Market Demand

M.Com. IVth Sem.

Mr. Abhi Dutt Sharma

Date: 11/04/2020

Objectives

After studying this unit, you will be able to:

- Identify the determinants of demand
- Know the basis of demand State the law of demand
-

Introduction

Demand and supply are two most fundamental concepts in economics. Demand conveys a wider and definite meaning than in the ordinary usage. Ordinarily, demand to you would mean your desire to buy something, but in economic sense it is something more than a mere desire. It is interpreted as your want backed up by your purchasing power. Further demand is per unit of time such as per day, per week etc. Moreover, it is meaningless to mention demand without reference to price. Considering all these aspects the term demand can be defined in the following words, "Demand for anything means the quantity of that commodity, which is desired to be bought, at a given price, per unit of time."

Example: Suppose price of a pen is ₹ 10 per unit of time. At this price, people are willing to buy 100 units of that pen at a specific point of time. So, it is the demand for that pen.

2.1 Market Demand

Demand is one of the crucial requirements for the existence of any business enterprise. A firm is interested in its own profit and/or sales, both of which depend partially upon the demand for its product. The decisions which management takes with respect to production, advertising, cost allocation, pricing, etc., call for an analysis of demand.

Demand for a commodity refers to the quantity of the commodity which an individual household is willing and able to purchase per unit of time at a particular price.

Demand for a commodity implies:

1. Desire to acquire it,

2. Willingness to pay for it, and

3. Ability to pay for it.

Demand has a specific meaning. As stated earlier, mere desire to buy a product is not demand.

Example: A miser's desire for and his ability to pay for a car is not demand because he does not have the necessary will to pay for it. Similarly, a poor man's desire for and his willingness to pay for a car is not demand because he does not have the necessary ability to pay (purchasing power).

One can also think of a person who has both the will and purchasing power to pay for a commodity, yet this is not demand for that commodity if he does not have desire to have that commodity.

Demand for a commodity has to be stated with reference to time, its price and that of related commodities, consumer's income and taste, etc. Demand varies with changes in these factors.

Example: As demand for sweets go up, the demand for sugar also goes up Or as your income increases, you demand for branded clothes also goes up.

2.1.1 Determinants of Demand

The demand for a commodity arises from the consumer's willingness and ability to purchase the commodity. The demand theory says that the quantity demanded of a commodity is a function of or depends on not only the price of a commodity, but also on income of the person, price of related goods – both substitutes and complements – tastes of consumer, price expectation and all other factors. Demand function is a comprehensive formulation which specifies the factors that influence the demand for the product.

$$D_x = f(P_x, P_y, P_z, B, A, E, T, U)$$

Where,

D_x = Demand for item x

P_x = Price of item x

P_y = Price of substitutes

P_z = Price of complements

B = Income of consumer

E = Price expectation of the user

A = Advertisement Expenditure

T = Taste or preference of user

U = All other factors

The impact of these determinants on Demand is:

1. Price effect on demand: Demand for x is inversely related to its own price.

This can be shown as:

$$D_x \propto \frac{1}{P_x}$$

This shows that demand for x is inversely proportional to price of x. This means – as price of x increases, the quantity demanded of x falls.

2. **Substitution effect on demand:** If y is a substitute of x, then as price of y increases, demand for x also increases.

📋 Example: Tea and coffee, cold drinks and juice etc. are substitutes.

This can be shown as:

$$D_x \propto P_y$$

This shows that the demand for x is directly proportional to price of substitute commodity y. This means - demand for x and price of substitute commodity y are directly related.

3. **Complementary effect on demand:** If z is a complement of x, then as the price of z falls, the demand for z goes up and thus the demand for x also tends to rise.

📋 Example: Ink and pen, bread and butter etc. are complements.

This can be shown as:

$$D_x \propto \frac{1}{P_z}$$

This shows that the demand for x is inversely proportional to the price of complementary commodity z. This means – demand for x and price for complementary commodity y are inversely directly related.

4. **Price expectation effect on demand:** Here the relation may not be definite as the psychology of the consumer comes into play. Your expectations of a price increase might be different from your friends'.

5. **Income effect on demand:** As income rises, consumers buy more of normal goods (positive effect) and less of inferior goods (negative effect). Examples of normal goods are t-shirts, tea, sugar, noodles, watches etc. and examples of inferior goods are low quality rice, jowar, second hand goods etc.

This can be shown as:

$$D_x \propto B, \text{ if X is a normal good. And,}$$

$$D_x \propto \frac{1}{B}, \text{ if X is an inferior good.}$$

6. **Promotional effect on demand:** Advertisement increases the sale of a firm up to a point.

This can be shown as:

$$D_x \propto A$$

This means that, demand for x is directly proportional to advertisement expenditure of the firm producing x. (Note: advertisements do not that powerful effect on demand)

Socio-psychological determinants of demand like tastes and preferences, custom, habits, etc., is difficult to explanation theoretically.

Did u know? If there is an increase in GDP, will the demand be affected?

Yes. An increase in GDP means that the total output of products and services have increased. Since, it represents the economy of a country, so any increase will have a positive effect on demand.

Task   List a few products that are: (a) substitutes and (b) complements

2.1.2 Basis of Demand

The basic source of demand is the need of individuals. Individual need products and services and they are also willing to pay a price to acquire those products and services. The firms analyse the needs and create products and services for them. The market for a firm's product cannot be analysed without reference to the demand conditions. For a firm or an industry consisting of several firms, the extent of demand determines the size of market. Successful business firms, therefore, spend considerable time, energy and effort in analysing the demand for their products. Without a clear understanding of consumers' behaviour and a clear knowledge of the market demand conditions, the firm is handicapped in its attempt towards profit planning or any other business strategy planning.

Example: Estimating present demand and forecasting future demand constitutes the first step towards measuring and determining the flow of sales revenue and profits which generate internal resources to finance business. The stability and growth of business is linked to size and structure of demand.

2.1.3 Direct and Derived Demand

You must have noticed that our demand for basic necessities, like demand for food, clothing and shelter, is independent of demand for any other good. On the other hand, demand for labour is dependent on our demand for houses or products and demand for mobile phones depend on our demand for communication with each other. The goods whose demand does not depend on the demand for some other goods are said to have a direct demand, while the rest have derived demand. However, there is hardly anything whose demand is totally independent of any other demand. But the degree of this dependence varies widely from product to product. Thus, the direct and derived demand varies in degree more than in kind.

Notes   Transportation as a Derived Demand

In economic systems what takes place in one sector has impacts on another; demand for a good or service in one sector is derived from another. For instance, a consumer buying a good in a store will likely trigger the replacement of this product, which will generate demands for activities such as manufacturing, resource extraction and, of course, transport. What is different about transport is that it cannot exist alone and a movement cannot be stored. An unsold product can remain on the shelf of a store until a customer buys it (often with discount incentives), but an unsold seat on a flight or unused cargo capacity in the same flight remain unsold and cannot be brought back as additional capacity later. In this case an opportunity has been missed since the amount of transport being offered has exceeded the demand for it. The derived demand of transportation is often very difficult to reconcile with an equivalent supply and actually transport companies would prefer to have some additional capacity to accommodate unforeseen demand (often at much higher prices). There are two major types of derived transport demand:

Direct derived demand: This refers to movements that are directly the outcome of economic activities, without which they would not take place. For instance, work-related activities commonly involve commuting between the place of residence and the workplace. There is a supply of work in one location (residence) and a demand of labor in another (workplace), transportation (commuting) being directly derived from this relationship. For freight transportation, all the components of a supply chain require movements of raw materials, parts and finished products on modes such as trucks, rail or containerships. Thus, transportation is directly the outcome of the functions of production and consumption.

Indirect derived demand: Considers movements created by the requirements of other movements. The most obvious example is energy where fuel consumption from transportation

activities must be supplied by an energy production system requiring movements from zones of extraction, to refineries and storage facilities and, finally, to places of consumption. Warehousing can also be labeled as an indirect derived demand since it is a non-movement of a freight element. Warehousing exists because it is virtually impossible to move commodities instantly from where they are produced to where they are consumed.

Transportation can also be perceived as an induced (or latent) demand which represents a demand response to a reduction in the price of a commodity. This is particularly the case in the context where the addition of transport infrastructures results in traffic increases due to higher levels of accessibility. Roadway congestion is partially the outcome of induced transport demand as additional road capacity results in mode shifts, route shifts, redistribution of trips, generation of new trips, and land use changes that create new trips as well as longer trips. However, the induced demand process does not always take place. For instance, additional terminal capacity does not necessarily guarantee additional traffic as freight forwarders are free to select terminals they transit their traffic through, such as it is the case for maritime shipping.

2.1.4 Law of Demand

The Law of demand explains the functional relationship between price of a commodity and the quantity demanded of the commodity. It is observed that the price and the demand are inversely related which means that the two move in the opposite direction. An increase in the price leads to a fall in quantity demanded and vice versa. This relationship can be stated as "Other things being equal, the demand for a commodity varies inversely as the price".

Example: Ram is demanding a motorbike manufactured by Company A. Now, if Company A increases the price of the bike substantially, say by 10% , then Ram might change his mind and decide to buy motorbike from company B whose price is lesser or he might postpone his demand altogether.

A demand curve considers only the price-demand relation, other factors remaining the same. The inverse relationship between the price and the quantity demanded for the commodity per time period is the demand schedule for the commodity and the plot of the data (with price on the vertical axis and quantity on the horizontal axis) gives the demand curve of the individual.

Example:

An Individual's Demand Schedule for Commodity X

Price x (per Unit) Px	Quantity of x demanded (in Units) Dx
2.0	1.0
1.5	2.0
1.0	3.0
0.5	4.5
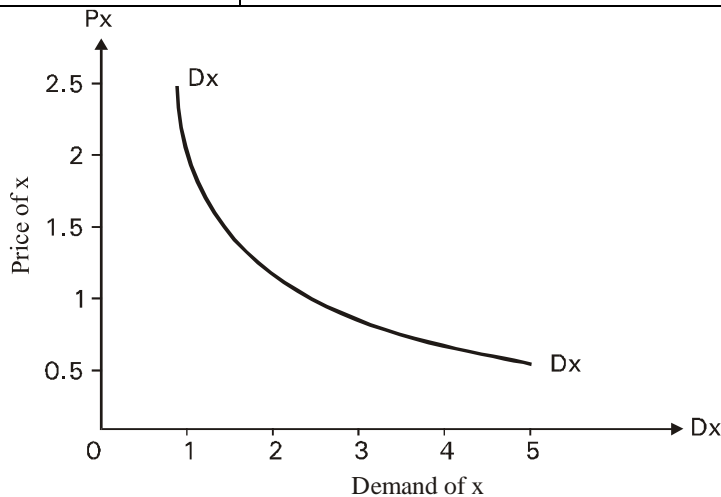
Demand Curve

The Demand curve is negatively sloped, indicating that the individual purchases more of the commodity per time period at lower prices (other factors being constant).

The inverse relationship between the price of the commodity and the quantity demanded per time period is referred to as the Law of Demand.

A fall in P_x leads to an increase in D_x (so that the slope is negative) because of the substitution effect and income effect.

The first reason for the validity of downward sloping demand curve is that the lower prices bring in new buyers. Secondary, when the price of a commodity declines, the real income or purchasing power of the consumers increases which induced them to buy of this commodity. This is known as the income effect. Thirdly, when the price of a commodity falls while prices of all other goods remain constant, the commodity becomes relatively cheaper. This induces the consumers to substitute this commodity in place of other commodities which have been relatively dearer. This is known as substitution effect.

2.2 Summary

- In economics demand has a specific meaning. Demand for any commodity implies: desire to acquire it, willingness to pay for it, ability to pay for it and at a particular time.

- Demand depends on not only the price of a commodity, but also income, price of related goods – both substitutes and complements – taste of consumer, price expectation and all other factors.

- According to Law of Demand, there is an inverse relationship between the price of a commodity and the quantity demanded (other things remaining equal)

2.3 Keywords

Demand Function: A comprehensive formulation which specifies the factors that influence the demand for the product

Demand: The quantity of the commodity which an individual is willing to purchase per unit of price at a particular time.

Derived Demand: Goods whose demand is tied with the demand for some other goods

Direct Demand: Goods whose demand is not tied with the demand for some other goods

2.4 Self Assessment

1. State true or false for the following statements:

    (a) Demand of petrol is direct demand.

    (b) Demand is just a want or desire to purchase a product or a service.

    (c) Demand for labour is always a derived demand.

    (d) When price of tea goes up, then the demand for coffee is likely to go up as well.

    (e) When the price of X brand of soap went up, people began buying Z brand of soap. This happened due to the substitution effect.

    (f) When the price of bread goes up, the demand for butter usually goes up.

2. Fill in the blanks:

    (a) Usually, income of the individuals and demand have a ……………. relationship.

    (b) Demand for machinery in industries is a ………………demand.

    (c) Shoes and socks are ………………goods.

    (d) The most basic source of demand is……………of the individuals.

    (e) The shape of the demand curve is………………sloping.

2.5 Review Questions

1. Define 'demand'. Discuss different types of demand.

2. Explain the law of demand. Discuss some practical applications of law of demand.

3. Distinguish between direct and derived demand with help of suitable examples.

4. Examine the impact of increase in prices of a good on its:

   (a)   Substitutes

   (b)   Complements

5. "Demand for everything in this world is a derived demand." Discuss

6. It is generally believed that when fares of airlines go up, the demand for railway travel also goes up? Does this seem logical to you?

7. Explain the downward sloping shape of demand curve.

8. It was noticed that even though the price of salt went up, there was no fall in demand. Can you explain, why?

9. Explain the income effect and substitution effect with help of suitable examples.

10. Draw a demand curve based on following data- Number of units demanded of X: 35, 46, 67, 89, 90 and 120 and respective prices: 40, 45, 50, 55, 60 and ₹65. ₹   ₹

Answers: Self Assessment

1. (a) False   (b) False   (c) True   (d) True
    (e) True   (f) False

2. (a) Positive   (b) Derived   (c) Complementary (d) Need
                     (e) Downward