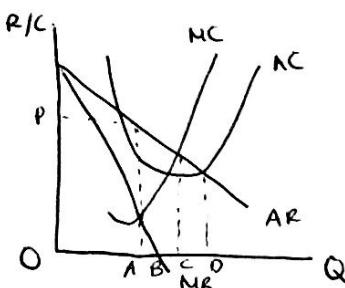


## Concentrated markets: monopoly

Range of monopoly outputs:

- 1) Prof. max.  $Q = OA$  where  $MR = MC$ : monopolists' favoured  $Q$
  - 2) Revenue max.  $Q = OB$  where  $MR = 0$ : TR maximised
  - 3) MC pricing.  $Q = OC$  where  $MC = AR$ : allocative efficient or in absence of external cost, welfare max.
  - 4) AC pricing.  $Q = OD$  where  $AC = AR$ : monopolist making normal profit. lowest  $P$  at which firm will remain in industry
- economic theory suggests  $P = MC$  but in reality this is hard as it is not easy to determine MC accurately.

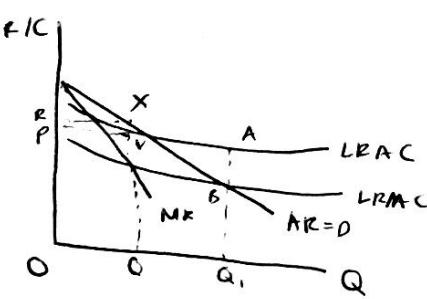
Natural monopoly:

- situation where competition would be inefficient as it would  $\uparrow C$  eg. railways & water provision amplify  $C$  & use scarce resources (land) inefficiently

Characteristics: 1) high capital  $C$  to set up

2) duplication is unnecessary and wasteful

3) MES does not occur until a high  $Q$  as economies of scale do not appear to diminish in foreseeable future



- firm is facing economies of scale as LRMC is falling and pulling LRAC down.
- In order to max. prof. monopolist produce at OQ and sell at OR  $\therefore$  make supernormal PRXV
- unlikely that authorities would allow natural monopoly to act this way and impose price control or regulation
- to be allocatively efficient, produce Q<sub>1</sub> where MC = AR but at this Q ATC > AR and make loss of AB.
- If government require this Q then firm require subsidy AB

Consumer/producer surplus: