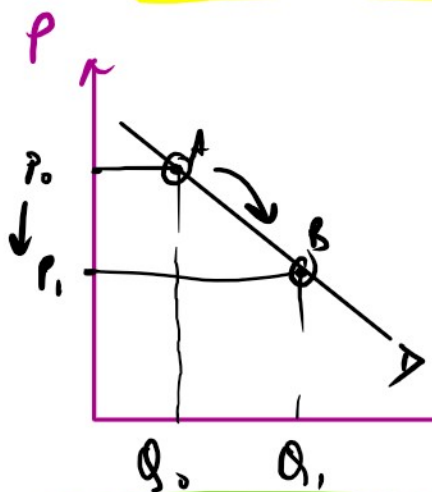


Shift and no shift in demand curve



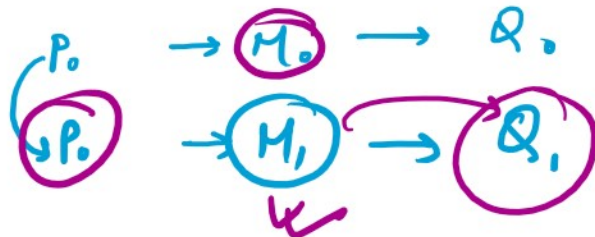
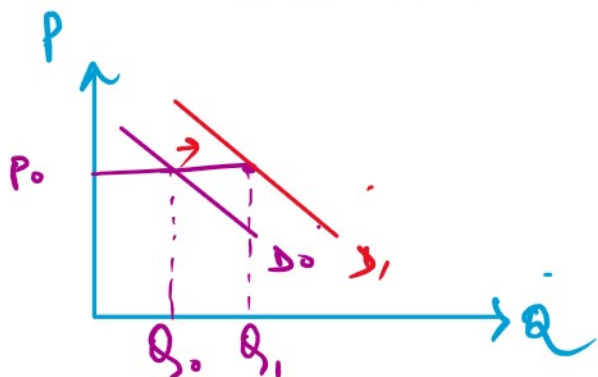
All factors remaining constant
 income, price of related goods etc
 price is changing.

When price changes → (movement along same curve)

for example, movement from point A to point B.

this is also called increase or decrease in QUANTITY demand.

≠ Suppose price of commodity is constant along with other factors of demand and only one factor (for example income) increase, then demand will change and demand curve will shift.





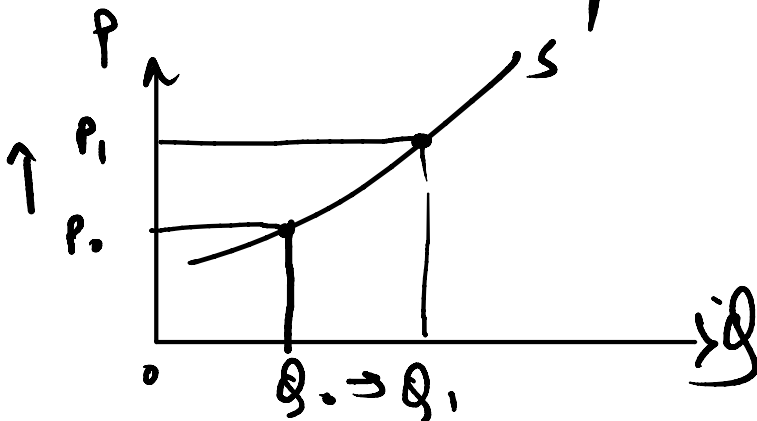
increase in demand → extension/expansion in demand
 → right shift of demand curve

decrease in demand → contraction in demand
 → left shift of demand curve.

Question: Distinguish between movement along the same curve and shift in demand curve.

— * —

Law of Supply : All factors remaining constant, there is a positive relation between price charged and quantity supplied. That is supply curve is upward sloping.



Factors that can affect supply:

Factors that can affect Supply:

- * ① Price of commodity
 - ② Price of inputs / Cost of production
 - ③ Technology innovation / advancement
 - ④ Advertisements
- * —

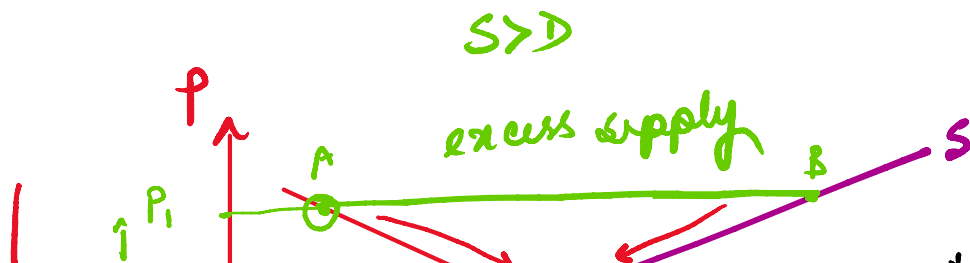
Market equilibrium:

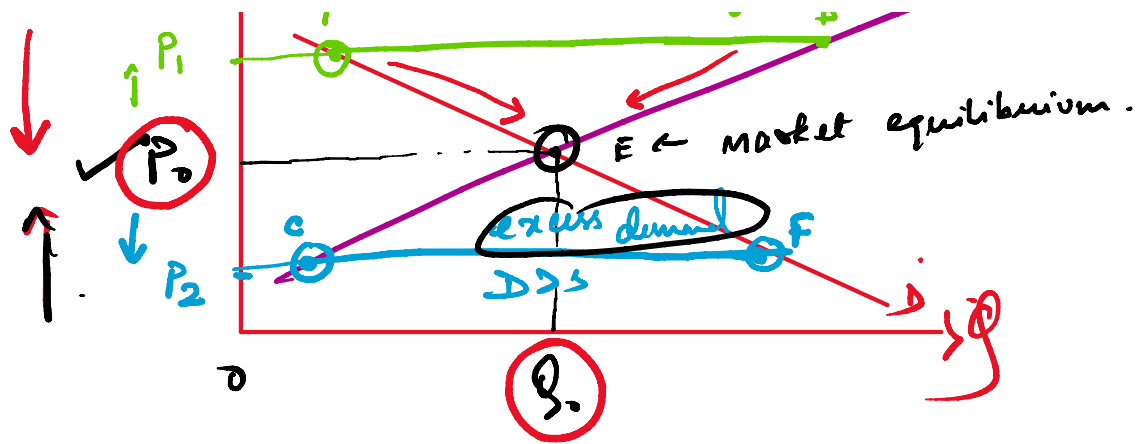
↓
is the point at which demand is exactly equal to supply. That is the market clears. There will be no excess demand or excess supply at that point.

The price at which demand = supply is the equilibrium price (OP)

and the quantity is quantity (OQ)

Market equilibrium adjustment:





Walrasian Stability

The Walrasian stability condition is based on the assumptions that buyers tend to raise their bids/price if excess demand is positive and sellers will tend to decrease their bids/price if excess demand is negative.

let us define excess demand as

$$E(P) = D(P) - S(P)$$

So a market is stable if a price rise reduces excess demand.

$$\therefore \text{for stability, } \frac{dE(P)}{dP} < 0$$

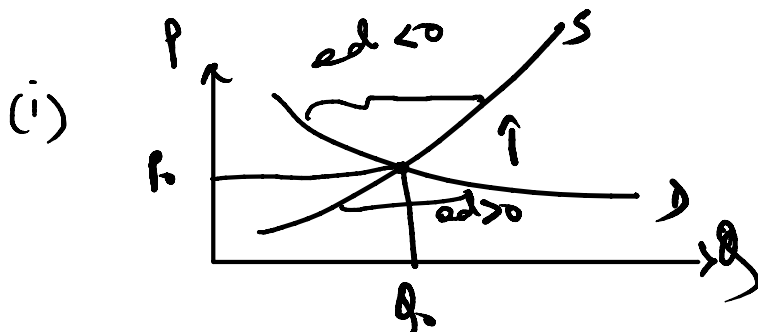
$$\text{or } \frac{dD(P)}{dP} - \frac{dS(P)}{dP} < 0$$

$$\text{or, } \frac{dD(P)}{dP} < \frac{dS(P)}{dP}$$

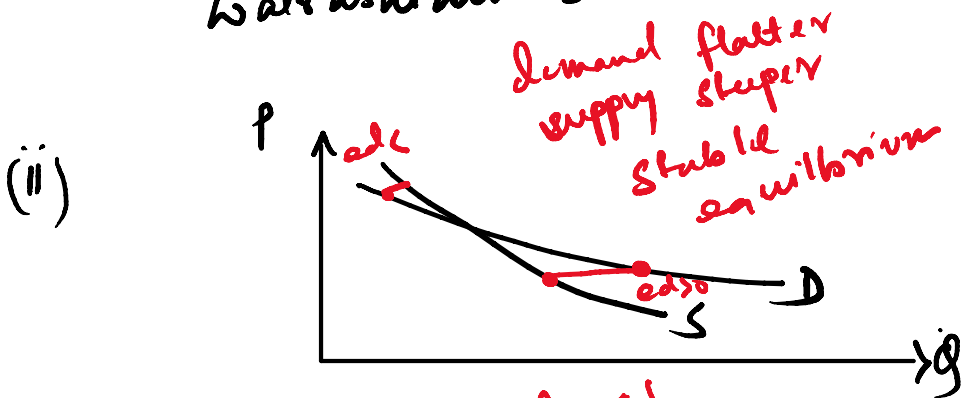
$$\text{or, } \frac{dD(P)}{dP} > \frac{dS(P)}{dP}$$

or, $\frac{dP}{dS(P)}$ \rightarrow $\frac{dP}{dD(P)}$

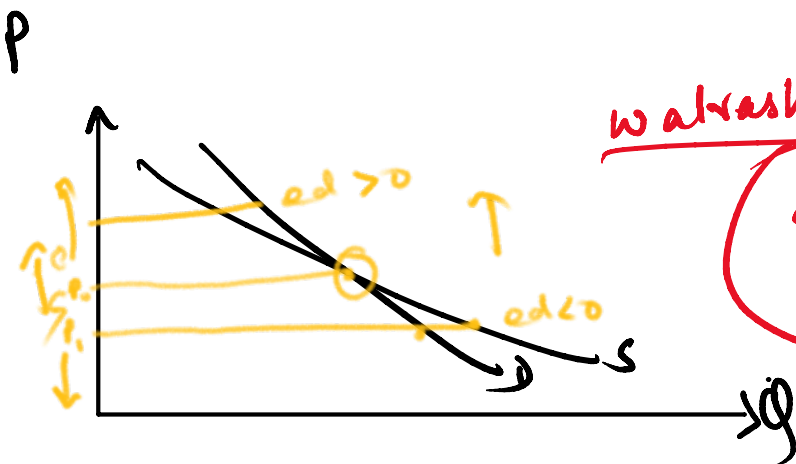
\swarrow slope of supply \rightarrow slope of demand



Walrasian stable



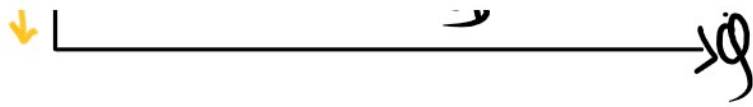
here $\frac{dE(P)}{dP} < 0$



Walrasian instability

$\frac{dE(P)}{dP} > 0$

condition violated.



Condition violated.

If demand curve is downward sloping and supply curve is upward sloping } Walrasian stable
(exception case)

but if both demand and supply decrease then
 (supply curve should be steeper than demand)

↳ stable
 but if demand is steeper than supply } unstable

Marshallian stability Condition

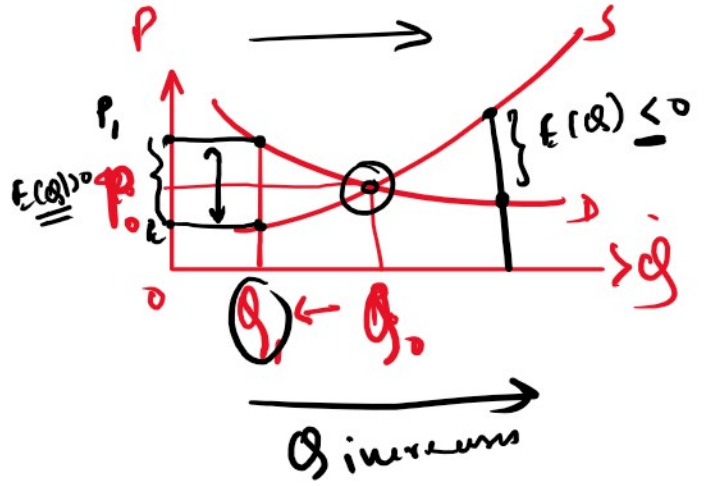
This condition is based on the demand price and supply price of a commodity. The demand price of a commodity is defined as that price (P^d) which a consumer is willing to pay for any given quantity of a commodity.

Similarly the supply price of a ~~commodity~~ commodity is defined as that price (P^s) which a seller is willing to accept for a given quantity

as they are willing to accept for \rightarrow

$$P^d = f(Q) \quad \text{and} \quad P^s = f(Q)$$

define excess demand \rightarrow $E(Q) = P^d - P^s$
 stability condition requires



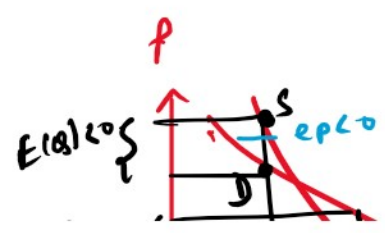
$$\frac{d E(Q)}{d Q} < 0$$

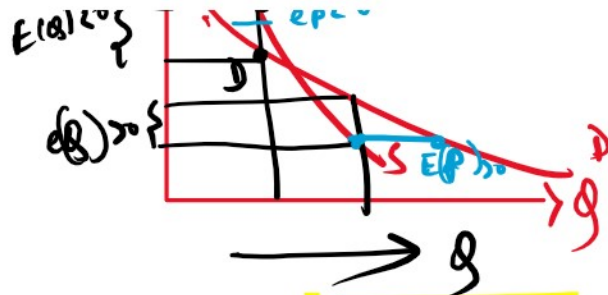
$$\text{or, } \frac{d P^d}{d Q} - \frac{d P^s}{d Q} < 0$$

$$\text{or } \left| \frac{d P^d}{d Q} \right| < \frac{d P^s}{d Q}$$

slope of demand < slope of supply

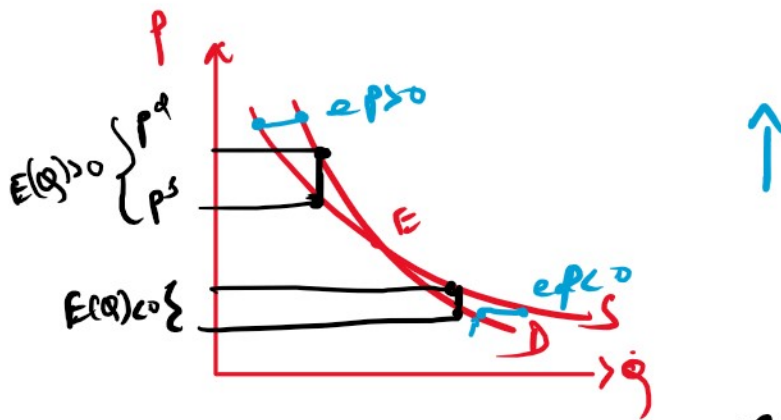
(Case ii) downward demand and supply.





Here $\frac{dE(Q)}{dQ} > 0 \rightarrow$ Marshallian unstable.
 and $\frac{dE(P)}{dP} < 0 \rightarrow$ Walrasian stability

Case iii)



Here $\frac{dE(Q)}{dQ} < 0 \rightarrow$ Marshallian stable.
 Here $\frac{dE(P)}{dP} > 0 \rightarrow$ Walrasian unstable.

- Topics :
1. Why demand curve is downward
 2. Exception to law of demand
 3. Change in market equilibrium
 4. Consumer and producer's surplus