



# *Micro Economics Notes PDF*

*On*

*Market Equilibrium*

*(Class - 11)*

**INTRODUCTION**

This chapter helps to determine the market equilibrium, to define equilibrium price and equilibrium quantity and states how equilibrium changes due to increase and decrease in demand and supply.

**DETERMINATION OF MARKET EQUILIBRIUM UNDER PERFECTLY COMPETITIVE MARKET**

- 1. Market equilibrium:** It refers to that point which has come to be established under a given condition of demand and supply and has a tendency to stick to that level, i.e. where Demand = Supply.
- If due to some disturbance we divert from our position the economic forces will work in such a manner that it could be driven back to its original position, i.e., where Demand = Supply. In short it is the position of rest.
- 3. It can be explained with the help of the schedule and diagram:**

(a)

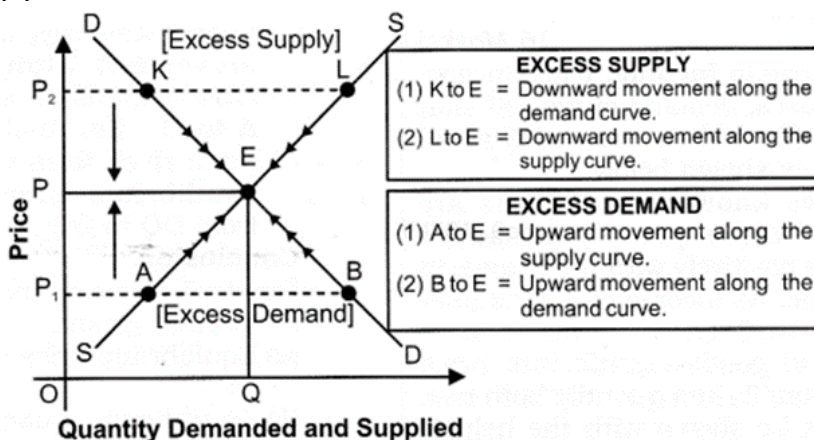
Price (₹)	Demand (Units)	Supply (Units)	Surplus (+) or Shortage(-)	Resulting Tendency
1	5	1	(-) 4	Expansion
2	4	2	(-) 2	Expansion
<b>3</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>Market Equilibrium</b>
4	2	4	(+) 2	Contraction
5	1	5	(+) 4	Contraction

(i) In the given schedule market equilibrium is determined at Price Rs. 3 where Market demand is equal to Market Supply.

(ii) At price 1 and 2, there is excess demand, which leads to rise in price, resulting in an expansion in supply.

(iii) Similarly, at prices 4 and 5, there is excess supply, which leads to fall in price, resulting in a Contraction in supply.

(b)



(i) In the given diagram, price is measured on the vertical axis, whereas quantity: demanded and supply is measured on the horizontal axis.

(ii) Suppose that initially the price in the market is  $P_1$ . At this price, the consumer demands  $P_1B$  and the producer supplies  $P_1A$ , i.e. consumers want more than what the producer is willing to supply. There is excess demand equal to  $AB$ . So, price cannot stay on  $P_1$  as excess demand will create competition among the buyers and push the price up till we reach equilibrium.

Due to the rise in price from  $P_1$  to  $P_2$  there is upward movement along the supply curve (expansion in supply) from  $A$  to  $E$  and upward movement along the demand curve (contraction in demand) from  $B$  to  $E$ .

(iii) Similarly, at price supplied  $P_2L$ . There is excess supply, equal to  $KL$ , which will create competition among the sellers and lower the price. The price will keep falling as long as there is an excess supply.

Due to fall in price from  $P_2$  to  $P$  there is downward movement along the supply curve (contraction in supply) from  $L$  to  $E$  and downward movement along the demand curve (expansion in demand) from  $K$  to  $E$ .

(iv) The situation of zero excess demand and zero excess supply defines market equilibrium ( $E$ ). Alternatively, it is defined by the equality between quantity demanded and quantity supplied. The price  $P$  is called equilibrium price and quantity  $Q$  is called equilibrium quantity.

**Equilibrium Price:** The equilibrium price is the price at which the amount demanded and supplied are equal. A condition of no change is termed equilibrium. So unmistakably, at the equilibrium price, both purchaser and vendor are in the situation of no change. Hypothetically, at this price, the amount of products demanded by purchasers is equivalent to the sum provided by the vendors. As a result, supply and demand are in sync with the equilibrium price. So, this can be considered as an example of equilibrium price.

**Equilibrium Quantity:** The term equilibrium quantity alludes to the number of goods provided in the marketplace when the amount provided by vendors precisely coordinates with the amount demanded by purchasers. It is an idea inside the branch of knowledge of market equilibrium or market balance and is identified with the idea of equilibrium price. In other terms, the equilibrium quantity is the quantity demanded and supplied at an equilibrium price.

**Excess Demand:** When the amount wanted exceeds the quantity supplied at the current price level, the market is said to be in excess demand. Excess demand arises at a lower price than equilibrium. Because prices would fall, it would operate as a lure for purchasers to come to markets, resulting in competition among them.

$$Y^d > Y^s$$

Here,  $Y^d$  = Market Demand and  $Y^s$  = Market Supply.

**Excess Supply:** Excess supply is a market condition in which the quantity supplied for a commodity is greater than the demand at the current market price. It happens at a higher price than the equilibrium price. Since the price will be higher than the equilibrium price, sellers will see this as an opportunity to increase their profits and will increase supply.

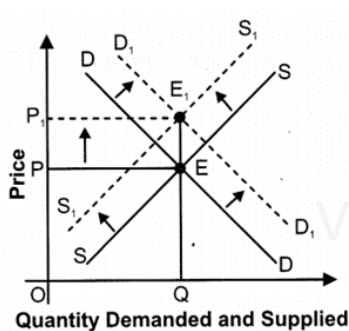
$$Y^s > Y^d$$

Here,  $Y^s$  = Market Supply and  $Y^d$  = Market Demand.

### SHIFT IN DEMAND AND SUPPLY IN OPPOSITE DIRECTION

**Case I: When demand increases and supply decreases at the same rate:**

1. When demand increases and supply decreases but at the same rate, then equilibrium price rises and equilibrium quantity remains constant as shown below:



#### **You Must Know**

When demand increases and supply decreases but at the same rate, then

1. Equilibrium price rises.
2. Equilibrium quantity remains constant.

#### **Logic**

1. Equilibrium price: (Demand 5% ↑) → (Supply 5% ↓). So, there is excess demand, which will increase the price.

2. Equilibrium quantity: As we know change in equilibrium quantity.

$$(\Delta Q) = \text{change in demand} - \text{change in supply} \\ = + 5\% - 5\% = 0$$

So,  $\Delta Q = 0$ , which means equilibrium quantity remains constant.

2. We assume that initial price is OP and equilibrium quantity is OQ as shown above:

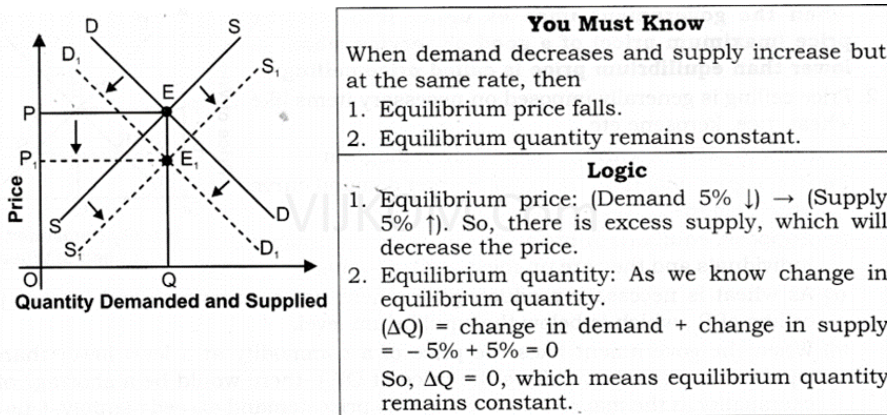
(a) In the above diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis.

(b) But when, “demand increase and supply decreases but at the same rate”, then:

- Equilibrium price rises from OP to  $OP_1$  and
- Equilibrium quantity remains constant at OQ.

**Case II: When demand decreases and supply increases at the same rate:**

1. When demand decrease and supply increases but at the same rate, then equilibrium price falls and equilibrium quantity remains constant as shown below:



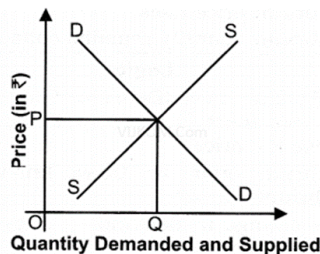
2. We assume that initial price is OP and equilibrium quantity is OQ as shown above:

(a) In the above diagram price is measured on vertical axis and quantity demanded and supplied are measured on horizontal axis.

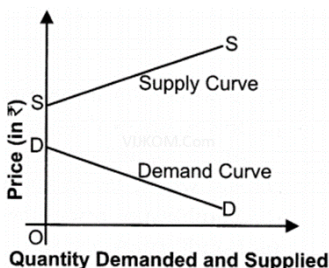
(b) But when, “demand decreases and supply increases but at the same rate”, then:

- Equilibrium price falls from OP to  $OP_1$  and
- Equilibrium quantity remains constant at OQ.

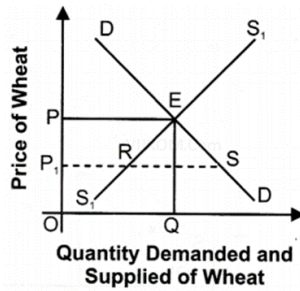
**Viable Industry:** These industries are known as viable industries since their equilibrium can be identified. Manufacturing is one example of a viable industry.



**Non-viable Industry:** The demand and supply curves of a non-viable industry do not intersect at any positive quantity. It's an industry where the costs are too high to achieve any beneficial results.



**Price Ceiling:** The practice of fixing the price of particular required products at a lower level so that they might be made available to the poor is known as setting a price ceiling. The Indian government sets a price ceiling on basic necessities that should be available to the poor. Rice, wheat, sugar, kerosene, and lentils are just a few examples.



**Price Floor (Minimum Price Ceiling):** When the government imposes a lower limit on the price (minimum price) that may be charged for a good or service which is higher than equilibrium price is called price floor. Price Floor is generally imposed on agricultural price support programmes and the minimum wage legislation.

**Price Determination in Perfect Market Competition:** Price is determined by market demand and supply in a perfectly competitive market. The aggregate of all individual market requests is known as market demand. The aggregate of all individual supply schedules in the market is also known as market supply. The cost in a totally competitive market is controlled by the crossing point of market supply and market demand.

Graphical representation of price determination in perfect competitive market:

The price is decided at the point where the market demand curve intersects the market supply curve, as shown in the diagram above. As seen in the diagram, every position above the equilibrium price provides excess supply, whereas any point below the equilibrium price creates excess demand.

**Wage Determination in Perfect Competitive Labour Market:** The wage rate is determined by the equilibrium of labour demand and supply. The marginal product of labour is a key factor in determining labour demand. The wage rate is equal to the marginal revenue product of labour, which is determined by the demand for and supply of labour. As a result, in a perfect labour market, a firm will employ the amount of labour at which the wage rate equals the MRP of labour.

#### Effects of Income on Price and Quantity Equilibrium:

- If the number of businesses in the market remains constant, an increase in consumer income leads to an increase in the equilibrium price. With an increase in their income, consumers are more inclined to raise their demand. When demand rises, the equilibrium price rises as well.
- If the number of consumers remains constant, a fall in consumer income results in a decrease in the equilibrium price. In the market, firms are constant. As a result of their lower income, consumers are more inclined to reduce their demand. Due to the availability of extra supply in the market, a drop in demand induces a drop in the equilibrium price.

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