

KRISHNAGAR ACADEMY

CLASS - X

SUB - ECONOMIC APPLICATIONS  
(6TH SUB)

TODAY'S LESSON: (CH1)

(DATE: 18.05.2020) The Theory of Demand

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# The Theory of Demand

## 1.1. Introduction

When the price mechanism works freely without Government intervention, prices of commodities are determined by their demands and supplies.

We shall approach the theory in steps. In this chapter, we shall discuss the *theory of demand*. In the next chapter we shall discuss the *theory of supply*. Then we shall be in a position to bring the two theories together and explain how the price of a commodity is determined by the interaction between the demand for and the supply of the commodity. Although we shall talk about *one commodity*, the theory will be generally applicable to any commodity.

## 1.2. Concept of demand

A commodity is demanded because it has ability to satisfy want. However, wanting a commodity is not the same thing as demanding it. By 'demand' for a commodity, we mean the desire for the commodity, backed by purchasing power. When a consumer wishes to consume a commodity and also has the necessary purchasing power, he is said to have a demand (or effective demand) for the commodity. Therefore, effective demand = desire for a commodity + purchasing power.

### ● Different concepts of demand :

There are different concepts of demand. These are as follows :

- Income demand,
- Cross demand,
- Joint demand or complementary demand,
- Composite demand,
- Competitive demand,
- Direct demand,
- Derived demand or indirect demand,
- Notional or *ex ante* demand, and
- Effective or *ex post* demand.

Let us now give a brief outline of those concepts.

- (a) **Income demand :** (When the demand for any commodity depends only on the income of the consumer, it is called income demand.) In case of normal



goods, we get a positive correlation between the income of the consumer and the demand for the commodity, i.e., as the income increases (or decreases), the quantity demanded will also increase (or decrease). However, in case of inferior goods, the demand for the commodity declines with an increase in the income of the consumer. (Thus, later on we can show that the income demand curve will be positively sloped in case of normal goods and negatively sloped for inferior goods.)

(b) **Cross demand** : If the demand for a commodity depends on the price of a related commodity, it is called cross demand. For example, the demand for petrol-driven motorcycles is influenced by the price of petrol (here, petrol and motorcycle are complementary goods). Similarly, the demand for cotton shirts depends on the price of non-cotton shirts (they are substitutes). Later on, you can easily understand that the cross demand curve for any one of the substitute goods will be positively sloped (say, the demand for cotton shirts may rise due to an increase in the price of non-cotton shirts). On the other hand, the cross demand curve for complementary goods will be negatively sloped (say, the demand for petrol-driven cars will fall with an increase in the price of petrol).

(c) **Joint demand** : When the demands for different complementary goods are created at a time, it would be termed as complementary demand or joint demand. For example, the demands for computer hardware and software are created jointly. Similarly, the demands for gun and bullets are also an example of joint demand.

(d) **Composite demand** : When any commodity or service is demanded for many alternative uses, it is called a composite demand. For example, the electricity services are demanded both for domestic and commercial uses.

(e) **Competitive demand** : If any commodity or a service has some substitutes in the market, then the demand for any of these substitutes would be termed as competitive demand. For example, in case domestic aviation services in India, the demand for the services provided either by Kingfisher or Jet Airways or Indian (airlines) will be considered as competitive demand.

(f) **Direct demand** : If any commodity is demanded for direct consumption, its demand will be considered as direct demand. For example, the demand for bread and butter.

(g) **Derived demand** : When the demand for any commodity is derived from the demand for some other commodities, it is called derived demand or indirect demand. Generally, the demand for any factor of production (say, the demand for a machine) is called derived demand. This is because, the demand for some goods which are produced with the help of that machine, has increased in the market. As a result, the demand for that machine will also increase.

(h) **Notional or ex ante (or planned) demand** : It refers to the desire for goods and services, which is not backed by the ability to pay for those goods and services. Hence, if any individual desires to purchase a motor car without having the required purchasing power, that desire would be considered as





notional or *ex ante* demand. This demand cannot be communicated to the suppliers through price mechanism.

- (i) **Effective or ex post (or actual) demand** : It refers to the aggregate demand for different goods and services backed by the required purchasing power of the consumers.

∴ Effective or *ex post* demand

= (a) Desire for having some goods and services

+ (b) Purchasing power of any individual to buy those desired goods and services.

or, Effective or *ex post* demand

= (a) Notional or *ex ante* demand

+ (b) Adequate purchasing power of individuals.

## ● Difference between want and demand :

Sometimes the economists have distinguished between the concepts of 'want' and 'demand'. The desire for having some goods which fulfill the needs of human beings, can be termed as the 'want' or 'wants' for different goods. For instance, an individual may desire to have goods like a motor car, a residential flat, a coloured TV, a washing machine, an air-conditioning machine, costly furniture and so on. We consider these desires as his/her 'wants'. Thus, 'want' refers to the willingness of having some goods without backed by the ability to purchase those goods. However, demand refers to the willingness to have some goods backed by adequate purchasing power of the consumer. It also refers to the quantity of a commodity purchased by the consumer at any particular price during any particular time period.

Hence, in any society if the 'wants' are to be translated into actual demand, then the purchasing power of the people has to be increased.

Want	Demand
1. Desire for having some goods without the ability to purchase these goods.	1. The willingness to have some goods backed by adequate purchasing power.
2. This cannot be communicated to the sellers through price mechanism.	2. It can be communicated to the sellers through price mechanism.
3. It has no relation with actual purchase of a commodity at any given price.	3. It has a relation with the actual purchase of a commodity at any given price during any particular time period.
4. It implies notional or <i>ex ante</i> demand.	4. It implies actual or effective or <i>ex post</i> demand.



## 1.3. Factors determining demand for a commodity

Now we can identify the factors which determine either the individual or the aggregate demand for different commodities.





### 1.3.1. Factors determining individual demand

The demand of any particular individual for any commodity depends on various factors.

These factors are stated below :

- (i) **Income of the consumer** : The demand for any commodity depends on the income of the consumer. An increase in individual income, other things remaining unchanged, would mean an increase in the purchasing power of the consumer. As a result, the consumer can purchase more of the commodity.
- (ii) **Price of the commodity** : The price of a particular commodity also determines the demand for the commodity. Given the money income of the consumer, an increase in the price level reduces the purchasing power of the consumer and *vice versa*. Hence, if the price of a commodity increases, the consumer purchases less of it. On the other hand, if there is a fall in the price of that commodity, the consumer purchases more of it.
- (iii) **Prices of related commodities** : Demand for any commodity also depends on the prices of the related commodities. For instance, if the price of tea falls, the demand for coffee may fall, because a consumer may now substitute tea for coffee. In the economist's language, tea and coffee are *substitutes*. Again, when the price of sugar falls, tea-drinking may go up because people usually use sugar with tea. Tea and sugar are *complements*.  
Thus, the demand for any commodity also depends on the prices of its substitutes and complements.
- (iv) **Taste and preference pattern on the consumer** : The demand for a commodity also depends on the taste and preference pattern of the consumer. If the taste and preference pattern moves in favour of the commodity, the consumer purchases more of this commodity. Thus, a change in the individual taste and preference pattern leads to a change in the demand for the commodity.
- (v) **Price-expectations** : Price-expectations also influence the individual demand for any commodity. If the consumer apprehends that the price of the commodity will rise in near future, he will purchase more of it at present. On the other hand, if he expects a price-fall in the near future, he will purchase less of the commodity at present.

From the above discussion, it becomes clear that individual demand for any commodity depends on the following factors :

- (i) Price of that commodity (say,  $P_x$ ) ;
- (ii) Prices of related commodities i.e., substitutes and complements (say,  $P_y$ ) ;
- (iii) Income of the consumer ( $M$ ) ;
- (iv) Taste and preference pattern of the consumer ( $T$ ) ;
- (v) Expected changes in commodity price in future ( $P_e$ ).

So, individual demand for commodity X depends on  $P_x, P_y, M, T, P_e$ , etc.



### 1.3.2

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### 1.3.2. Factors determining market demand

Market demand for a commodity means the sum total of the demand of all individuals. Market demand depends, not only on the price of the commodity and related prices, but also on the pattern of income distribution in any country, the demographic structure of that country, etc.

- (i) **Pattern of income distribution** : If income distribution moves in favour of the down-trodden people, then demand for such commodities which are used by common people would increase. On the other hand, if the major part of national income is concentrated in the hands of only some rich people, that demand for luxury goods may increase in that society.
- (ii) **Demographic structure or age-distribution of the population** : Some social factors also influence the market demand for a commodity. For example, if there is a change in the demographic structure in a country in such a way that the composition of the population changes in favour of old-aged persons, then the market demand for such commodities, which are used by senior citizens, would increase.
- (iii) **Total number of consumers** : The growth in the number of prospective buyers of a commodity in any society also determines the market demand for that commodity.

Thus, the market demand for commodity X at any particular time period depends on the following factors :

- (a) Price of the commodity ( $P_x$ ),
- (b) Prices of related commodities ( $P_y$ ),
- (c) Pattern of income distribution in a country (say,  $Y_d$ ),
- (d) Demographic structure or age-distribution of the population in a country (say,  $P_d$ ), etc.



### 1.4. Demand schedule and demand curve

We have mentioned the various factors on which individual and aggregate demand for a commodity depends. From the point of view of price determination, the most crucial among these factors is the *price of the commodity*. Economists, therefore, spend much time and effort in studying the relationship between the demand for a commodity and its price.

There are basically two ways of presenting this relationship : it can be presented in the form of a table or *schedule* or it can be presented pictorially or diagrammatically in the form of a *curve*.



#### 1.4.1. Demand schedule

By a demand schedule, we mean a chart or a table showing the quantities of a commodity demanded at various prices. For example, an individual demand schedule is shown below. It describes an individual's demand for tea at various levels of tea prices. In general, the individual demand schedule indicates the desired demand for a commodity (say, X) at different possible prices, by an individual.



Table-1

Individual Demand Schedule

Price of Tea (per kg.)	Individual's Demand
₹ 50	1 kg.
₹ 45	2 kgs.
₹ 40	4 kgs.
₹ 35	6 kgs.
₹ 30	9 kgs.

Here, we have assumed that, as the price falls, demand rises.

The *market demand schedule* shows the total demand for the commodity in the market at various prices. This is obtained by the horizontal or lateral summation of individual demands at each price. For instance, if there are 2,000 consumers in our example and if their individual demands are the same, then the aggregate demand schedule for tea will be as follows :

Table-2

Market Demand Schedule

Price of Tea (per kg.)	Market Demand for Tea
₹ 50	2,000 kgs. ( $2,000 \times 1$ )
₹ 45	4,000 kgs. ( $2,000 \times 2$ )
₹ 40	8,000 kgs. ( $2,000 \times 4$ )
₹ 35	12,000 kgs. ( $2,000 \times 6$ )
₹ 30	18,000 kgs. ( $2,000 \times 9$ )

Obviously, if a demand schedule is plotted on a graph by measuring price along the vertical axis and demand along the horizontal axis, we shall get a demand curve. A demand curve is nothing but a geometric representation of a demand schedule. Conversely, a demand schedule is nothing but a tabular representation of a demand curve. For this reason, economists often use the phrases 'demand curve' and 'demand schedule' as if they mean the same thing.



#### 1.4.2. Individual and Market demand schedules : Some examples

The concept of individual and market demand schedules would be more clear if we consider the following examples.



##### Example 1.

Prepare a market demand schedule on the basis of the individual demand schedules shown below :

Price (₹)	Quantity demanded by individuals (units)		
	A	B	C
5	15	12	10
8	10	9	5
17	6	4	3



**Solution :**

We know that the horizontal summation of individual demands at different possible prices, would give us the market demand schedule. For instance, at price = ₹ 5 per unit, the market demand for the commodity will be 37 units (= 15 + 12 + 10). Following the same procedure for other prices, we can prepare the market demand schedule. This is shown below :

Price (Per unit)	Individual demand schedule (units)			Market demand schedule
(₹)	A	B	C	(units)
5	15	12	10	37
8	10	9	5	24
17	6	4	3	13

**Example 2.**

Assume that there are three households A, B and C. Prepare the individual demand schedule for the household B from the following table :

Price (Per unit)	Units Purchased by A	Units Purchased by B	Units Purchased by C	Market demand (units)
(₹)				
15	24	?	44	104
9	32	?	64	144

**Solution :**

We know that the market demand schedule is the horizontal summation (or lateral summation) of individual demand schedules. In this example, the individual demand schedules of the household A and C are given. On the other hand, the market demand schedule is also given. Thus, if we deduct the sum total of individual demands for the households A and C from the market demand schedule, we get the required individual demand schedule for the household B. This is shown below :

Price (Per unit)	Units Purchased by B	(Market demand – Units Purchased by A and C)
15	36	$104 - (24 + 44) = 36$
9	48	$144 - (32 + 64) = 48$

**1.4.3. Individual demand curve**

The isolated effect of price on individual demand is usually shown with the help of the individual demand curve. The individual demand curve is a curve drawn with the price of the commodity on one axis (usually along the vertical axis) and the quantity demanded on the other (the horizontal) axis. The curve is usually drawn as a downward-sloping one, i.e., it slopes downwards from left to right. In



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## ASSIGNMENTS

Ch-1 The Theory of Demand

Q:1 > Differentiate between want and demand.

Q:2 > Differentiate between:

i > Substitute and Complementary Goods

ii > Direct and indirect demand.

Give e.g.s in each case.

Q:3 > How do the following affect demand for a commodity?

i > Price - expectations

ii > Pattern of income distribution

iii > Income of a consumer.

Q:4 > How is market demand schedule derived from three individual demand schedules (A, B, C)? (Prepare a hypothetical schedule)

Q:5 > What is i > ex ante demand  
ii > ex post demand.

Give their other names.