

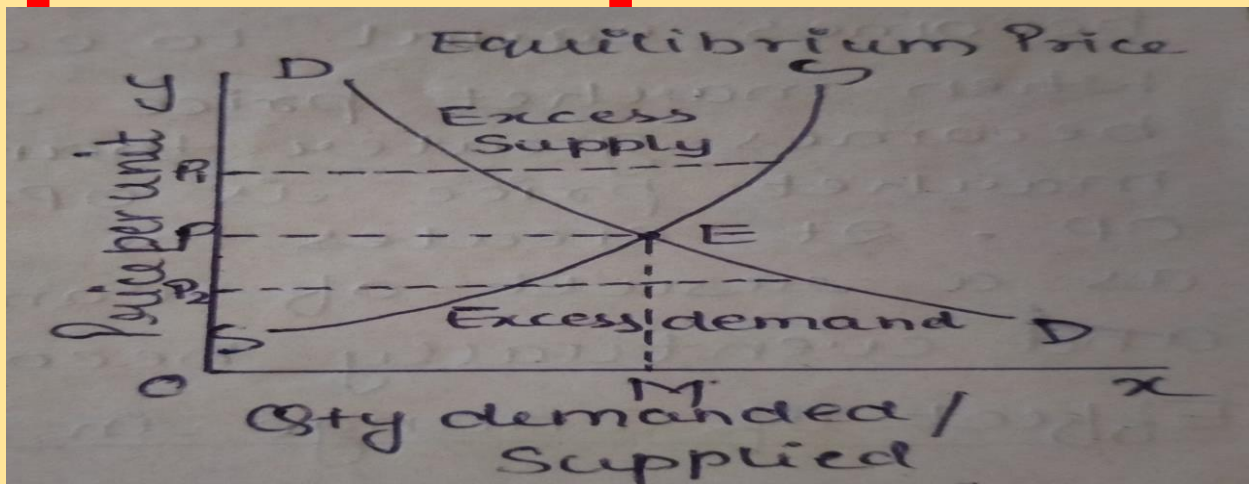


Chapter - 10
Market Equilibrium
and
Price Determination under
Perfect Competition

EQUILIBRIUM PRICE

Under Perfect Competition, generally, demand and supply play an equally important role in determining the price. The equilibrium price is determined by the market demand and market supply of the commodity. Equilibrium price is that price where demand is equal to the supply.

Price (Rs. per metre)	Qty demanded	Supply
250	19	28
240	20	26
230	22	22
220	25	17
210	30	10



In figure, quantity demanded and supplied is shown on the x-axis and price is shown on the Y-axis. DD is the demand curve showing total demand at different prices, and SS is the supply curve representing the quantity supplied at different prices. The demand and supply curve balance each other at point E. This point is called on Equilibrium point. Under Perfect Competition, the equilibrium price would, therefore, be Rs 230/- per metre and at this price OM would be sold in the market.

Excess demand: - Excess demand means that the market demand is greater than market supply at a given price. Here consumer demand is greater than what the producers are able and willingly to supply at a given price. In fig, at P_2 Price, quantity demanded is more than quantity supplied.

Excess Supply: - Excess Supply means that the market supply of the Commodity is greater than market demand at the given price. Here firm are unable to sell all they intend to, hence price tends to fall. This process continue till the price reaches to Rs 230. In fig, P_1 is to situation where market supply is greater than market demand.

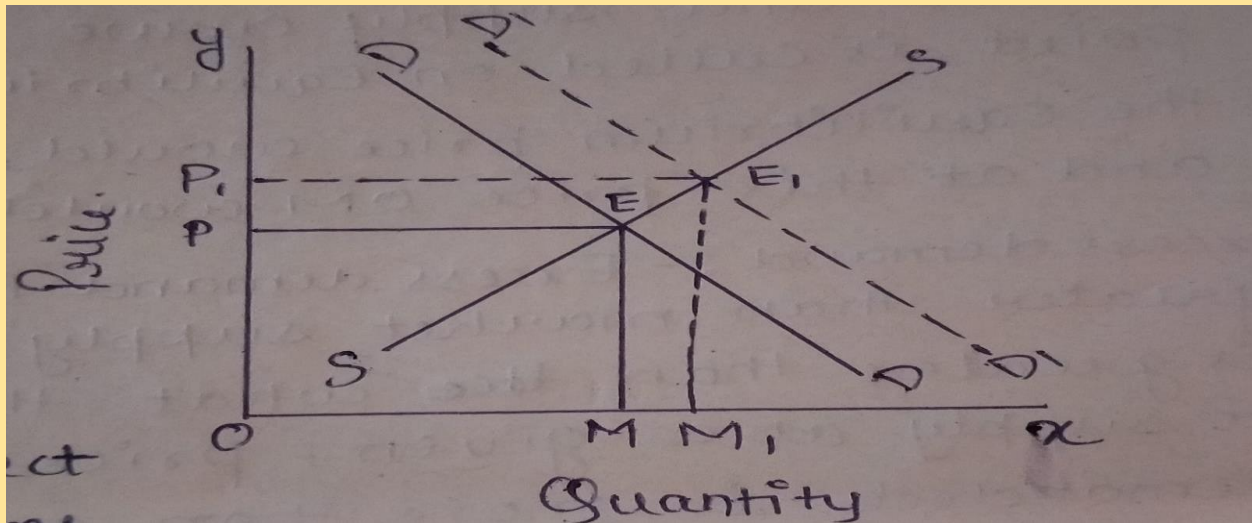
EFFECT OF CHANGE IN DEMAND AND SUPPLY

(A) Effect of change in demand when supply remain Constant

Assuming Supply curve remain Constant, change in demand affect both equilibrium price and equilibrium Quantity

(1) Effect of increase in demand

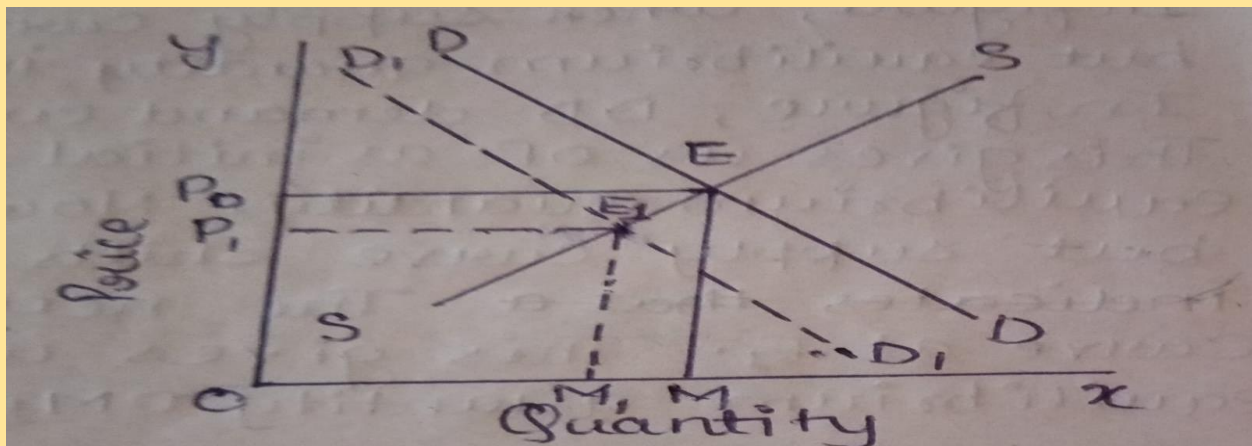
Under the condition of stable supply Curve, if there is increase in demand (i.e. a rightward shift of the demand Curve), both equilibrium price and equilibrium Quantity increases.



In fig, when demand curve shifts rightward and become DD to D_1D_1 . When new demand Curve D_1D_1 intersect with Supply curve SS at E_1 . This gives us higher equilibrium price OP_1 and higher equilibrium Quantity OM_1 .

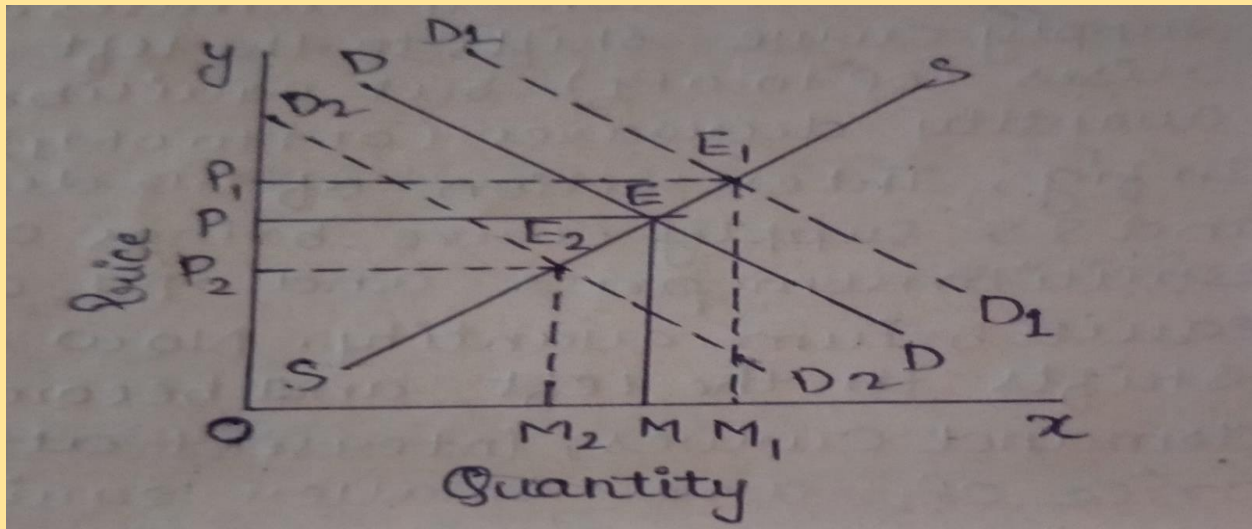
2. Effect of Decrease in demand

Under the condition of stable supply curve, if there is decrease in demand (i.e. a leftward shift of demand curve), both the equilibrium price and equilibrium quantity both decline. In figure, when demand curve shifts to the left (DD to D_1D_1) both the equilibrium Price (OP to OP_1) and equilibrium quantity (OM to OM_1) decrease.



Now the new D_1D_1 demand curve and SS Supply curve intersect at Point E_1 . This gives us lower equilibrium price OP_1 and smaller equilibrium quantity OM_1 .

The effect of shift in demand curve (leftward or rightward) have been shown in one single diagram.



In the beginning

Equilibrium price = OP

Equilibrium Quantity = OM

After rightward shift in demand Curve (At D_1D_1 Curve)

Equilibrium price = OP_1

Equilibrium Quantity: OM_1

After leftward shift in demand curve

(At $D_2 D_2$ Curve)

Equilibrium price = OP_2

Equilibrium Quantity = OM_2

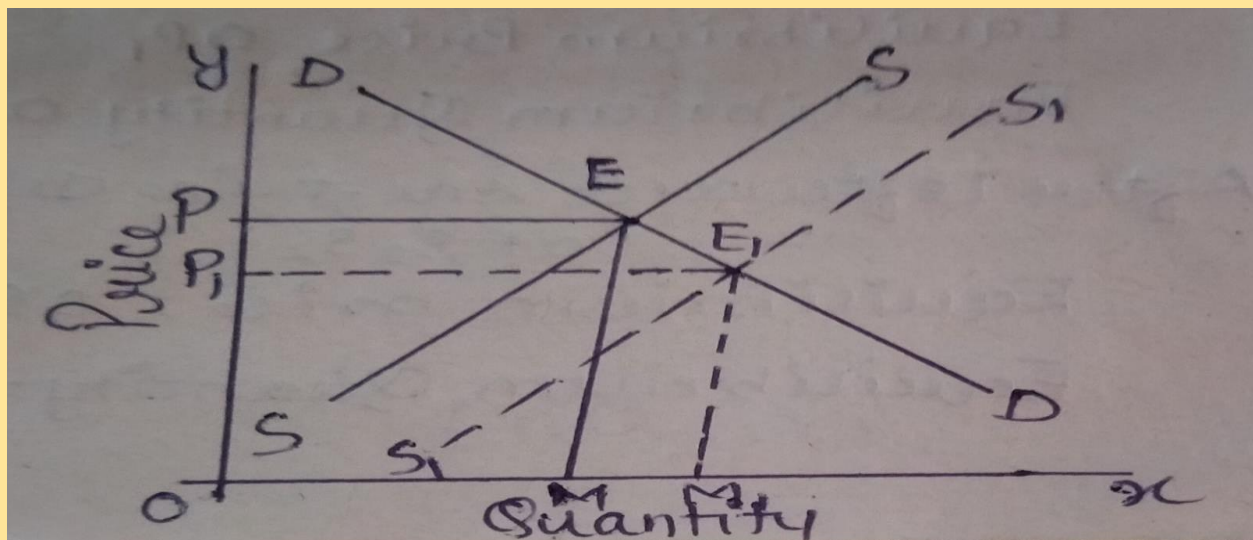
(B) Effect of change in supply when demand curve remain Constant

Assuming stable demand curve, change in supply also affects equilibrium price and equilibrium Quantity.

(i) Effect of increase in supply

Under the conditions of stable demand curve, if there is increase in supply (i.e. rightward shift of the supply curve) equilibrium price decreases and equilibrium quantity increases.

In figure, when supply curve shifts to the right, price falls (OP to OP_1) but equilibrium quantity increases (OM to OM_1)

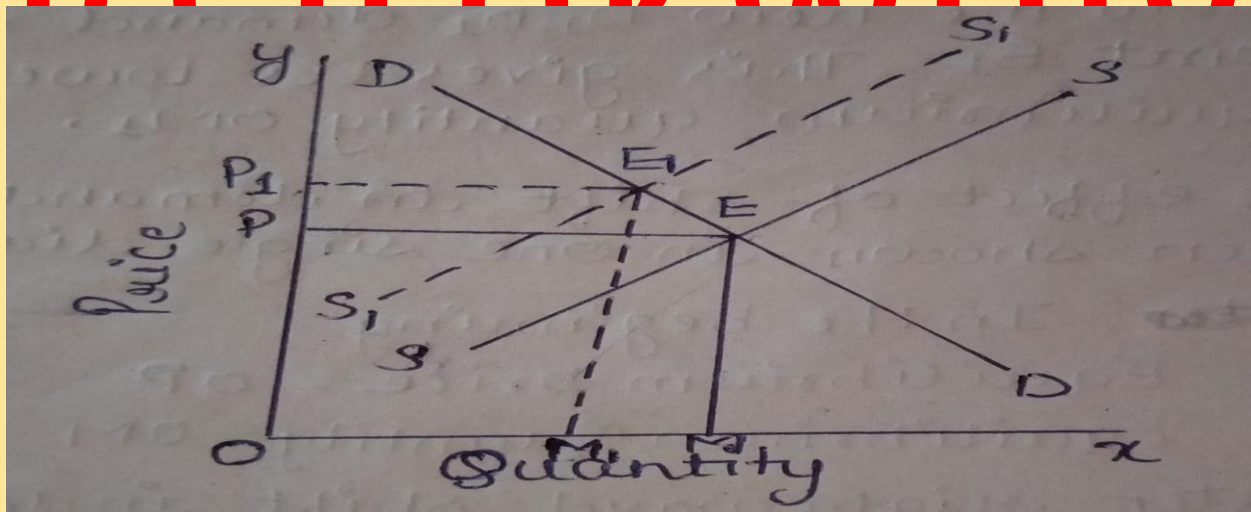


In figure, DD demand curve intersects SS supply curve at point E. This gives us OP as initial equilibrium price and OM as initial equilibrium Quantity. Now, demand curve remain same DD curve but supply curve shifts to the right and becomes S_1S_1 .

The new S_1S_1 Supply curve now intersects DD demand curve at E_1 . This gives us lower equilibrium price OP_1 and greater equilibrium quantity OM_1 .

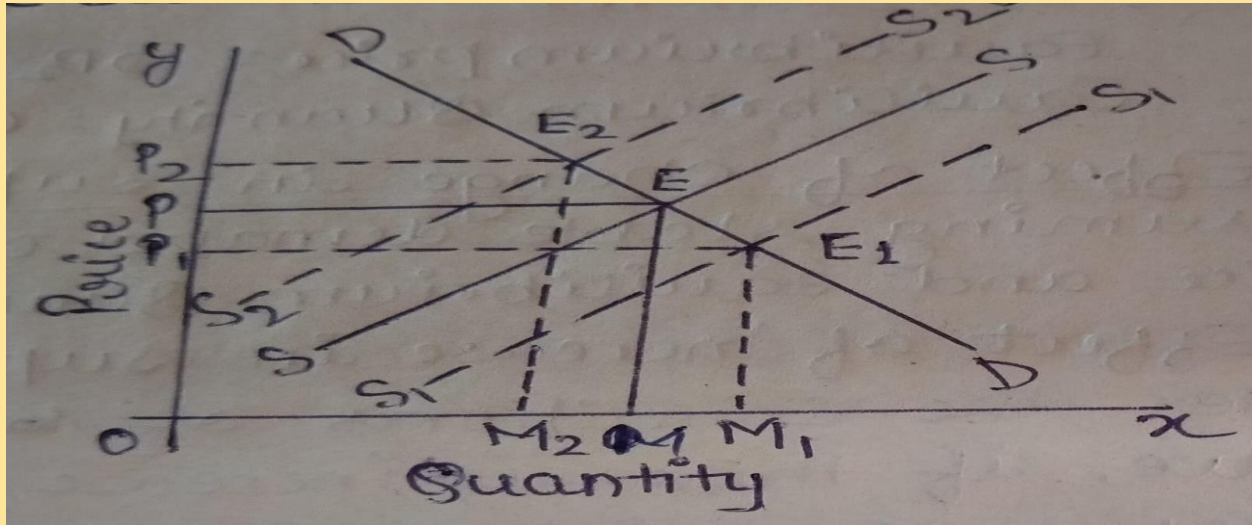
(ii) Effect of Decrease in Supply

Under the conditions of stable demand curve, if there is decrease in supply (i.e. a leftward shift to the supply curve), equilibrium price increases and equilibrium quantity decreases. When Supply curve shifts to the left price rises (OP to OP_1) but equilibrium Quantity decreases (OM to OM_1)



In fig, Intersection of DD demand curve and SS supply curve brings OP as initial equilibrium price and of as initial equilibrium quantity. Now supply curve shifts to the left and becomes S_1S_1 . The new SS_1 curve and old demand curves, intersect at Point E_1 . This gives higher equilibrium price OP_1 and smaller equilibrium quantity OM_1 .

The effect of shift in supply curve have been shown in single diagram.



In the beginning,

Equilibrium price = OP

Equilibrium quantity = OM

After rightward Shift in Supply curve

Equilibrium Price OP_1

Equilibrium Quantity OM_1

After Leftward shift in supply curve (at S_2S_2)

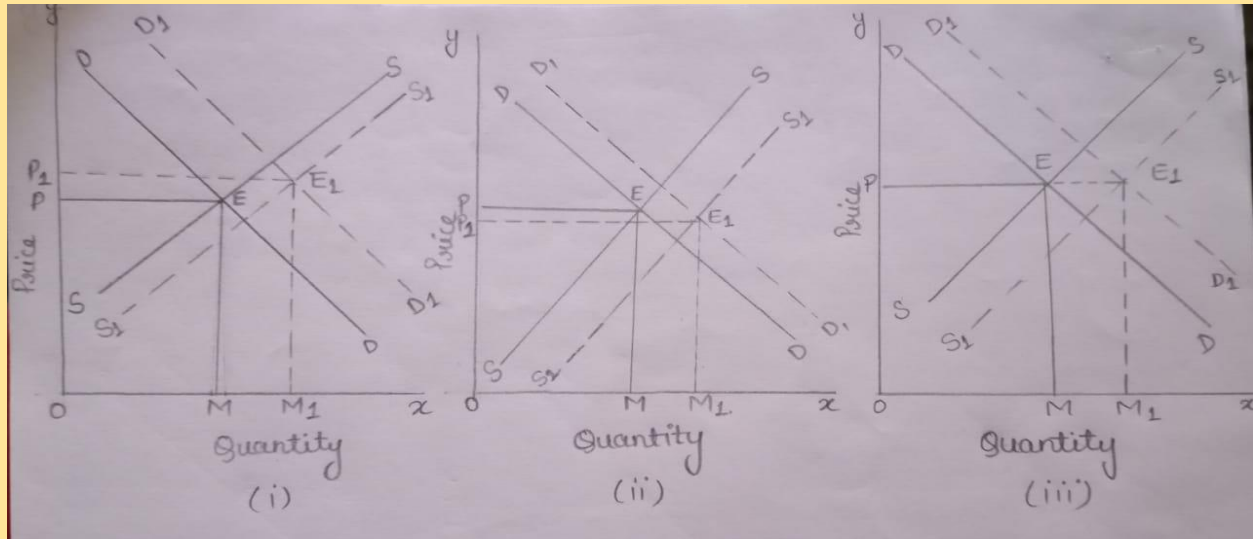
Equilibrium price = OP_2

Equilibrium Quantity = OM_2

EFFECTS OF CHANGE BOTH IN DEMAND AND SUPPLY

(A) When both demand and Supply curves shifts rightward

If both demand and supply increase, the equilibrium quantity would certainly rise, but the equilibrium price may rise, fall or remain unchanged.



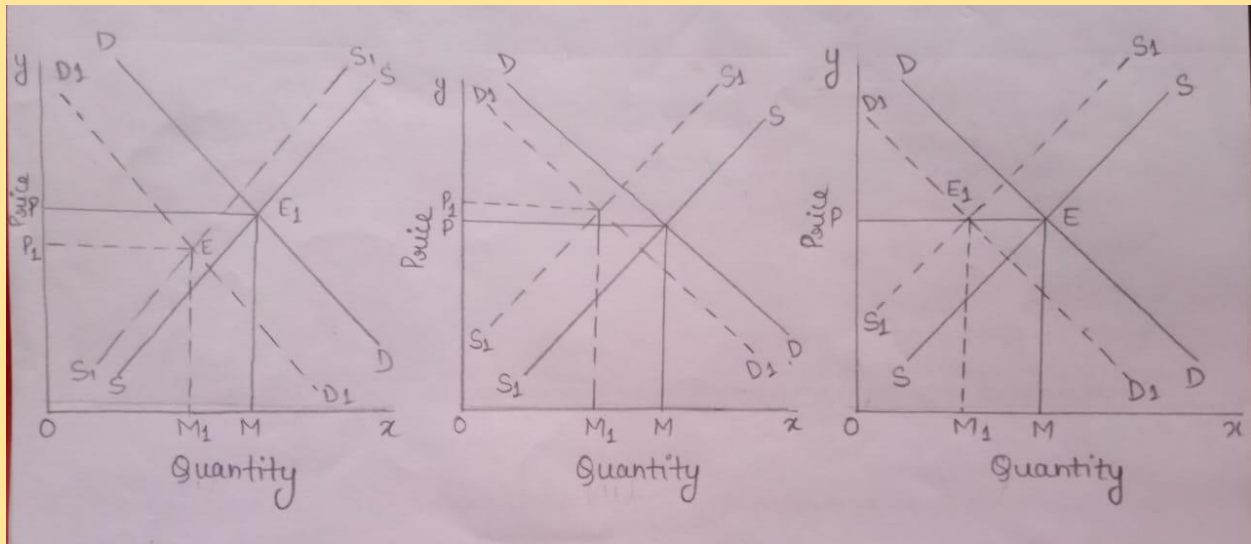
(i) If the increase in demand is greater than the increase in supply, the equilibrium price rises.

(ii) If the increase in demand is smaller than the increase in supply, the equilibrium price falls.

(iii) If the increase in demand and increase in supply are equal, the equilibrium price remains unchanged.

(B) When both demand and Supply curve shifts leftward

If both demand and supply decrease, the equilibrium quantity would certainly fall but the equilibrium price may rise, fall or remain unchanged.

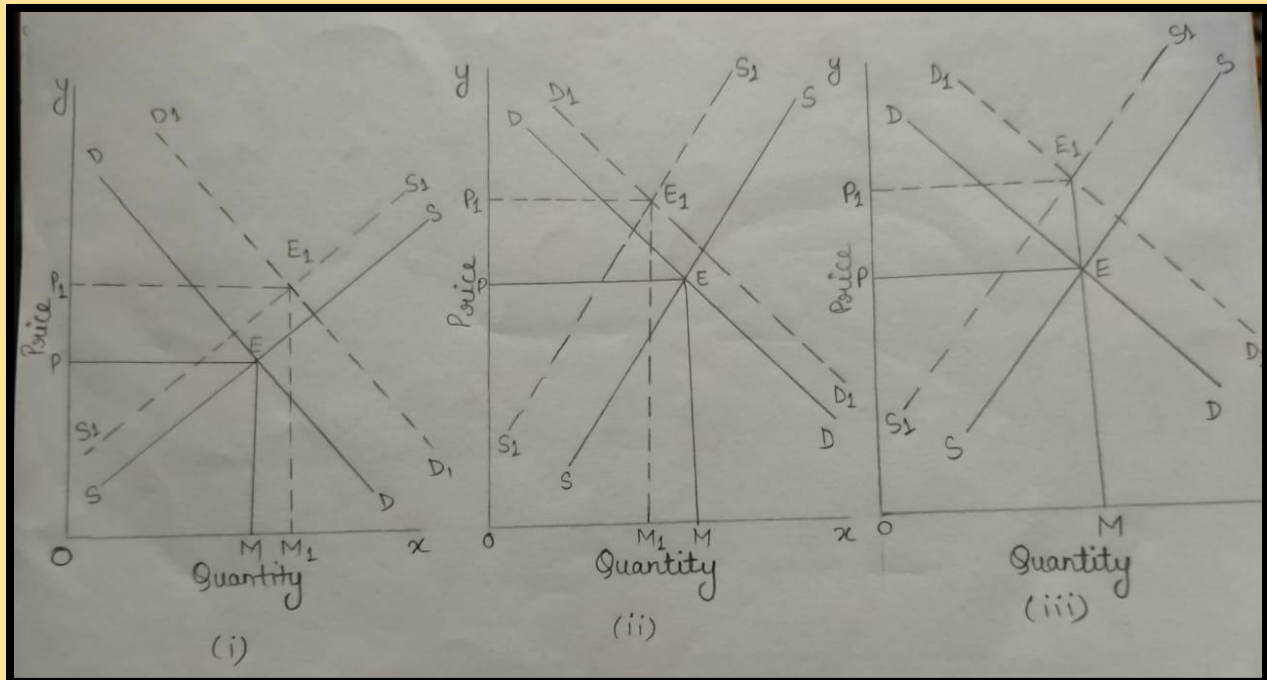


(i) If the decrease in demand is greater than the decrease in Supply the equilibrium price falls.

(ii) If the decrease in demand is smaller than decrease in Supply, the equilibrium price rises.

(iii) If the decrease in demand and decrease in supply are equal, the equilibrium price remains unchanged.

(c) When demand curve shifts rightward and Supply curve shifts leftward



(i) If the increase in demand is greater than the decrease in Supply, the equilibrium quantity increases.

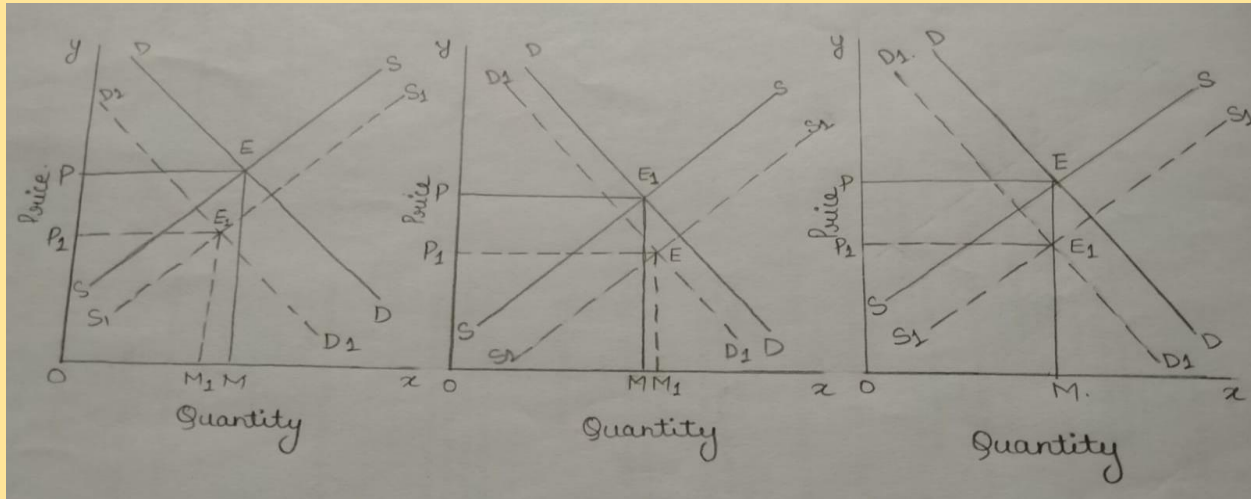
(ii) If the increase in demand is smaller than the decrease in Supply, the equilibrium quantity decreases.

(iii) If the increase in demand and decrease in supply equal, the equilibrium quantity remain unchanged.

If the demand curve shifts rightward and supply curve Shifts leftward, the equilibrium price would certainly rise. But the equilibrium quantity may increase, decrease or remain unchanged.

(d) When demand curve shifts leftward and supply curve shifts rightward

If demand curve shifts leftward and supply curve shift rightward, the equilibrium price could certainly fall. But the equilibrium quantity may increase, decrease or remain unchanged.



(i) If decrease in demand is greater than the increase in the supply the equilibrium quantity decreases.

(ii) If decrease in demand is smaller than increase in the supply, the equilibrium quantity increases.

(iii) If decrease in demand and increase in supply are equal, the equilibrium quantity remain unchanged.

Sources (or causes) of demand shifts

1. Change in Income.
2. Change in number of consumers
3. Change in the price of related goods
4. Change in Tastes

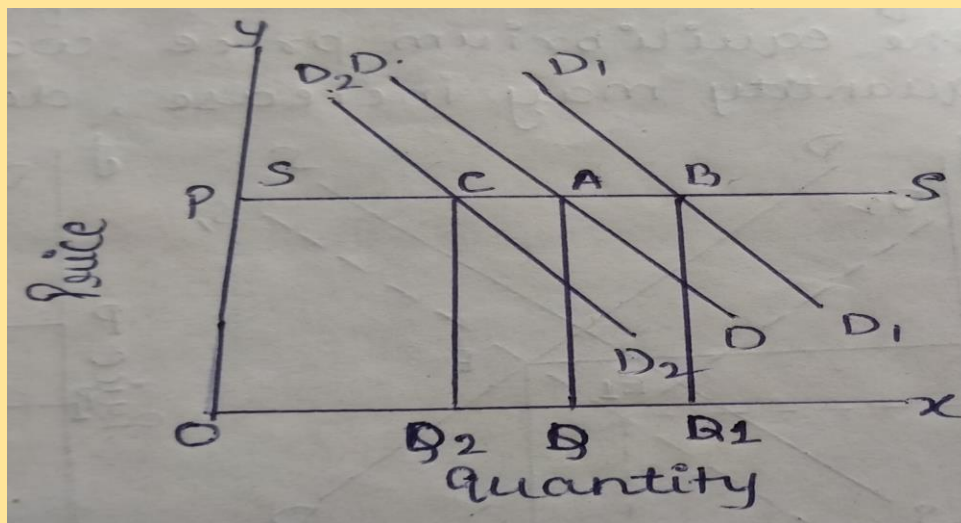
Sources (or Causes) of supply shifts

1. Change In the prices of factor inputs
2. Charge in the number of firms
3. Change in technology
4. Change in Season.

Que show with the help of diagram the effect of equilibrium price and quantity when :-

a) Supply is perfectly elastic

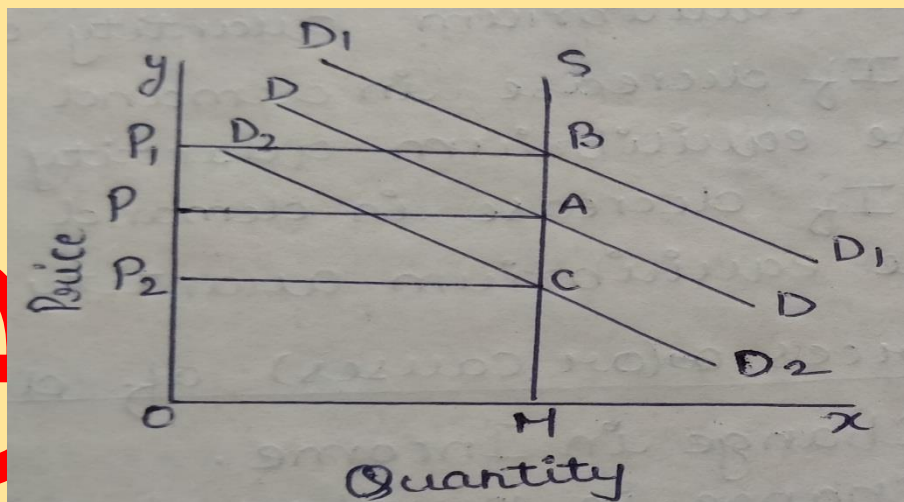
When the Supply of the commodity is perfectly elastic, the equilibrium price remain unchanged but with the increase in demand equilibrium quantity will increase.



In fig, when demand increases to OQ_1 , the equilibrium price remain unchanged (OP).

(b) Supply curve perfectly inelastic

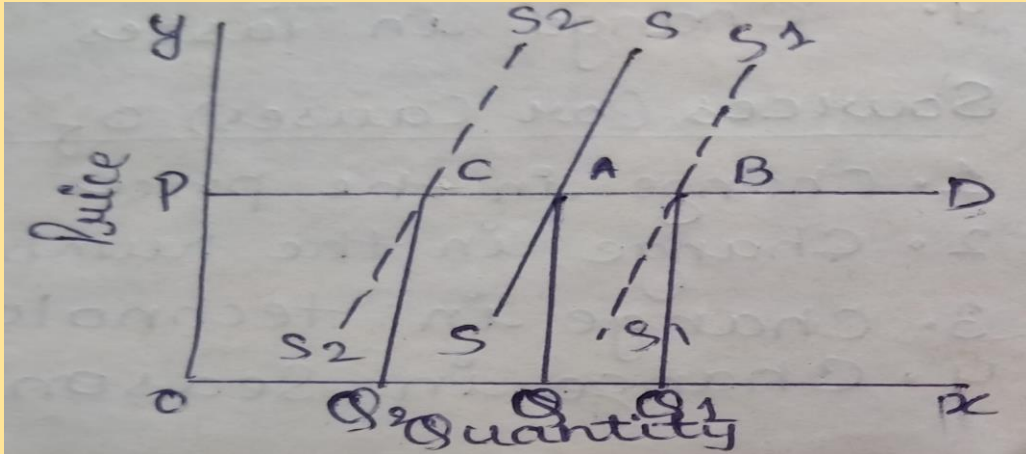
When Supply curve is perfectly inelastic, with the increase in demand there will be increase in equilibrium price and equilibrium quantity remain unchanged.



In fig, SS shows the supply curve which is perfectly inelastic. When increases (DD to D_1, D_1) price rises from OP to OP_1 .

(c) Demand is perfectly elastic and supply increase and decrease

When the demand of commodity is perfectly elastic, with the increase in supply, the equilibrium price remain unchanged and equilibrium Quantity will increase.

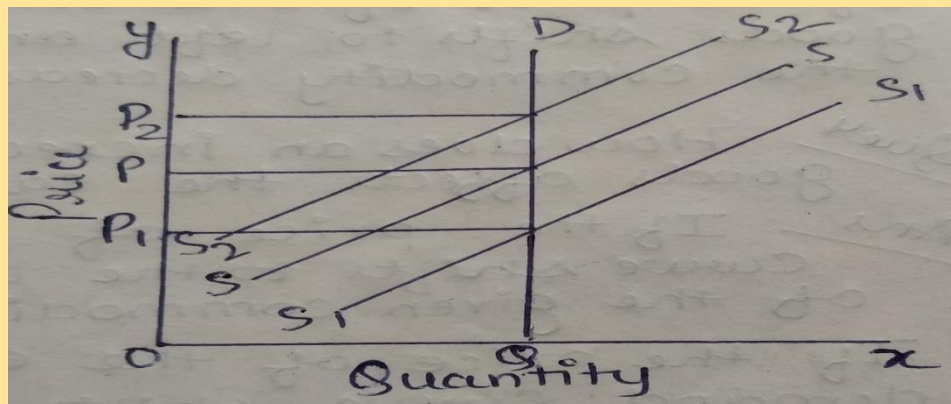


In fig, DD shows perfectly elastic demand curve. when supply increases (SS to S_1S_1), price remain constant at OP and quantity changed from OQ to OQ_1

In reverse when Supply decreases from OQ to OQ_2 then equilibrium price will remain unchanged OP and equilibrium quantity will Change from OQ to OQ_2 .

(D) When demand curve is perfectly inelastic.

When the demand of the commodity is perfectly inelastic, with the increase inelastic is in supply, equilibrium price will decrease and equilibrium Quantity remain unchanged.



In fig, DD is the perfectly inelastic demand curve, when Supply increases (SS to S₁S₁) then equilibrium price will decrease from OP to OP₁, and equilibrium Quantity remain unchanged (OQ).

When there is decrease in the supply, the equilibrium price will rises (OP to OP₂) and equilibrium quantity remain unchanged.

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