

Supply

Stock refers to total quantity of a particular commodity that is available with the firm at a particular point of time.

Supply refers to the quantity of a commodity that a firm is willing and able to offer for sale, at each possible price during a given period of time. In other words, supply is that part of stock which is actually brought into the market for sale. Stock can never be less than supply.

For example, a seller has a stock of 50 tonnes of sugar in the godown. If the seller is willing to sell 30 tonnes at a price of Rs. 37 per kg, then supply of 30 tonnes is a part of total stock of 50 tonnes.

Market supply refers to the quantity of a commodity that all firms are willing and able to offer for sale at each possible price during a given period of time.

Factors affecting personal (individual) supply:

(a) Price of the commodity:

- (i) Positive relationship exists between price of the commodity and supply of that commodity.
- (ii) It means, with the rise in price of the commodity, the supply of that commodity also rises and vice-versa.

(b) Price of the factors of production:

- (i) This also influences the supply since price of factors (rent, wages, interest, profit) constitutes the cost of production of a commodity.
- (ii) An increase in the price of a factor of production may lead to fall in production of a commodity shifting the supply curve to the left.
- (iii) As against it, a producer may supply more of a commodity at a given price if the prices of factors fall shifting the supply curve to the right.

(c) State of technology:

- (i) When there is technological progress in the firm, then cost of production will decrease, which leads to increase in the profit margin of the firm and thereby shifts the supply curve rightward.
- (ii) Supply of those goods which are being produced with old and inferior technology causing increase in cost of production will decrease the total output and shift the supply curve to the left.

(d) Unit tax:

- (a) A unit tax is a tax that the government imposes per unit sale of output.
- (b) For example, suppose that the unit tax imposed by the government is 3. Then, if the firm produces and sells 20 units of the goods, the total tax that the firm must pay to the government is $20 * 3 = 60$.
- (iii) So, if the unit tax increases, the firm's cost of production increases which will shift the supply curve leftward. Similarly, if the unit tax decreases, the firm's cost of production decreases, which will shift the supply curve rightward.

(e) Price of other goods:

- (i) Suppose a firm produces more than one product with its given resources.
- (ii) An increase in the price of other goods induces the firm to produce more of other goods to earn more profit and less of goods whose prices remained unchanged.

(f) Objective of the firm:

- (i) Sometimes a firm may be induced to increase supply of a commodity not because it is more profitable, but because its supply is a source of status and prestige in the market.
- (ii) Similarly, a firm may increase production just to achieve the goal of maximum sale or maximum employment.

5. Factors affecting Market supply:

- (a) Price of the commodity
- (b) Price of the factors of production
- (c) State of technology
- (d) Unit tax
- (e) Price of other goods
- (f) Objective of the firm

Number of firms in the market:

- (i) When the number of firms in the industry increases, market supply also increases due to large number of producers producing that commodity.
- (ii) However, market supply will decrease, if some of the firms start leaving the industry due to losses.

(h) Future Expectation regarding price:

- (i) If sellers expect a rise in price in near future, current market supply will decrease in order to raise the supply in future at higher prices.
- (ii) However, if the sellers fear that the prices will fall in the future, they will increase the present supply to avoid losses in future.
- (i) Means of transportation and communication: Proper infrastructural development, like improvement in the means of transportation and communication, helps in maintaining adequate supply of the commodity.

6. Supply function shows the relationship between quantity supplied for a particular commodity and the factor influencing it.

7. Individual supply function refers to the functional relationship between supply and factors affecting the supply of a commodity.

It is expressed as, $S_x = f(P_x, P_0, P_f, S_t, T, O)$ Where, S_x = Supply of the given commodity x.

P_x = Price of the given commodity x.

P_0 = Price of other goods.

P_f = Prices of factors of production.

S_t = State of technology.

T = Taxation policy.

O = Objective of the firm.

8. (a) Market supply function refers to the functional relationship between market supply and factors affecting the market supply of a commodity.

(b) As we know, market supply is affected by all the factors affecting the individual supply.

(c) In addition, it is also affected by some other factors like number of firms, future expectations regarding price and means of transportation and communication.

Market supply function is expressed as, $S_x = f(P_x, P_0, P_f, S_t, T, O, N, F, M)$

Where, S_x = Market supply of given commodity x.

P_x = Price of the given commodity x.

P_0 = Price of other goods.

P_f = Prices of factors of production.

S_t = State of technology.

T = Taxation policy.

O = Objective of the firm.

N = Number of firms.

F = Future expectation regarding price of given commodity x.

M = Means of transportation and communication.

9. Supply schedule is a table showing various quantities of a commodity offered for sale corresponding to different possible prices of that commodity.

Supply schedule is of two types:

(a) Individual supply schedule

(b) Market supply schedule.

10. Individual supply schedule refers to the supply schedule of an individual firm in the market.

Table shows a hypothetical supply schedule for commodity 'x'.

Price (₹)	Quantity supplied of good x (units)
10	50
20	100
30	150
40	200
50	250

As seen in the schedule, quantity supplied of commodity x increases with the increase in price. The producer is willing to sell 50 units of x at a price of 10. When the price rises to 20, supply also rises to 100 units.

11. Market supply schedule refers to supply schedule of all the firms in the market producing a particular commodity.

It is obtained by adding all the individual supplies at each and every level of price.

Market supply is calculated as, $S_M = S_A + S_B + \dots$

Where S_M is the market supply and $S_A + S_B + \dots$ are the individual supply of supplier A, supplier B and so on.

Let us understand the derivation of market supply schedule with the help of Table (Assuming that there are only 2 producers A and B in the market).

Table: Market Supply Schedule

Price (₹) P_x	Individual Supply (units)		Market Supply (units) ($S_A + S_B$)
	S_A	S_B	
10	50	100	50 + 100 = 150
20	100	200	100 + 200 = 300
30	150	250	150 + 250 = 400
40	200	350	200 + 350 = 550
50	250	400	250 + 400 = 650

As seen in table market supply is obtained by adding the supplies of suppliers A and B at different prices. At price of Rs. 10 market supply is 150 units. When price rises to Rs. 20, market supply rises to 300 units. So, market supply schedule also shows the direct relationship between price and quantity supplied.