

Chapter - 2

Theory of Demand and Supply

Unit -3 Supply

- (i) Supply refers to what a firm offer for sale in the market, not necessarily to what they succeed in selling. What is offered may not get sold.
- (ii) Supply is a flow.

■ Determinants of Supply (ONE NSG PPP)

- (i) Price of the good:
- (ii) Prices of related goods:
- (iii) Prices of factors of production:
- (iv) State of technology:
- (v) Government Policy:
- (vi) Nature of competition and size of industry:
- (vii) Expectations:
- (viii) Number of sellers:

- **Other Factors:** The quantity supplied of a good also depends upon government's industrial and foreign policies, goals of the firm, infrastructural facilities, natural factors such as weather, floods, earthquake and man- made factors such as war, labour strikes, communal riots etc.

1. Price of own Good

$$P \uparrow \longrightarrow S \uparrow$$

$P \uparrow \longrightarrow S \downarrow$ Direct / positive relation

2. Price of Related Goods

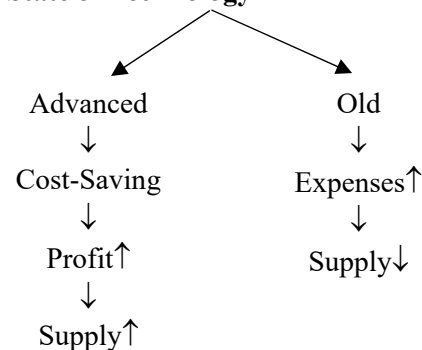
$$P_y \uparrow \longrightarrow S_x \downarrow$$

$$P_y \downarrow \longrightarrow S_x \uparrow$$

3. Price of factors of Production

$$\text{Price of input } \uparrow \longrightarrow \text{Production cost } \uparrow \longrightarrow \text{Profit Margin } \downarrow \longrightarrow \text{Supply } \downarrow$$

4. State of Technology



5. Number of Sellers

No. of Sellers $\uparrow \longrightarrow$ Supply \uparrow

6. Expectations:

An increase in the anticipated future price of a good or service reduces its supply today; and if sellers expect a fall in prices in future, more will be supplied now.

7. Nature of competition and size of industry:

Under competitive conditions, supply will be more than that under monopolized conditions.

8. Govt. Policy:

Tax $\uparrow \rightarrow S \downarrow$ Tax $\downarrow \rightarrow S \uparrow$

Subsidy $\uparrow \rightarrow S \uparrow$

Restriction \rightarrow Ban – Import Quota

■ **The Law of Supply**

$P \uparrow \rightarrow S \uparrow$

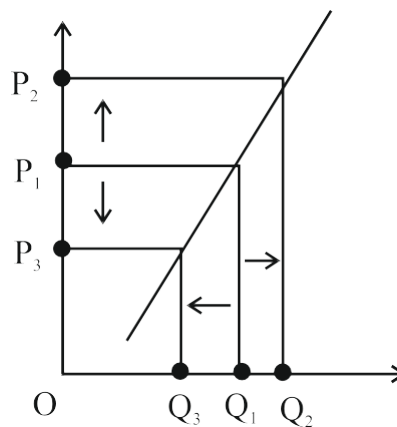
$P \downarrow \rightarrow S \downarrow$

This law states that, if other factors are same, (Ceteris Paribus) then there is direct relationship b/w Price of Qty. SS.

$P \uparrow \rightarrow S \uparrow \rightarrow$ offer for sale

$P \downarrow \rightarrow S \downarrow$

■ **Supply Curve**



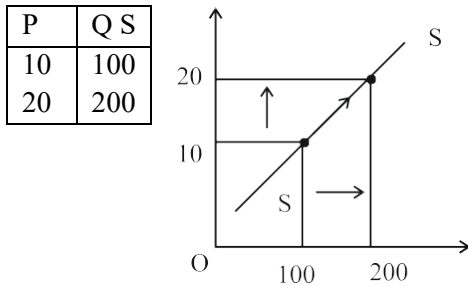
1. Upward sloping

2. Positivity sloped

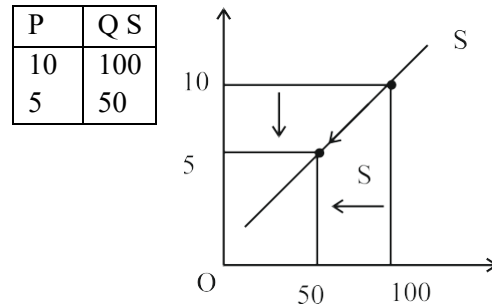
3. Slope = $\frac{\Delta P}{\Delta Q}$

Movement on SS-Curve OR Change in Qty. Supplied

$P \uparrow S \uparrow$
 Expansion of SS
 OR
 \uparrow In Qty. supplied
 OR
 Upward movement



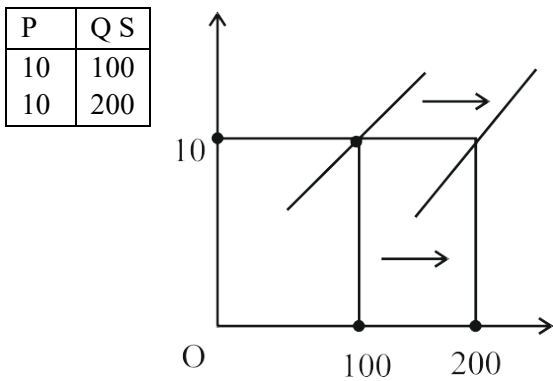
$P \downarrow S \downarrow$
 Contraction of SS \downarrow in Qty. Supplied
 OR
 Downward movement along SS-Curve



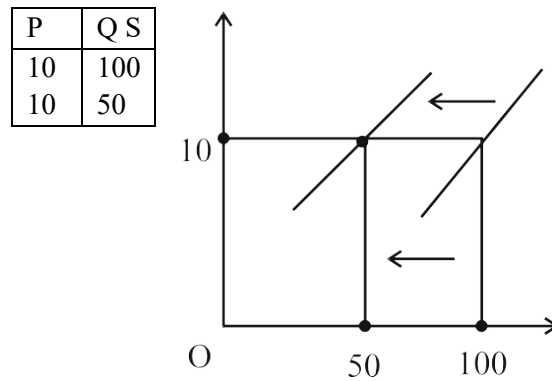
\uparrow in Qty. SS due to \uparrow in P is called Expansion of SS.
 \downarrow in Qty. SS due to \downarrow in Price is called contraction of SS.

Shift in SS-Curve OR Change in Supply

Increase in SS
 OR
 Rightward shift



Decrease in Supply
 OR
 Leftward shift



■ **Elasticity of Supply**

The elasticity of supply is defined as the responsiveness of the quantity supplied of a good to a change in its price. Elasticity of supply is measured by dividing the percentage change in quantity supplied of a good by the percentage change in its price i.e.,

$$E_s = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in Price}}$$

OR

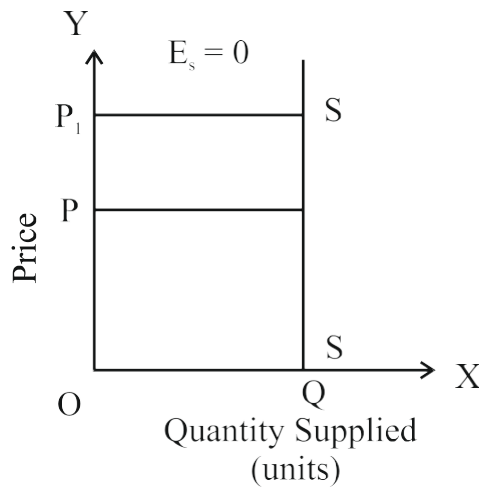
$$E_s = \frac{\frac{\text{Change in quantity supplied}}{\text{quantity supplied}}}{\frac{\text{Change in price}}{\text{Price}}}$$

OR

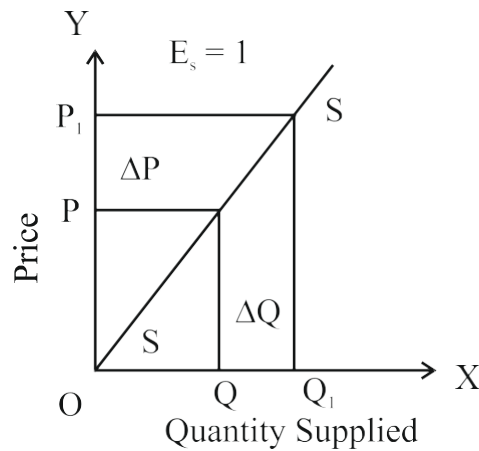
$$E_s = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

■ **Types of Supply Elasticity**

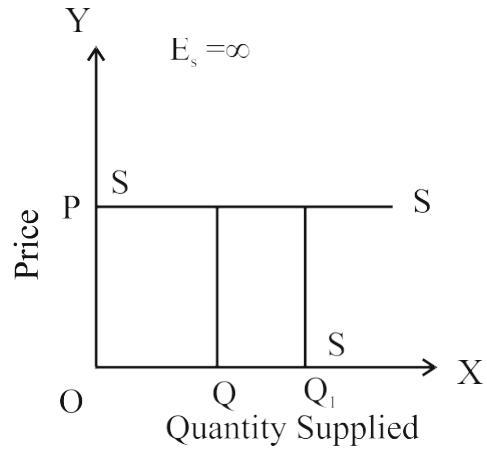
1. **Perfectly inelastic supply:**



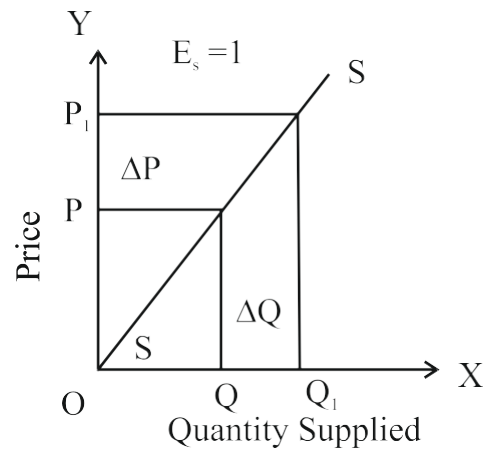
2. **Unit-elastic supply**



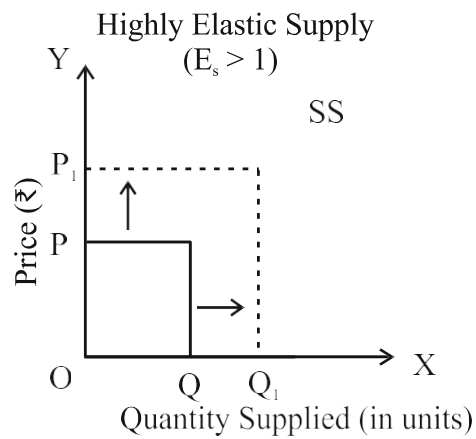
3. Perfectly elastic supply



4. Unit-elastic supply



5. More elastic supply:



- **Point-elasticity:** Just as in demand, point-elasticity can be measured with the help of the following formula through Derivative method :

$$E_s = \frac{dq}{dp} \times \frac{p}{q}$$

- **Arc-Elasticity:** Arc-elasticity i.e. elasticity of supply between two prices can be found out with the help of the following formula through Mid-point method:

$$E_S = \frac{q_1 - q_2}{q_1 + q_2} \div \frac{p_1 - p_2}{p_1 + p_2} \quad \text{Or} \quad E_S = \frac{q_1 - q_2}{q_1 + q_2} \times \frac{p_1 + p_2}{p_1 - p_2}$$

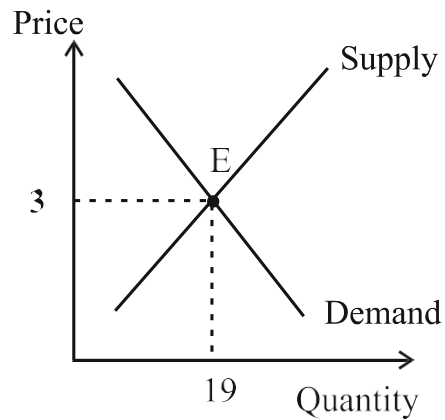
■ Determinants of Elasticity of Supply (

- If increase in production causes substantial increase in costs, producers will have less incentive to increase quantity supplied in response to increase in price and therefore, price elasticity of supply would be less.
Similarly, Products that involve more complex production processes or require relatively longer time to produce exhibit lower elasticity of supply.
- The longer the period of time, the more responsive the quantity supplied to changes in price and the greater the supply elasticity.
- Supply is more elastic when there is large number of producers and there is high degree of competition among them.
- Supply will be elastic if firms are not working to full capacity.
- If key raw materials and inputs are easily and cheaply available, then supply will be elastic
- If firms have adequate stocks of raw materials, components and finished products, they will be able to respond with higher supply as price rises.
- The ease and cost of factor substitution influence price elasticity of supply. Commonly available and easily substituted factors allow for quick production response to price changes.
- If both capital and labour are occupationally mobile, then the elasticity of supply for a product is higher than if capital and labour cannot be easily switched.

■ Equilibrium Price

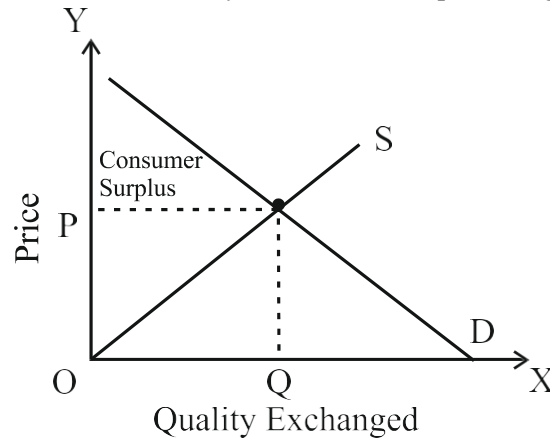
- The equilibrium price in a market is determined by the intersection between demand and supply. It is also called the market equilibrium.
- At this price, the amount that the buyers want to buy is equal to the amount that sellers want to sell.
- The competitive market equilibrium represents the 'unique' point at which both consumers and suppliers are satisfied with price and quantity.
- Equilibrium price is also called market clearing price.
- The determination of market price is the central theme of micro economic analysis. Hence, micro-economic theory is also called price theory

Price	Demand	Supply	Impact On Price
5	50	50	Downward
4	40	40	Downward
3	30	30	Equilibrium
2	20	20	Upward
1	10	10	Upward



■ **Market Equilibrium and Social Efficiency**

- Social efficiency represents the net gains to society from all exchanges that are made in a particular market. It consists of two components: consumer surplus and producer surplus.
- consumer surplus is a measure of consumer welfare whereas Producer surplus is the benefit derived by producers from the sale of a unit above and beyond their cost of producing that unit.



- Producer surplus can be calculated as the area above the supply curve and below the market price.
- Producer surplus shows the additional revenue or profit that producers gain when the market price exceeds their production costs.