ELASTICITY EXPRESSION OF MR:

TR=P.Q

MR=d(TR)/dQ= d(PQ)/dQ

=P.(dQ/dQ)+Q.(dP/dQ)

=P+Q.(dP/dQ).(P/P)

=P [1+(Q/P).(dP/dQ)]

=P [1+ 1/{(dQ/dP).(P/Q)}]

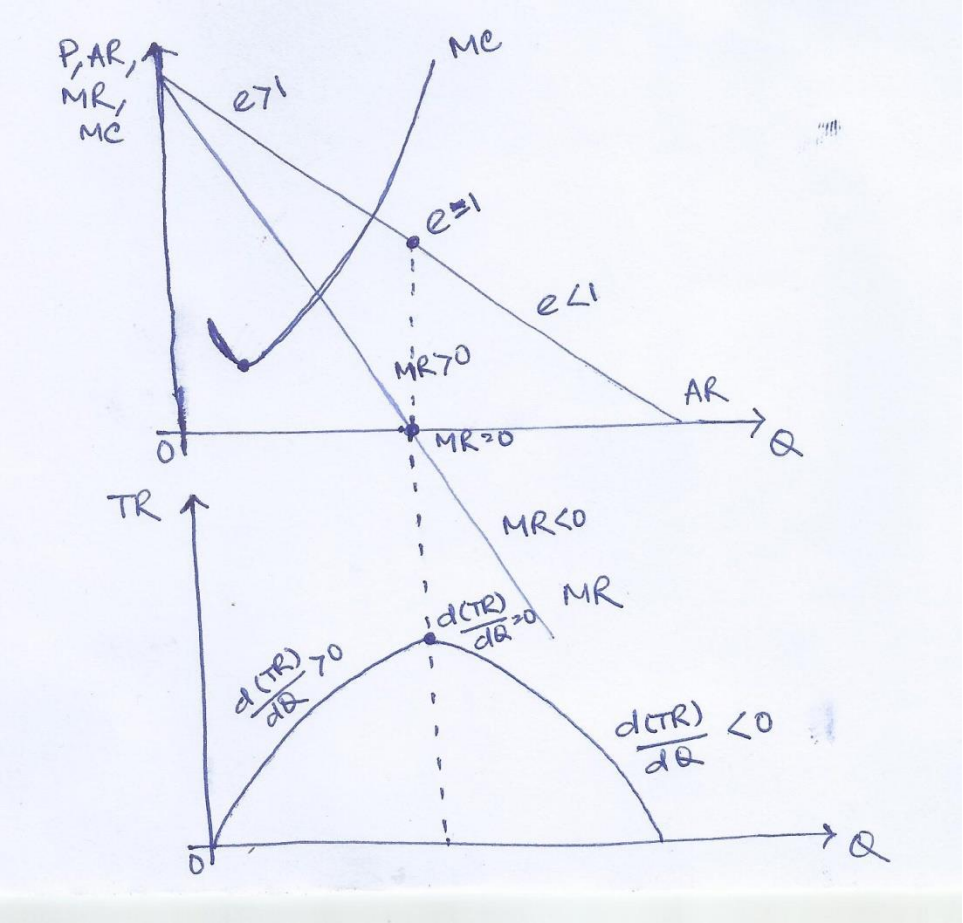
MR=P[1- 1/e]

MR=AR[1- 1/e] where, e= -(dQ/dP).(P/Q)

MONOPOLISTS NEVER OPERATES AT INELASTIC REGION :

1. When e>1 (elastic demand) then MR>0 i.e. d(TR)/dQ>0 that means as Q increases TR also increases
2. When e<1 (inelastic demand) then MR<0 i.e. d(TR)/dQ<0 that means as Q increases TR decreases
3. When e=1 (unitary elastic demand) then MR=0 i.e. d(TR)/dQ=0 that means as Q increases TR remains unchanged

Thereby, we can conclude that monopolists will always operate at elastic region.



RULE OF THUMB:

At monopoly equilibrium,

MR=MC

P(1-1/e)=MC

(1-1/e)=MC/P

(1-MC/P)=1/e

(P-MC)/P=1/e = **LERNER'S INDEX**

Deviation of price marginal cost (MC) represents degree of monopoly power which is equal to 1/e. So as elasticity increases degree of monopoly power decreases.

Supply Curve of Monopolists:

In Perfectly Competitive market, price is given & we have different price for different quantity supplied.

In Monopoly market, price is not given. Monopoly is price maker & we do not have an unique relationship between price & quantity supplied. Monopolists may charge different prices for single quantity or may charge single price for different quantity. So, there is no supply curve in monopoly market.

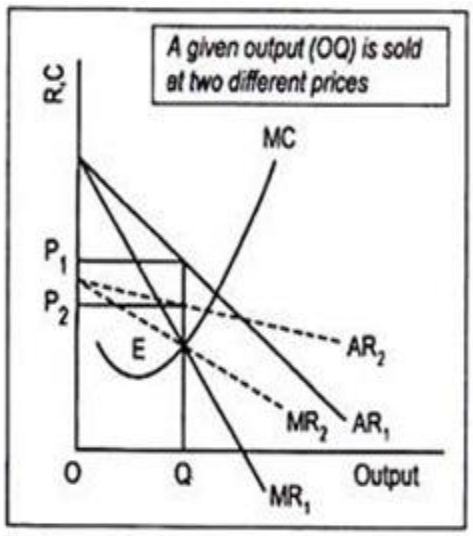


Fig. 5.5: Monopolist's Supply Curve

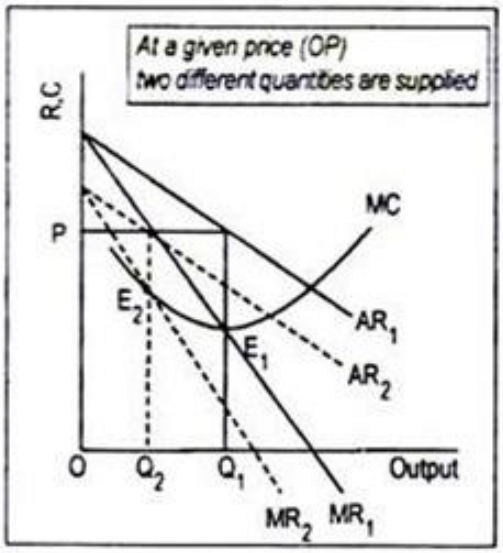


Fig. 5.6: Monopolist's Supply Curve