

UNIT II

LESSON 7

MARKET DEMAND SCHEDULE

STRUCTURE

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- 7.1 INTRODUCTION**

The individual demand curve- sometimes also called the household demand curve- that is based on an individual's choice among different goods. In this lesson we show how to build the market demand curve from these individual demand curves. When demand changes due to the factors other than price, there is a shift in the whole demand curve. Apart from price, demand for a commodity is determined by incomes of the consumers, his tastes and preferences, prices of related goods. Thus, when there is any change in these factors, it will cause a shift in demand curve. For example, if incomes of the consumers increase, say due to the hike in their wages and salaries or due to the grant of dearness allowance, they will demand more of a good, say cloth, at each price. This will cause a shift in the demand curve to the right. Similarly, if preferences of the people for a commodity, say colour TV, become greater, their demand for colour TV will increase, that is, the

demand curve will shift to the right and, therefore, at each price they will demand more colour TV. The other important factor which can cause an increase in demand for a commodity is the expectations about future prices. If people expect that price of a commodity is likely to go up in future, they will try to purchase the commodity, especially a durable one, in the current period which will boost the current demand for the goods and cause a shift in the demand curve to the right. As seen above, the prices of related commodities such as substitutes and complements can also change the demand for a commodity. For example, if the price of coffee rises other factors remaining the constant, this will cause the demand for tea, a substitute for coffee, to increase and its demand curve to shift to the right.

If there are adverse changes in the factors influencing demand, it will lead to the decrease in demand causing a shift in the demand curve. For example, if due to inadequate rainfall agricultural production in a year declines this will cause a fall in the incomes of the farmers. This fall incomes of the farmers will cause a decrease in the demand for industrial products, say cloth, and will result in a shift in the demand curve to the left. Similarly, change in preferences for commodities can also affect the demand. For example, when colour TVs came to India people's greater preference for them led to the increase in their demand. But this brought about decrease in demand for black and white TVs causing leftward shift in demand curve for these black and white TVs. The decrease in demand does not occur due to the rise in price but due to the changes in other determinants of demand. Decrease in demand for a commodity may occur due to the fall in the prices of its substitutes, rise in the prices of complements of that commodity and if the people expect that price of a good will fall in future.

7.2 OBJECTIVES

The objectives of this lesson is to:

- Explain the concept of demand curves
- Describe the relationship between individual demand curve and market demand curve.
- Demand schedule and types of demand schedule.
- Types of demand.

7.3 DEMAND SCHEDULE

The relationship between the price of a commodity and the amount demanded is dependent on a large, number of factors, the most important being the nature of a commodity. The response of amount demanded to changes in price of a commodity is known as the demand schedule. It summarises the information on prices and quantities demanded. The table 7.1 showing the prices per unit of the commodity and the amount demanded per period of time.

Table: 7.1

| Price per Quintal (Rs.) | Amount Demanded by buyer A | Amount Demand by buyer B | Total Market by buyer B |
|-------------------------|----------------------------|--------------------------|-------------------------|
| 50 | 5 | 10 | 15 |
| 40 | 15 | 20 | 35 |
| 30 | 25 | 30 | 55 |

7.3.1 Types of Demand Schedule

The Demand Schedule may be the Individual Demand Schedule which refers to the prices and amount demanded of the commodity by an individual.

In Price Theory we are mainly interested in the Market Demand Schedule. A market consists of all those individuals who want to purchase a given commodity. Therefore, “Market Demand Schedule is defined as the quantities of a given commodity which all consumers will buy at all possible prices at a given moment of time.” It should be clear that the Individual Demand Schedules when added give us the Market Demand Schedule.

The following table 7.1 shows the Individual Demand Schedules of buyers A and B and the Market Demand Schedule where there are only two buyers.

7.4 TYPES OF MARKET DEMAND

There are mainly three types of demand. They are

1. Price Demand
2. Income Demand and
3. Cross Demand

Price Demand

It refers to the various quantities of the good which consumers will purchase at a given time and at certain hypothetical prices assuming that other conditions remain the same. We are generally concerned with price demand only. In the explanation of the law of demand given above, we dealt in detail with price demand only.

Income demand

Income demand refers to the various quantities of a commodity that a consumer would buy at a given time at various levels of income. Generally, when the income increases, demand increases and vice versa.

Cross Demand

When the demand of one commodity is related with the price of other commodity is called cross demand. The commodity may be substitute or complementary. Substitute goods are those goods which can be used in case of each other. For example, tea and coffee, Coca-cola and Pepsi. In such case demand and price are positively related. This means if the price of one increased then the demand for other also increases and visa versa. Complementary goods are those goods which are jointly used to satisfy a want. In other words, complementary goods are those which are incomplete without each other. These are things that go together, often used simultaneously. For example, pen and ink. Tennis rackets and tennis balls, cameras and film, etc. In such goods the price and demand are negatively related. This means when the price of one commodity increases the demand for the other falls. Tennis rackets and tennis balls, cameras and film, etc. In such goods the price and demand are negatively related. This means when the price of one commodity increases the demand for the other falls.

Other Types of Demand

Joint demand

When several commodities are demanded for a joint purpose or to satisfy a particular want. It is a case of a joint demand. Milk, sugar and tea dust are jointly demanded to make tea. Similarly, we may demand paper, pen and ink for writing. Demand for such commodities in bunch is known as joint demand. Demand for land, labour, capital and organisation for producing commodity is also a case of joint demand.

Composite demand

The demand for a commodity which can be put to several uses is a composite demand. In this case a single product is wanted for a number of uses. For example, electricity is used for lighting, heating, for running the engine, for the fans etc. Similarly coal is used in industries, for cooking etc.

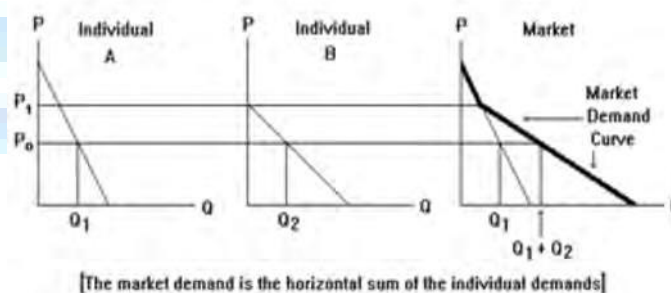
Direct and Derived demand

The demand for a commodity which is for direct consumption, i.e.. Demand for ultimate object, is called direct demand, e.g food, cloth, etc. Direct demand is called autonomous demand. Here the demand is not linked with the purchase of some main products. When the commodity is demanded as a result of the demand for another commodity or service, it is known as the derived demand or induced demand. For example, demand for cement is derived from the demand for building construction; demand for tires is derived from the demand for cars or scooters, etc.

7.5 MARKET DEMAND CURVE

The relationship between the demand curves of individual buyers and the market demand curve is shown in Figure 1. In that figure we suppose, for the sake of argument, that there are only two buyers in the market—Individual A and Individual B. Each of these individuals will choose to purchase a particular quantity at each possible price. To find the total market demand at each price we simply add together the quantities demanded by the two individuals at that price.

Figure 1



For example, the quantity demanded by Individual A at price P_0 in the Figure is Q_1 and the quantity demanded by Individual B is Q_2 . The quantity demanded in the

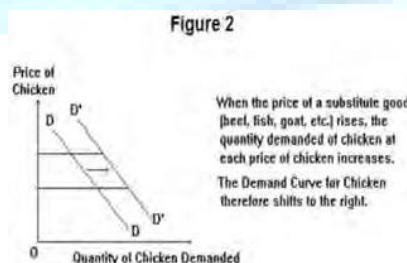
market as a whole is therefore $Q_1 + Q_2$. The market demand curve is simply the horizontal sum of the individual buyers' demand curves.

As can be seen from the above Figure, an important reason why the market demand curve is negatively sloped (that is, why the quantity demanded in the market increases as the price falls) is the entry of new consumers as the price falls. Individual B chooses not to consume any of the product at prices above P_1 . As the price falls below that level she enters the market. In general, more and more buyers will enter the market as the price falls, adding their demands to the market demand.

There are also important reasons why the individual consumers' demand curves are negatively sloped. Individuals consume in order to satisfy certain wants—food, shelter, entertainment, self-image, etc. Different commodities are substitutes for each other in supplying these wants. One can eat chicken, fish or goat instead of beef, or abandon all of these for a vegetarian diet. What one does will depend on the relative prices of these meats. If the price of beef rises substantially, with all other prices remaining the same, many consumers will choose to consume less beef and more fish, goat or chicken.

Broad categories of consumption are also substitutes for each other. For example, a substantial rise in rents relative to the costs of dining out, frequenting bars and going to the cinema may lead some consumers to maintain smaller and cheaper apartments and spend more leisure time on outside entertainment. This tendency to substitute cheaper goods and services for ones whose prices have risen is called the *substitution effect*. The substitution effect of a price change is always negative—a rise in a good's price reduces the quantity of it demanded.

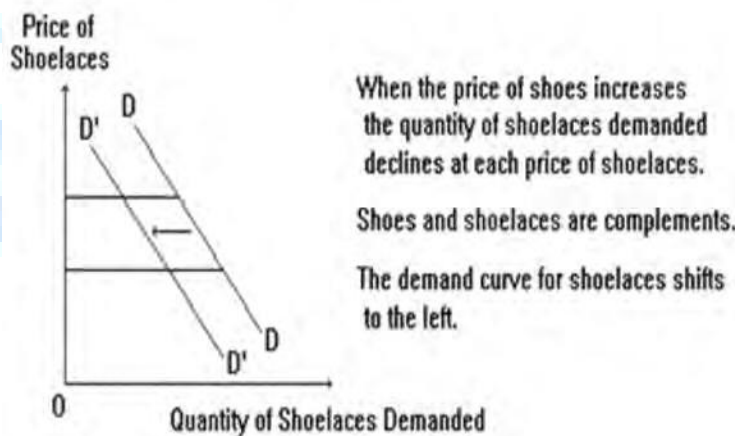
It should be obvious from the above that the quantity of a good demanded depends not only on its own price but on the prices of substitute goods. For example, consider the demand curve for chicken, plotted in Figure 2.



A fall in the price of chicken, holding all other prices constant, will bring about an increase in the quantity of chicken demanded—the price-quantity combination moves downward to the right along the demand curve. At the same time, a rise in the price of beef (or fish, or goat) will also increase the quantity of chicken demanded at every price of chicken. This will shift the demand curve in Figure 2 to the right. A change in the commodity's own price leads to a movement along the demand curve, while changes in the prices of substitute commodities cause the demand curve to shift. In general, the increase in the price of a substitute good shifts the demand curve for a commodity to the right—more of the commodity is demanded at each price.

Increases in the prices of other goods do not always cause the quantity demanded of a commodity to increase. Consider, for example, the market for shoelaces. A rise in the price of shoes will cause the quantity demanded of shoes to fall as people repair old shoes and wear them longer. Since there will be a smaller demand for shoes, there will also be a smaller demand for shoelaces. A rise in the price of shoes thus leads to a decline in the demand for shoelaces—the demand curve for shoelaces shifts to the left. People substitute other goods for both shoes and shoelaces. In this case, shoes and shoelaces are said to be *complementary goods* or *complements*. The effect of an increase in the price of a complementary good on the quantity of a good demanded is shown in Figure 3.

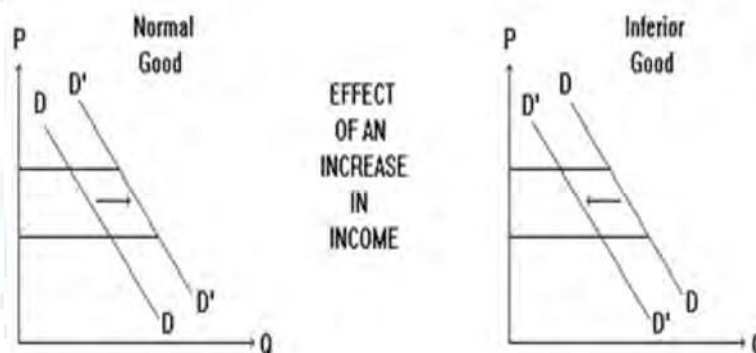
Figure 3



The quantities demanded of commodities are also affected by the level of income.

People's entire income must be spent on something (saving is treated here as an expenditure on future goods). When that income rises and more is therefore available to spend it is necessarily the case that consumers' expenditure on goods will, on average, rise. If a good is a *normal good*, people's expenditure on it will increase as their income increases. The quantity demanded of the good will increase at each price of that good. This is shown in the left panel of Figure 4.

Figure 4



Not all goods are normal. Consider, for example, rice consumption in mainland China. As the country's income rose with the influx of capital from the rest of the world and the development of new enterprises, people were likely to decide that they can now afford to add a bit more meat to their diet and rely less heavily on rice.

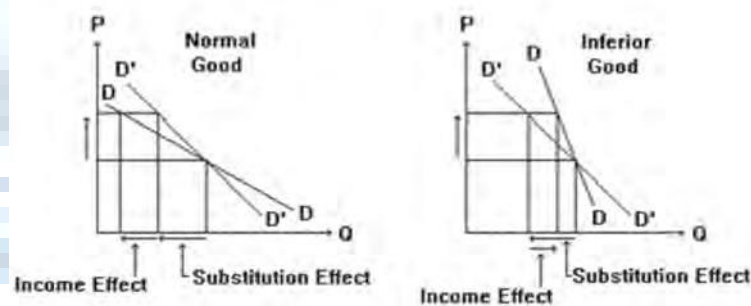
One's primary goal is to survive. To survive at low levels of income it may be necessary to spend all available funds on rice, meat being too expensive. At higher incomes, one can purchase much more rice than would be necessary for sustenance. It is then worthwhile to substitute a bit of meat for some of that rice and have a more enjoyable diet. For this reason, the demand curve for rice might well shift to the left with an increase in income. Rice is in this instance an *inferior good*. This is shown in the right panel of Figure 4 above. When income rises, the demand curves for normal goods shift to the right and the demand curves for inferior goods shift to the left.

Up to this point we have argued that the demand curve is negatively sloped because of the *substitution effect*-when the price of a good rises consumers substitute other goods

whose prices have not risen. But an increase in the price of a good also has an *income effect* on the quantity of it demanded.

Suppose that you earn \$1000 per month and spend \$500 of it on rent. Assume that your rent goes up to \$600—that is, by 20 percent. The cost of your original consumption bundle is now \$1100, so you have to cut your consumption of something—either housing or other goods or both—by \$100. Your real income has thus declined by 10 percent. If housing is a *normal good*, you will allocate some of this cut in overall consumption to it. So there will be a decline in the quantity of housing demanded additional to any substitution of other goods for housing you make on account of the substitution effect. This will make the demand curve for housing flatter than it would otherwise have been, as is shown in the left panel of Figure 5.

Figure 5



There is, of course, the possibility that the commodity whose price has risen may be an *inferior good*. In this case the income effect will make the demand curve steeper. The adverse effect on real income of an increase in the price of rice, for example, may make it necessary for people to consume less meat and more rice. This is shown in the right panel of Figure 5.

In the case of normal goods, the income and substitution effects work in the same direction; in the case of inferior goods they work in opposite directions.

It turns out that the income effect is unlikely to be of much importance in practice. People spend tiny fractions of their income on most goods so that the effects on their real incomes of changes in the prices of those goods is likely to be trivial.