
UNIT 2 BASIC ECONOMIC CONCEPTS

Structure

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2.0 OBJECTIVES

After going through this unit you will be able to explain

- 1 the basic differences between two branches of economic theory: Micro and Macro
- 1 the concept of market and its functioning
- 1 demand function and supply function
- 1 the concepts of equilibrium and disequilibrium and their significance in economics,
- 1 the determination of the price of a good and its quantity traded by using demand-supply model.

2.1 INTRODUCTION

In this unit we will first spell out the distinction between micro and macroeconomics. Since in this block we will be concerned only with microeconomics, which deals only with markets, we start with the concept of market. Demand for and supply of a good form the basic tools of economic analysis when dealing with markets. If a good has market it also has a price attached to it. Hence, the next step will explain the concept of price. In market, transactions take place only at a price. The role of price in the market is to equate demand for and supply of a good so that an equilibrium can be attained. Hence in this unit the last concepts to be introduced are equilibrium and disequilibrium.

2.2 MICRO VS MACRO ECONOMICS

The words *Micro* and *Macro* have Greek origins Mikros and Makros. Mikros implies small and Makros large. Microeconomics is concerned with the most 'Elemental' economic units, like consumer, firm, input, market and industry. In other words, micro-economic theory analyses the behaviour of a consumer or a group of consumers; a firm, an industry, a market; a supplier of an input etc. The unit of analysis is small. In contrast to this, with macro-economic theory the unit of analysis is large. In fact, both micro and macroeconomics are two ways of looking at the same thing, the functioning

or the working of an economy. They are two starting points in analysing how an economy functions or operates. Micro-economic theory focuses attention on individual markets (like the grain market), consumers (say of wheat), firms, industries. It is an in-depth study of how these individual economic units or agents operate or function or make decisions, as well as how they interact with each other. Macro-economic theory, on the other hand, deals with broad aggregates like national income, national expenditure, aggregate consumption expenditure, aggregate investment expenditure, the level of employment, the general price level and so on. It analyses how the economy functions through the interactions of these broad aggregates; how these aggregative variables behave and how they are determined. The distinction between micro and macro is made in terms of the level of aggregation and disaggregation used in analysing the functioning of an economy. Microeconomics uses more disaggregative variables than macroeconomics. Together they form the two sides of the same coin. However, it must be noted that economic decisions are ultimately taken at the micro level, and the conjunction of all micro decisions have important ramifications at the macro level. For instance, when we add consumers' expenditures on all goods and services, we get the aggregate consumption expenditure for the economy as a whole, which is a macro concept. Similarly, the functioning of the economy at the macro level will have bearings for decision-making at the micro level. When income tax is raised, disposable income of households falls, firms will experience a decline in sales and as a result will cut back output. Hence, a macro level event will generate a micro manifestation.

Micro-economic theory will be basically concerned with relative prices of commodities and factors of production (inputs). Hence, we will not be incorrect if we call Micro-economic theory, a price theory. Following *Quirk* we can say, "micro-economic theory provides the framework within which the economist describes and analyses the behaviour patterns and inter-relationships of the elemental economic units like consumer, firms, industries, commodities and markets. The main objective of micro-economic theory is to explain and predict how production, exchange and distribution of goods and services respond to the incentive structure operating in a given society." (James Quirk, - **The Intermediate microeconomics**, 1st Edition).

Check Your Progress 1

1. Which of the following statement pertains to microeconomics?
 - (a) When inflation occurs, the Indian economy is able to export smaller volume of textiles.
 - (b) When supply of wheat goes up, its price falls.
 - (c) When there is strike in Mother Dairy the price of milk goes up.
 - (d) An increase in investment increases employment.

2.3 THE CONCEPT OF MARKET IN ECONOMICS

In ordinary language, by market we mean the place where goods and services are bought and sold. Remember the places like Sabzi Mandi at Azadpur and Okhla; Timber Market at Paharganj or Kotla; Grain Market at Khari Baoli; Cloth Market at Chandni Chowk, Car Bazar at Lajpat Nagar, Paper Market at Chawri Bazar and Furniture market at Kirti Nagar all situated in Delhi. However, the meaning of market in economics is different. By market an economist would mean a complex set of activities by which potential buyers are brought into contact with potential sellers in the process of purchase and sales of goods and services. When two or more individuals undertake exchange transactions, a market is established irrespective of time and place. The physical presence of buyers and sellers are not at all relevant in the economist's conception of market. Due to the development of modern mode of communication based on computer technology, physical presence is not required for

establishing a market. What is more relevant is that there must exist two groups of transactors who are willing to undertake exchange transactions.

The essential characteristic of a market is the confrontation between potential buyers and potential sellers, making bids and offers in the process of determining the terms at which exchange would take place. The emphasis is on the word Potential. Every one comes to the market with his or her notion of how much to buy or sell depending on the prevailing prices. If the prevailing price of a good is high, those who have made plans to buy at a lower price will be priced out of the market. Similarly, if price is low those sellers who planned to sell at higher prices will be eliminated from the market. Activities on a market would determine what the price will be, what quantities will be bought and sold, and who the buyers and sellers are. In a market-based economy, it is through the market that resources get allocated among competing ends.

Markets in economics vary from perfectly competitive, to monopoly, to imperfectly competitive, to monopolistically competitive, to oligopolistically competitive.

The existence of markets provides efficiency in the use of resources. In economies where markets do not exist, resources cannot be used efficiently. Markets provide information required for making optimal decisions. The kind of information provided by a market would pertain to the nature of goods traded, the prices prevailing, and who the transactors are. No other information is transmitted by the market. Also information transmitted by markets would be costless, though for many goods one has to spend money, time and efforts to acquire the relevant market information. Modern modes of tele-communication make information gathering, storing and processing much easier. This surely must have improved the quality of decision-making.

Markets can exist and function efficiently if and only if there exist ownership rights in commodities (property rights) which are well defined, transferable and are protected by the laws of the country. Ownership rights or property rights imply that the individual owning a commodity can take certain actions with respect to that commodity. Such rights include the right to allow access to the commodity on the part of any other individual(s), and also include the right to charge others for the use of the commodity or service as well as transferring the ownership of the commodity to someone else. As Quirk says, “What is produced, exchanged and consumed in a society are bundles of property rights that we call commodities. The pattern of economic activity within a society is closely linked to the structure of property rights of that society, because it is through the acquisition of property rights that self-interest is expressed and incentives operate.”

2.4 WHAT IS MEANT BY DEMAND?

In economics, by demand we mean effective demand and not absolute demand. The demand for a good by an individual consumer means individual's desire for the good backed by a capacity to pay. Human desires backed by purchasing power constitute demand. In other words, an individual's desire for a good to satisfy a particular want backed up by his/her willingness and ability to pay gives rise to demand for that good. If and only if individuals have means to pay that demand becomes effective in the market for goods. An individual's income measures his/her capacity to pay, purchasing power or means to pay for the goods desired.

Example: A beggar desires milk, but has no purchasing power. Hence a beggar's desire for milk does not constitute an effective demand for milk. As a result a beggar cannot participate in market activities. However, suppose this beggar becomes successful in getting a job, becomes a helper in a shop and for his work as helper gets paid for in money. The beggar who is now a helper earns an income, with which she can buy milk. The beggar's demand for milk, which earlier constituted only an absolute demand, has now become an effective demand. This particular beggar's demand for

milk now adds to the market demand for milk, which a potential supplier of milk has to take into account in deciding how much milk must be produced and supplied. Note that the person's demand will be effective demand even if she had not picked up a job and had paid for milk out of her collection of alms. Hence, for demand (for a good like milk) to exist two conditions must be fulfilled:

- (i) individuals must have a desire for that good, and
- (ii) their desire must be supported by income or purchasing power or means to pay.

Check Your Progress 2

1. Your monthly income from salary is Rs. 3000. You desire to travel by taxi to and fro from office every day. Does your desire constitute demand for taxi?
2. You are fond of tea. Analyse what happens when price of coffee rises; your income goes up and suddenly some guests come to stay with you?

2.5 THE DEMAND FUNCTION FOR A GOOD

In Section 2.4 we have considered various influences on the demand for a good. Here, it must be pointed out that there could be many other influences working on the demand for a good, which we have not considered. However, the above four factors are the major influences on the demand. In any particular situation if we keep factors other than own price as constant, we can derive a demand schedule, a demand function, and a demand curve. A demand schedule lists the various quantities of a good, which a potential consumer buys from the market at different prices, observed at a given moment of time. Its tabular representation would be as follows:

Price of Milk (In Rs. per litre)	20	15	105
Quantity Demanded (In liters)	1	1.5	36

A demand function for a good expresses a causal relationship between quantity demanded of the good and its own price. In other words, it is a functional relationship between demand and price. If the good is X (milk in our case), Q_x^d is quantity demand and P_x is the own price of good X then the general form of the demand function will be

$$Q_x^d = f(P_x)$$

What it says is that quantity demanded depends on price. Price is the *cause* and quantity demanded is the *effect*. Stated alternatively, price is the independent variable while quantity demanded is the dependent variable. In technical terms, independent variables are also called *exogenous variables* while dependent variables are called *endogenous variables*. The demand function which expresses the functional relationship between the quantity demanded of a good and its own price is based on *ceteris paribus* assumptions. That is, we only allow the own price of commodity to vary with demand with everything else held constant at their pre-assigned values. In other words, when we try to capture the relationship between quantity demanded of a good and its own price, we ignore all other influences on the demand for that good (like prices of substitute goods, complementary goods, the households income level, tastes and so on).

The graph of the demand function on a two dimensional Euclidean space with horizontal axis measuring the quantity demanded and vertical axis measuring the price, we get the demand curve for the good. Since the normal behaviour is one of an inverse

relationship between quantity demanded of a good and its own price, the demand curve for a good will be downward sloping. For convenience we can assume the demand curve to be a downward sloping straight line. This is illustrated in Fig. 2.1.

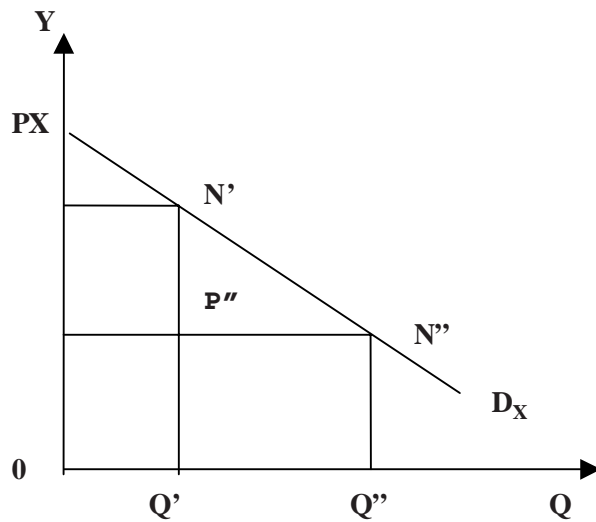


Fig. 2.1: We have shown price of milk in rupees on vertical axis and quantity in litres on the horizontal axis. The consumer buys OQ' quantity at OP' price. As the price falls to OP'', she is willing to buy OQ'' amount. N' and N'' show there are two situations on the demand curve DX.

In the figure the quantity demanded of good X (milk) is plotted on the horizontal axis (abscissa) and the price of good X on the vertical axis (ordinate). The quantity demanded is measured in physical units of the good. In case of milk, physical unit is litres. Price of the good is, however, expressed in monetary units (in rupees or paise). In case of milk, the price of milk would read as Rs. 8 per litre or Rs. 12 per litre etc. A downward sloping demand curve for good X would imply that when price is lowered, the quantity demanded would tend to increase. And when the price is raised, the quantity demand would tend to be reduced. In the diagram when price is OP¹ the consumers of good X operate at point N¹, demanding (purchasing or buying) OQ¹ quantity of good X. When price falls to OP¹¹, the consumers operate at point N¹¹ on the demand curve D_x, demanding OQ¹¹ quantity of X. A lowering of price induces a larger quantity of it being demanded. This is supposed to be a commonly observed aspect of consumer behaviour. As to the question why demand curve is downward sloping, we defer the explanation to Units No. 4 and 5. *A downward sloping demand curve reflects the law of demand. This law says that, other things remaining the same, a consumer (or, in general consumers) would tend to buy more when price falls and buy less when price rises.*

Here, it can be pointed out that when the demand curve for a good is a straight line, the corresponding demand function will have a linear equation of the type:

$$Q_x^d = a - bP_x$$

where 'a' is the quantity intercept and 'b' is the slope. The slope, b, expresses the rate at which quantity demanded changes (increases or decreases) when price changes (falls or rises). That is,

$$b = dQ / dP$$

When we plot the demand curve, we actually plot the inverse demand curve

$$P_x = \alpha - \beta Q_x$$

Where $\alpha = a/b$ is the price intercept and $\beta = 1/b$ is the slope of the inverse demand curve and equals dP/dQ .

Note: Here it must be pointed out that in economics when we plot diagrams the convention is to plot the independent variable on the vertical axis and the dependent variable on the horizontal axis. In mathematics we do just the opposite.

In its normal form $Q_x^d = a - bP_x$, the demand curve would indicate the maximum quantity demanded at any given price of the good whereas in its inverse form $P_x = \alpha - \beta Q_x$, it would indicate, for each given quantity demanded, the maximum price a consumer (or consumers) would be willing to pay rather than doing without that quantity. The demand curve (or its inverse form) always indicates the maximum boundary to consumers. No consumer will be willing to pay for OQ^1 quantity a price higher than $OP^1 (=N^1Q^1)$ in the above diagram. Also since price paid by buyers reflects the average revenue (AR) earned by sellers, the inverse demand curve is also known by the name AR curve. Note that the demand curve touches the price axis. It gives us the price at which quantity demanded falls to zero. Such a price is called the prohibitive price (OP).

Check Your Progress 3

1. For the following demand function determine what will be the quantity demanded when the price assumes the values Rs. 5, Rs.4, Rs. Rs.3, Rs.2, Rs.1.

$$Q = 40 - 0.5 P.$$

2. How do you interpret the following two functions?

(a) $Q = 100 - 2 P$

(b) $P = 50 - 0.5 Q$

2.6 WHAT IS MEANT BY SUPPLY

By supply of a good we mean a producer's desire to produce (manufacture) a good backed up by her capacity to produce as determined by technological knowledge and command over employable resources. A commodity (good) can be supplied if and only if it is produced. The concept of supply is, therefore, related to the concept of production.

2.7 THE SUPPLY FUNCTION OF A GOOD

How much of a good gets produced and supplied will depend on many factors. Some of these factors are the own price of the good, the prices of inputs used to produce the goods, the technology used etc. Of these factors the own price of the good is an important factor determining how much of it will be supplied. The supply function captures that relationship. The general form of supply function of a good is the following:

$$Q_x^s = F(P_x)$$

Where X is the good. Recall that a function expresses a cause-effect relationship. The above relationship indicates that the quantity supplied varies directly with the price of the good under consideration and the relationship is one of a positive correlation between quantity supplied and own price. As price of good X rises the quantity supplied tends to increase. And when own price of good X decreases the quantity supplied tends to decline. This is supposed to be a normal behaviour on the part of suppliers. Of course, such a relationship is based on *ceteris paribus* assumption. All other influences like technology, prices of inputs and so on are held constant.

A supply schedule of good X indicates the quantities that will be supplied by potential sellers at its prevailing prices. In other words, it lists the various amounts of a good that potential suppliers will put up for sale at the alternate prices prevailing. A supply schedule will look something like the following:

Supply Schedule

Price of Good X (In Rs.)	Quantity of Good X Supplied (In the physical unit of the good)
9	100
8	80
7	75
6	65
5	45

When the above schedule is plotted on a two dimensional graph with price of good X measured on the *ordinate* and the quantity supplied on the *abscissa*, we get the supply curve of good X which will be upward sloping. This is shown below (Fig. 2.2).

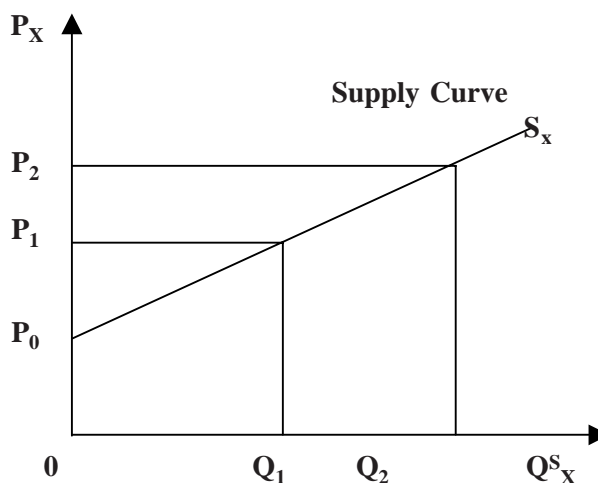


Fig. 2.2 At OP_0 price, the producer does not supply anything. As price rises to OP_1 , she will be ready to supply OQ_1 . A further rise in price to OP_2 makes the producers willing to supply OQ_2 quantity.

The supply curve can be linear (straight line) or non-linear (curve). In the diagram below we have depicted both the cases. An upward sloping supply curve implies that as price rises the quantity supplied tends to increase. A higher price induces a larger supply.

The supply curve or a market supply curve is an aggregate of individual supply curves. Since the supply curve is the graph of supply function, it is also based on *ceteris paribus* assumption, and considers only the relationship between quantity supplied of a good and own price.

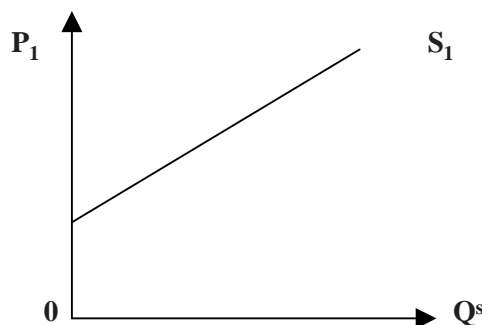


Fig. 2.3a

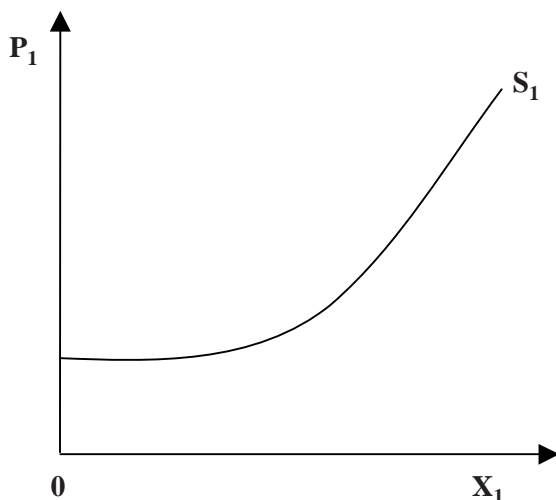


Fig.2.3b

Note that in defining the concepts of demand and supply the stress is on the word potential. Each buyer or seller comes to the market with her notion of how much to buy or sell. If some buyers have made plans to buy at a given price will leave the market if price of the good rises. They will be priced out of the market. Similarly, if market price is low, those sellers who had made plans to sell at a higher price, will be priced out of the market. Hence, the emphasis is on the word potential in the definitions of demand and supply.

Like the demand curve, the supply curve also indicates the planned (expected) behaviour of sellers (or, producers-cum- sellers). At any given price it would indicate the maximum quantity produced and supplied. To put it in a different way, if a given quantity of a good is to be produced and supplied, the supply curve would indicate the minimum price of the good expected by each seller (in order to cover the cost of production and to earn a normal rate of profit).

In the Fig. 2.4, if OQ_1 quantity is to be forthcoming in the market, OP_1 price must prevail. However, if the price is $E_1Q_1 = OP_2$ then an output OQ_1 will not be produced and supplied. At such a price if OQ_1 is produced and supplied the producer-cum-supplier will suffer losses.

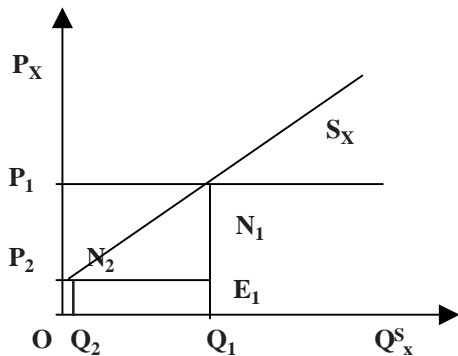


Fig. 2.4 Producer expects a minimum price OP_1 for quantity OQ_1 . At price OP_2 , if she is asked to supply OQ_1 , she should refuse as it involves suffering a loss equal to triangular area $N_1 E_1 N_2$

Check Your Progress 4

1. For the following supply function determine what will be the quantity supplied when price assumes values 1, 2, 3, 4, 5, 6.

$$Q = -4 + 4P$$

2. How do you interpret the following two functions?

- (a) $Q = -20 + 4P$

- (b) $P = 5 + 0.25 Q$

2.8 MEANING OF PRICE IN ECONOMICS

In economics we always talk of prices, the price of wheat, the price of milk, the price of a car, prices of vegetables, input prices like wages, interest and rent. If a commodity has a market it will have a price associated with it. A price can be expressed in one of the following two ways. Firstly, we have price expressed in terms of a *numeraire commodity* (NC). Suppose, we choose gold as the *numeraire* commodity, then the price of a commodity, say, wheat, is the number of units of gold (of a particular specification), which would exchange for one unit of the commodity (that is, one kilogram of wheat). It is to be noted that the price of gold in terms of itself always equals one. In theory any commodity can be chosen as a *numeraire*. However, in practice the choice would depend on a number of attributes, which a *numeraire* commodity must possess. They are: the commodity chosen must be finely divisible, must not be bulky, must not be subject to physical decay, and must be easily transportable. It must be noted that the *numeraire* commodity is not intended to perform the function of money as a medium of exchange, but supposed to function only as a unit of account, in terms of which all values are expressed and measured. Expressed in terms of a *numeraire*, prices are commodity rates of exchange—the rate at which each commodity exchanges per unit of the numeraire good. Prices are ratio of the form X_g/X_p , where X_g is the units of gold (the NC) and X_i is the units of commodity i . As rates of exchange, prices are measured in the physical units of the commodities.

The second way in which prices can be expressed is in terms of an *Abstract Unit* of account used in a bookkeeping sense. It has no physical substance attached to it (unlike the first case). When a unit of commodity is sold, certain number of units of account is credited to one's account, while if a unit of commodity is bought, the same number of units of account is debited from one's account. *The price of the commodity is then the number of units of account credited or debited per unit of the commodity. In the Indian context Rupee is such an abstract unit of account. Price of a commodity will then be the number of Rupees per physical unit of the commodity.* "Notes and coins have no intrinsic worth, but are simply tokens representing number of units of account which are passed around directly and form part of the credit side of one's account. As between the two ways of expressing prices the second way represents the way prices are expressed in reality" (Gravelle and Rees, *Micro Economic Theory*, 2nd Edition)

Check Your Progress 5

1. If four kg. of wheat exchanges for one kg. of rice, which concepts of price we are referring to?
2. The price of a bicycle is Rs. 1000/-, which concept of price we are referring to?

2.9 MEANING OF EQUILIBRIUM OR DISEQUILIBRIUM

As with many other concepts in economics, the concept of equilibrium is also borrowed from physics, to be precise, mechanics. Equilibrium is described to be a situation

where a body subjected to actions of opposing forces attains a position of rest. That is, the state when opposing forces are in balance. In the same way, *in economics equilibrium is said to exist in a market where the forces operating from the side of potential buyers exactly offsets the forces operating from the side of potential sellers*. This means that when quantity supplied balances (matches) the quantity demanded, the market for that commodity reaches equilibrium. Once again, *for equilibrium to exist, opposing forces must be in balance*. The price at which demand equals supply is the equilibrium price and the corresponding quantity traded, the equilibrium quantity for that price. Such an equilibrium is a static concept, describes the position of the market when it is at rest. So long as the factors on which demand and supply depend do not change, equilibrium will be maintained period after period. This is one definition of *equilibrium*, describing it as a position of rest.

There is another concept of equilibrium, which is used in neo-classical economics, that is, equilibrium defined as a chosen position of individuals (the participants in a market transactions). As Gravelle & Rees put it, "*Equilibrium as being that state in which economic agents find themselves in those positions in which they wish to be*" (Gravelle & Rees). According to this definition, a market is in equilibrium when at a given price all economic agents can buy what they had planned to buy and all sellers can sell what they had planned to sell and the chosen position of buyers and sellers coincide.

It is quite possible that the two ways of defining equilibrium may or may not coincide. In the demand-supply model of price determination under perfect competition that we will be developing later, the point where demand schedule and supply schedule intersects is the point where both the definitions of equilibrium will coincide. In static micro theory we will be concerned with equilibrium configurations of markets.

When the market is not in equilibrium, it must be in disequilibrium, which reflects a situation in which demand and supply forces are not in balance. What the buyers plan to buy do not match what the sellers plan to sell. So the market is not cleared. Either unsold stocks of inventories remain or a shortage develops which requires interventions by authorities with previously accumulated stocks. When the market is in a disequilibrium situation, the market adjustment process or corrective process must be brought into the picture, to analyse how the situation can be corrected. Such an analysis must be dynamic in nature, i.e., it involves movement of the market through time. When the market is not in equilibrium the role of economic agents and decision-makers become very important and relevant. In actual situation, equilibrium is never attained. As the market tends towards equilibrium, disturbances occur due to dynamic changes always taking place in the economy, which prevents equilibrium being attained. Hence, disequilibrium analysis is more relevant. However, equilibrium analysis is simpler and easier to handle.

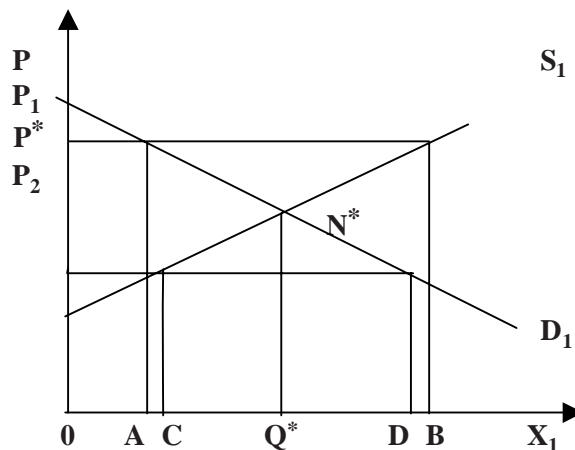


Fig. 2.5 Equilibrium price and quantity are OP^* and OQ^* respectively. At a higher price OP_1 , producers are ready to supply OB units while buyers demand only OA . Thus, excess supply equal to A , emerges. On the other hand, if price falls to OP_2 , buyers demand OD but sellers are willing to supply only OC . Hence, there emerges an excess demand in the market ($=CD$).

Check Your Progress 6

1. Consider the following demand and supply schedules

Price (in Rs.)	Quantity demanded (in kg.)	Quantity supplied (in kg.)
0	100	0
10	90	0
20	75	40
30	65	65
40	40	80
50	30	90
60	15	110

What is equilibrium price and quantity?

1.6 LET US SUM UP

We have started this unit with a distinction between microeconomics and macroeconomics. They represent two different ways of looking at the functioning of a market economy. Only the degree of aggregation or disaggregation is different. Microeconomics is a more disaggregated study of economics where individual economic agents and individual markets are the focus of attention. In Macroeconomics individual agents as well as individual market are aggregated into broad categories like consumption, investment, employment, and markets like goods market, money market and factor markets. Microeconomics is based on partial equilibrium analysis where each market is studied in isolation of the rest of the economy. Macroeconomics, on the other hand, is based on general equilibrium analysis where all markets are interrelated (see Unit-4).

Since economics, whether micro or macro, deals with markets, we have tried to explain what the concept of market means to an economist as different from that to a layman. Market does not refer to any physical area where buyer or seller congregate to bargain and haggle to obtain better terms for themselves. To a layman that is what market means. To an economist a market for good exists whenever two or more persons are willing to undertake exchange transactions irrespective of place and context. In this sense market can have no physical boundaries. This is made possible by the development and use of modern technology in transport and communication.

In markets, transactions are made by potential buyers and sellers. As a result the buyers demand function and the sellers supply function constitute two market forces to determine the equilibrium market price and the equilibrium market quantity traded (bought and sold). We have also defined the concept of price, which is always expressed in items of a unit of account whether real or abstract. In the Indian context price of a good is expressed in terms of Rupees. The number of rupees given up to acquire a unit of a good is defined as a price of a good.

In economics, equilibrium price is determined whenever quantity demanded of a good equals quantity supplied. At the equilibrium price the market is cleared in the sense that whatever buyers wish to buy matches whatever sellers wish to sell. Given that market demand curve for a good is downward sloping and market supply curve of the good is upward sloping, at any other price the market for the good will be in

disequilibrium. At such a price either demand exceeds supply or the supply exceeds demand. Since demand and supply do not balance when the market is in disequilibrium, an excess demand pressure or an excess supply pressure will develop which will move the market price towards the equilibrium price. This happens only when demand and supply curves are normally shaped. Otherwise, even if equilibrium exists, it may not be a stable equilibrium.

1.7 SOME KEY WORDS

- A Demand Curve** : Captures the relationship between the quantities of a good which consumers would be willing to purchase at alternative prices, *ceteris paribus*.
- Demand Function** : The demand function of a good expresses a relationship between the quantity demanded of a good and its own price *ceteris paribus*. It is derived from the utility function by applying an optimisation rule. It reflects the consumer's maximising behaviour.
- Demand** : Means human desires backed by willingness and ability to pay. It means effective demand and not absolute demand.
- Disequilibrium** : Defined as a situation in which opposing forces are not in balance, that is, when the forces of demand and of supply are not in balance.
- Equilibrium** : Defined as a situation in which opposing forces are in balance. A market attains equilibrium whenever quantity demanded equals quantity supplied. The forces of demand and supply are in balance.
- Macro** : A large unit of analysis.
- Market** : When two or more individuals undertake exchange transactions a market is established irrespective of time and place. It is not restricted to a particular area or a place. The development of modern communication technology has extended the spatial limits of a market.
- Micro** : A small unit of analysis.
- Price** : The rate at which each and every commodity exchanges per unit of the *numeraire* good (unit of account).
- Supply and Supply Function** : By supply we mean how much of a good will be produced and offered for sale at alternative prices given technology, input prices and resources. The supply curve captures such a relationship given *ceteris paribus* conditions.

2.12 SOME USEFUL BOOKS

Same as in Unit-1.

2.13 ANSWER OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- (a) Micro Economics

- (b) Micro Economics
- (c) Micro Economics
- (d) Macro Economics

Check Your Progress 2

1. With a monthly salary of Rs. 3000 you cannot afford to travel in Taxies. Your desire for Taxi ride does not constitute effective demand.
2. The demand curve for tea *shifts* upward to the right. In other words, at the same price you tend to buy more. This phenomenon is known as *increase in demand*.

Check Your Progress 3

1.

Price (in Rs.)	Quantity demanded $Q = 40 - 0.5P$. (in physical unit like Kg.)
5	37.5
4	38.0
3	38.5
2	39.0
1	39.5
0	40.0

2. (a) At any given price this equation indicates the quantity demanded. Hence, it is called the demand equation (function).
- (b) This would indicate for any given quantity demanded the maximum price the buyers would be willing to pay rather than doing without the units. Hence, the equation would indicate the inverse demand curve.

Check Your Progress 4

1.

Price (in Rs.)	Quantity Supplied $Q = -4 + 4P$ (in physical units like kg.)
1	0
2	4
3	8
4	12
5	18
6	20

2. (a) This equation would indicate at any given price the quantity supplied by the sellers. Hence, it constitutes the supply curve.
- (b) This is the inverse supply curve. It would indicate the minimum price at which each unit of the good will be supplied in the market, (for instance to cover the cost of production).

Check Your Progress 5

1. Price as an exchange ratio. This is expressed in terms of a unit of account. (Wheat is the unit of account)
2. It is the money price of the good. It is expressed in terms of an abstract unit of account called Rupee.

Check Your Progress 6

1. Equilibrium Price is Rs. 30; the equilibrium quantity demanded and supplied is 65 kg.