. To summarise, consumer buys more commodities at low price and less commodities at high price. That is why, the demand curve slopes downwards to the right.

2. Income Effect : The reduction in the price of any commodity is actually same as the increase in the consumer's income. Due to reduction in price, he can buy equal units as previous in lesser expenditure. As a result, there is some saving in income which he can utilise to buy more units of commodities. For example, the price of sugar is reduced by ₹ 15 per Kg to ₹ 10 per Kg. and if the consumer is using 2 Kg. of sugar, previously he was expending ₹ 30 but after change in the price he will be able to buy it by spending ₹ 20 only and thus, his income will increase by ₹ 30 – 20 = ₹ 10. If consumer spends this surplus income on sugar then the demand of sugar will be 2 + 1 = 3 Kg. The extra increase in the quantity demand of sugar is increase in income. In its opposite, the increment in price is equal to reduction in consumer's income and demand decreases.

3. Substitution Effect : When price of any commodity is reduced, it means that other substitutes commodities have become costlier in comparison. Commodity becomes cheaper than substitute goods. Consumer will definitely transfer these cheaper goods in place of expensive commodities. For example, if the price of coffee decreases, people will start substituting coffee in place of tea. In its opposite, when price of any commodity increases and other products are available at same price, consumer will demand more for the commodities which have price unchanged as they are cheaper. Thus, the demand of commodities increases with decrease in its price and its demand will fall with increase in price due to substitution effect.

4. Change in Consumers' Number : The non-user of few commodities also starts buying them at the time of reduction in prices. This leads to increase in demand. Alternatively, the consumers who are continuously using any commodities, may stop its consumption with rise in its price, which results fall in demand. The entry or exit of consumer have inverse relationship with demand and price.

5. Different Uses : Any commodity may have different usage. If price is high, the commodity so purchased is used for important purposes only, as a result, demand falls. If price of commodity get reduced then it will be used for other additional purposes also, which give rise in demand. For example, potato has various usage; as vegetable, as snacks-chips or as pickle etc. If potato is expensive, people will only utilise it for vegetable purpose. Otherwise it can be used in other purposes if its price is cheaper. Thus, the demanded quantity increases and decreases according to fall and rise in its price.

Exceptions Of The Law Of Demand

OR

Can Some Demand Curves Slope Upwards ?

Sometimes demand curve is upwards sloping or in other words the rise in price leads to rise in demand rather than fall. Generally, it is the nature of reduction in quantity demanded due to increase in price but its reverse condition is also found. In these exceptional conditions, the demand curve goes upwards which is called exceptional demand curve. It is shown in diagram 2.

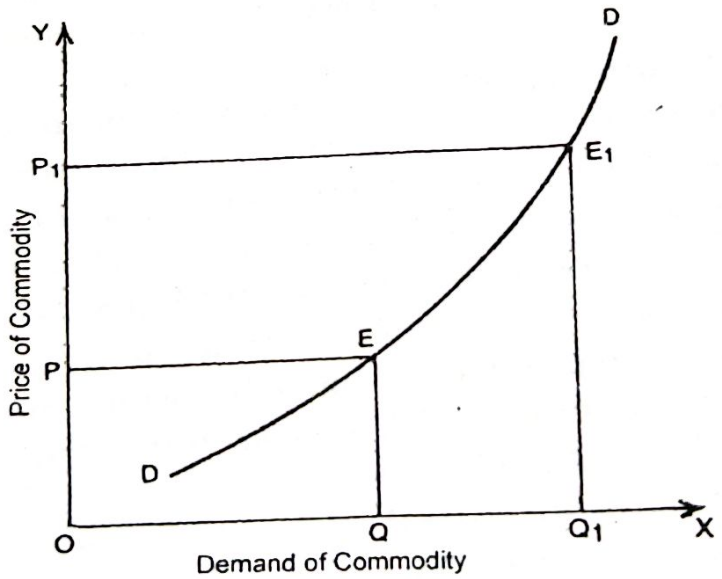

Diagram-2

In diagram 2, DD is an exceptional demand curve which shows relationship between price and demand. If price increases OP_1 from OP then, quantity demanded also increases to OQ_1 from OQ. Here, demand line is rising upward. Such upward sloping demand curves are unusual and quite contradictory to the law of demand as they represent the phenomenon that 'more will be demanded at a higher price and vice versa.' The upward sloping demand curve, thus, refers to the exception to the law of demand. There are a few such exceptional cases, which may be categorised as follows :

1. Giffen Paradox : Modern economists consider Giffen paradex as actual exception of law of demand which was given by **Sir Robert Giffen.** It applies in case of certain inferior goods called Giffen goods, when the price falls quite often less quantity will be purchased than before, because of negative income effect and people's preference rises for a superior commodity with the rise in their real income. Hence, law of demand does not operate. This surprising and contradicting condition was firstly realised by British economist **Sir Robert Giffen** is 19th century, in the case of Ireland's labourers in the context of potato and meat. Since, Giffen was first to explain this exceptional condition thus, it is called Giffen's paradox. It is important to consider that this exception only applies if the consumer spends most part of total income on inferior items.

The above fact can be concluded by example of maize (inferior goods) and rice (superior goods). Price fall has two effects : substitution effect and income effect. Since, the price of inferior goods is reduced and price of superior goods is unchanged. In this case, cheaper goods (maize) will substitute rice. Due to this substitution effect the rise in demand of maize is result of fall in its price.

But, there is effect of income also apart from substitution effect. The reduction in the price of inferior item, maize, is equal to rise in income of consumer because he, now, can purchase maize of equal quantity through lesser price payment resulting to some money left in consumer's hand. Suppose, he spends this surplus on maize, its demand will rise, such an effect will be called positive income effect, where its demand rises as per law of demand.

However, maize is inferior commodity and customer would like to spend his surplus on superior commodity rather than on extra inferior goods. Eventually demand for maize will fall with reduction in its price. Such an effect is called Negative Income effect. When income effect is negative, demand falls. The total effect on demand depends over the fact whether substitution effect or income effect was more intensive. In case of inferior goods, if negative income effect is more powerful, demand falls with reduction in price of commodity. Reduction in price of Giffen goods brings fall in demand and thus, law of demand does not apply.

2. Articles of Snob Appeal : Sometimes, certain commodities are demanded just because they happen to be expensive or prestige goods and have a Snob appeal. These are generally ostentatious articles, and purchased only by rich people for using them as 'status symbol.' Veblen has termed these goods as 'conspicuous consumption goods.' These commodities are demanded due to the enjoyment they provide to their possessor from the felling that other people envy him/her for possessing these expensive items. Thus, when prices of such articles like diamond, gold etc. rise, their demand also rises. The high prices make the ownership of diamonds and gold more prestigious. As a result, law of demand does not apply to such articles.

3. Ignorance of the customer regarding quality price relationship : Many times, consumers buy expensive items in large quantity due to ignorance or lack of awareness. They think that an expensive or high price commodity is of high utility as in case of medicine, usefulness it treated high. Cheaper medicines are demanded low. **Behham** has given an appropriate example for such phenomenon. In 1914, a book of photography was published with price 10 shillng/pens, prior to 1st world war but, very few copies of this edition was sold. After world war, same book was republished with 3 pounds 3 shilling, this edition was sold largely. So, for high price goods, sometimes, people demand more as they consider it as of high quality and in the contrast if price is reduced they are considered to be of low quality and demand less. In case on prior example of book when it was republished customer might have thought expensive book is suitable for purchase and collection.

4. Necessities : In real life, we experience that the demand for compulsory articles does not fall due to increase in their price. Wheat, rice, pulses, milk, sugar are such necessary articles on which law of demand does not apply. The demand is constant though its price is increasing.

5. Interest in Specific Brand : If a consumer likes any particular brand or if he is extremely loyal to any brand, he would not decrease it demand on rise in the price. For example, if a customer is habitual of garments and suiting of 'Vimal', he would purchase its similar quantity even on the rise in the price.

6. Small Commodities : Some small commodities share very short part of total purchases, for example, match box, salt, toffee, washer etc. Then, spending portion are so small in these itmes that consumers do not even consider its price. As a result, its demand does not fall with increase in price.

7. Expectations or Possibility of Price Change : Whenever there is expectation of price rise, in future, consumers buy and accumulate commodities even at high prices. These are the conditions of war, flood, famine, and earthquake etc. Such conditions are generally found. In its opposite, if there is a possibility of reduction in price, in future, demand is less even on low price. It is commonly seen in speculative markets.

CHANGE IN DEMAND *i.e.* INCREASE OR DECREASE IN DEMAND

In economics, change in demand means increase or decrease in demand. The increase or decrease in demand can be due to various reasons, like, price, consumers' income, their preference, population, promotion and advertisement, climate, prices of related goods, trade cycles, govt. policy etc. Any change in any of the such element except price bring effect, that is called change in demand. Any charge, in such element leads to change in demand, demand schedule and demand curve. The increase in demand means more quantity demanded at present price. In reverse, decrease in demand means fall in demand on present price. When there is an increase in demand of commodity then the quantity demanded related to every price would be more then previous and when there is decrease in demand the quantity demanded related to every price would be lesser than previous. This can be explained in table as below :

Change is Demand

Price Per Unit (₹)	Basic Demand	Increase in demand	Decrease in demand
1	1000	1500	800
2	900	1200	600
3	700	900	500
4	400	600	300
5	200	400	100

It is clear from the table that there can be increase or decrease in demand even if price remains unchanged.

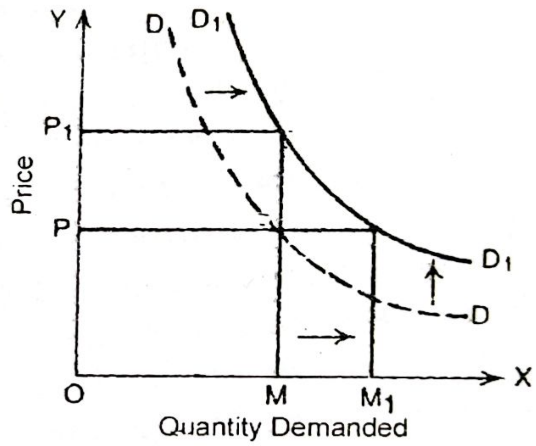

Diagram-3

Increase in demand : In diagram 3, increase in demand has been shown. Initial demand curve is DD. The demand of commodity is OM at OP price. Now the price remains unchanged but there is such change in the element of demand that demand increases and a new curve D_1D_1 forms. Shifting of demand curve to right is called increase in demand. It has two meaning :

(1) On the same price OP, more quantity OM_1 is demanded.

(2) The same quantity of commodity, OM is demanded at high price OP_1.

Decrease in demand : In diagram 4, decrease in demand is shown. Initial demand curve is DD. Demand of commodity is OM at price OP. Now, when price is as it is, but other elements change leads to decrease in demand to D_1D_1. Shifting of demand curve to left is decrease in demand. It has two meaning :

(1) On original price OP, less quantity of commodity OM_1 is demanded.

(2) The same quantity of commodity OM, is demanded at lower price OP_1.

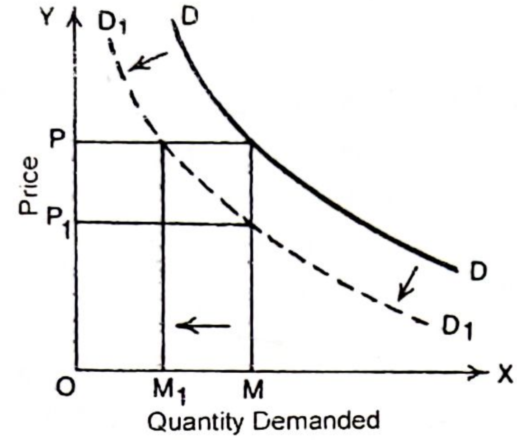

Diagram-4

CHANGE IN QUANTITY OF DEMAND *i.e.* EXPANSION OR CONTRACTION OF DEMAND

Demand has a very close relationship with price. Demand increases with reduction in price and decreased with increament in price. The change in quantity demanded due to change in price is called expansion or contraction of demand. Such changes are only due to change in price. Consumer's role in such case is passive and whole activity is carried on due to price change.

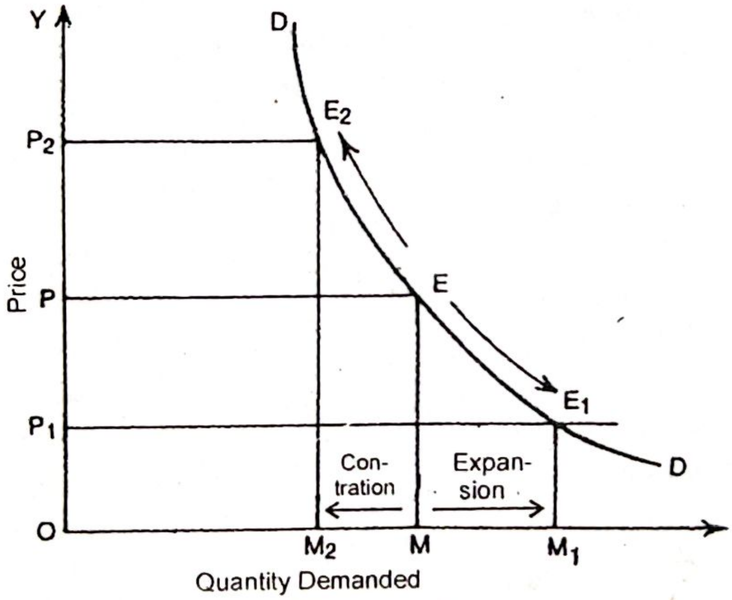

Diagram-5

In given diagram 5, DD is demand curve. As there is reduction in price of commodity its demand increases, when price OP is reduced to OP_1, the demand gets expended to OM_1. At its opposite, when price increases to OP_2 its demand get contracted to OM_2. In this condition MM_1 is expansion of demand and MM_2 quantity is contraction, in demand.

DETERMINANTS OF DEMAND

Demand is affected by various economic, social and political elements but their individual effects are different. That is why an economist should analyse them as per their importance in any particular situation. The main factors affecting demand are following :

1. Price of the Commodity : The most important factor affecting demand is price. There is inverse relationship between price and demand. Demand is more when price decreases and is less when price increases. The quantity of any commodity demanded by any consumer at a particular price is called 'Price Demand'. The price change is fast in agricultural economy and in industrial economy it is comparatively slow. Even the possibility of changes in future in price also affect the demand.

2. Income : The demand of commodities also depends on income of individuals. More be the income of individual, more will be the quantity purchased by him. More income means more purchasing power. Generally, demand increases with increase in income and demand decreases with decrease in income. For example, in the planning period, in India, the demand of consumer goods has been increased due to increased income of people. But, it is not necessary that the change in demand of consumer goods is equal to the change in income. The income effect is different on different commodities. The relationship between income and demand is called "Income Demand."

3. Prices of Related Goods : The demand of any commodity is also affected by price of other related commodities. Related goods are of two types —Substitute and Complimentary. Substitute goods are those which can be used in place of other basic commodity such as tea and coffee, dalda and pure ghee are close substitutes of each other. When price of tea increases, there is a possibility of increase in demand of coffee and comparatively cheaper commodity coffee will be purchased by consumer more than the tea. Complementary goods are goods which are used with other goods and not independently used. For example, scooter and petrol, pen and ink are complimentary to each other. If the price of pen increases the demand of ink will also decrease. There is a direct relationship of substitute good's price and demand of original good where as reverse relationship between complimentary good's demand and price. The change in demand of any commodity due to change in price of related goods is called 'Cross Demand.'

4. Taste and Fashion : There is a significant effect of consumer's taste, habit, fashion and custom on demand. The commodities in which consumers are more interested, will definitly have increase in demand. The taste and fashion of consumer keep on changing and thus, the demand is also changing. For example, few years ago, the demand of cold drink has risen due to taste of consumer. Technological changes, progress and innovation also change taste and fashion. Like the invention of television has reduced the demand of radio and gramophone, similarly the technological progress in plasma TV and LCD TV have reduced the demand of traditional CRT TVs.

5. Distribution of Wealth : Wealth and distribution of wealth both effect the demand. If the distribution of wealth is equal, the wealth is in hand of majority of people. In this case, the demand for necessary itemes like wheat, cloth and house will rise. In its opposite, if the distribution of wealth is uneven it will be concentrated in the hands of few rich people and demand for luxurious items as diamond, liquor, jewellary will increase.

6. Religious Ideas and Thoughts : Religious thoughts and conventions also affect demand. The people, who are of religious belief, are mainly living life with lots of discipline like prayers, simple food, simple clothes etc. where as people who believe in material life want luxurious and comfort giving articles. They do not hesitate even to take loan for fulfillment of their wants and demand for these luxurious commodities rise.

7. Geographical Conditions : Climate and weather conditions directly affect the wants. In a cold country, like Britain individuals demand for warm clothes, wine etc. according to their affortability but, in a hot country, like India demand for such items is limited. In India also, the demand for various commodity changes according to season such as, umbrella in rainy season, wollen cloth in winter and cotton cloth in summer is demanded more.

8. Population : Increase and decrease in population brings increase and decrease in demand. In the countries, which are more populated, have more demand in comparison to the countries which have less population. In the country, where population is increasing, the ratio of children will be more then old aged. Thus, demand for the items like toys, health drinks, schooling equipments etc. will be more. In the opposite side, in the country where population is reducing or its increasing with diminishing rate, will have high ratio of old aged people and low ratio of children.

9. Saving Tendency : In the region or in any country if the individuals are more concerned about saving thus spending less the demand of commodities will fall. In alternate case if customer is affected by consumption culture and save less amount then spending, the demand in such condition will rise.

10. Quantity of money : If the quantity of money and credit is rising in any country there is possibility of increase in demand due to increase in purchasing power of consumers through money expansion. In alternate situation, demand reduces, in case of money contraction. If the banks and financial institutions are providing loans at easy and cheap rates, the price demand of commodities will increase in that country.

11. Trade Cycle : Trade cycles have direct affect on demand. Demand of commodities increases in inflation and decreases in period of deflation.

12. Expectations of Changes is Future Prices : If consumers expect rise in price, in future, they buy commodities in large quantity, in present period so that they don't have to pay more price in future. In the same way if they expect lower commodity prices in future they buy less quantity in present time and demand reduces.

13. Advertising : In the present era of advertising, demand is greatly affected because of it. The demand of those commodity rises whose excessive advertising is done by the business persons. In case of low advertising, there is low demand for such commodity.

14. Government Policy : In democratic countries govt. policy is an important factor affecting demand. If the goverment levies taxes on any commodity its price rises and demand get hampered whereas govt. subsidy, monetary help and discounting is assistance and tax relie encourage the demand. Govt. takes help of rationing also to ban the demand of some commodities.

Kinds Of Demand

Following are the main types of demand :

(1) Producers' Goods and Consumers' Goods Demand : Such goods which help in the production of other goods, the demand for these commodities is called Producers' Goods Demand. The demand for these commodities are not by the consumers for direct consumption but for manufacturing in factories or for resiling such as raw material, machinery, tool's demand etc. The main features found in this type of demand are :

1. Business buyers are having professional ability who are very sensitive to price and quality for choosing alternative goods.
2. Buyers mainly consider the economic factors while purchasing goods and they are not very much influenced by the advertising and social factors. Professionlits buy commodity to maximise profit earning.
3. Demand of producers' goods depends on the demand for the commodities manufactured by such buyer.

The goods which are used for consumption of end user consumer, its demand is called Consumers' Goods Demand. For example, demand for watch, cycle, radio, soap etc. The number of consumers to demand for consumer goods is large and market is wide. It's demand is affected by economic and uneconomic factors.

The difference between Producers' Goods and Consumer Goods are following :

1. The buyer of producers' goods is the business manufacturer or profession list whereas buyers of consumers' goods are end user consumers.
2. The number of buyers of producers' goods is small whereas the number of consumers' goods is large.
3. The market for producers' goods is less wider in comparison to consumers' goods market.
4. Seller of producers' goods maintains a personal relationship with buyers of producer goods whereas in case of consumers' goods advertisement and promotional activities are carried on.
5. The buyers of producers' goods deeply analyze the price and quality of goods to be purchased but the buyers of consumers' goods take decision without deep thought, if they have proper income.

Actually the difference between consumers' goods and producers' goods depends on the fact that who is the buyer and what is the purpose of such