

## PART 2: PROFIT MAXIMISATION OF FIRMS



# 3

Pg. 23.2.3

### Q4: Why doesn't the firm sell at a higher or lower price?

Since the firm is very small relative to the entire market, it is a price taker. As a price taker, the firm will accept the price given by the market demand and supply.

FYI: Such firm is a perfect competitive firm which you will learn in Part 3.

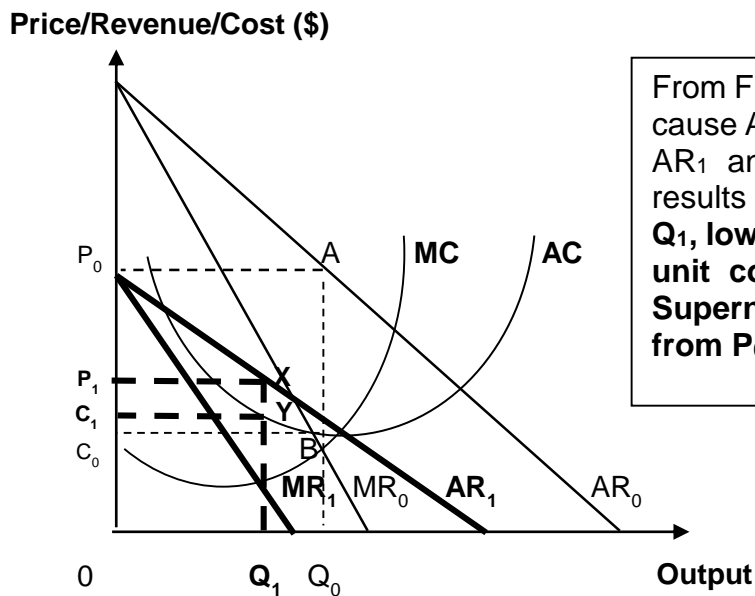


# 4

Pg 23.2.13

### Q1: Explain and illustrate with a revenue-cost diagram how a price-setting firm's supernormal profits shrink but it still earns supernormal profits when demand falls.

Figure 1: A decrease in supernormal profits (still > 0) when demand falls

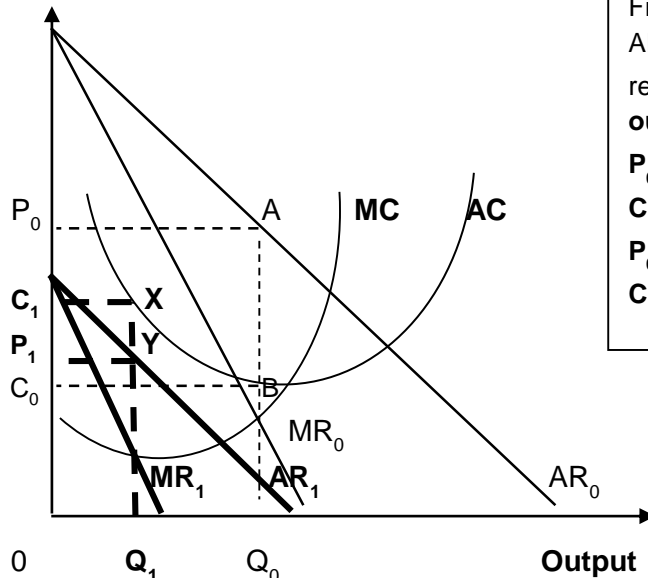


From Figure 1, a fall in demand will cause  $AR_0$  and  $MR_0$  to decrease to  $AR_1$  and  $MR_1$  respectively. This results in **lower output from  $Q_0$  to  $Q_1$ , lower price from  $P_0$  to  $P_1$  and unit cost rises from  $C_0$  to  $C_1$ . Supernormal profit decreases from  $P_0C_0BA$  to  $P_1C_1YX$ .**

**Q2: Explain and illustrate with a revenue-cost diagram how a price setting firm's supernormal profits shrink and it makes a loss when demand falls.**

Figure 2: Making losses/subnormal profits when demand falls

Price/Revenue/Cost (\$)



From Figure 2, a fall in demand will cause  $AR_0$  and  $MR_0$  to decrease to  $AR_1$  and  $MR_1$  respectively. These resulted in **lower output from  $Q_0$  to  $Q_1$ , lower price from  $P_0$  to  $P_1$  and unit cost rises from  $C_0$  to  $C_1$ . Supernormal profit decreases from  $P_0C_0BA$  to subnormal profits of  $C_1P_1YX$ .**

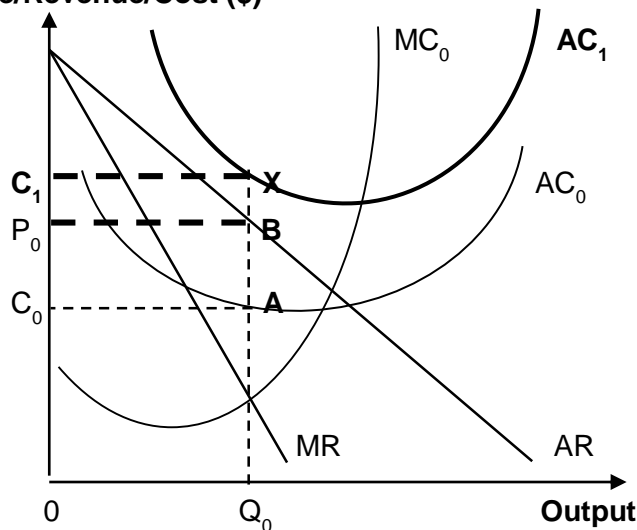


Pg 23.2.14

**Explain and illustrate with a revenue-cost diagram how a firm's supernormal profits shrink and it incurs a loss when fixed costs increase.**

Figure 3: A fall in supernormal profits till making losses when fixed cost increases

Price/Revenue/Cost (\$)

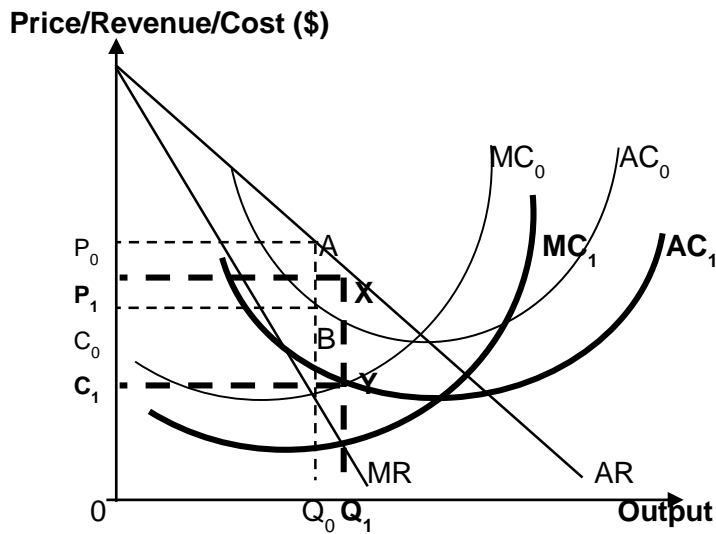


From Figure 3, a rise in fixed cost will cause average costs to increase from  $AC_0$  to  $AC_1$ .  $MC$  and  $MR$  do not change when only fixed costs change,  $MC$  cuts  $MR$  at the same point and equilibrium output and price remain the same at  $Q_0$  and  $P_0$ . But profits have shrunk from  $P_0C_0AB$  to losses  $C_1P_0BX$ .



Explain and illustrate with a revenue-cost diagram how a firm's supernormal profits increase when the firm's **variable costs fall** due to a rise in productivity.

Figure 4: A rise in supernormal profits when variable cost decreases



From Figure 4, we can see that a fall in variable costs will decrease average costs from  $AC_0$  to  $AC_1$  and marginal costs from  $MC_0$  to  $MC_1$ . These resulted in **higher output from  $Q_0$  to  $Q_1$ , lower price from  $P_0$  to  $P_1$  and unit cost decreases from  $C_0$  to  $C_1$ . Profit increases from  $P_0C_0BA$  to  $P_1C_1YX$ . Consumer surplus increases by  $P_0P_1XA$**