

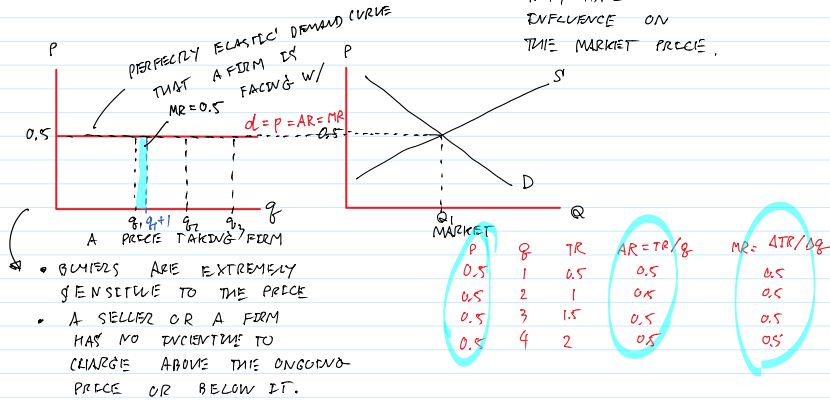
PERFECTLY COMPETITIVE MARKET

READ: PONDYCK CHAPTER 8

MAIN CHARACTERISTICS

- ① MANY BUYERS & SELLERS
 - ② PRODUCT HOMOGENEITY
 - ③ FREE ENTRY & EXIT
- IMPLIES THAT BOTH BUYERS AND SELLERS ARE "PRICE TAKERS"

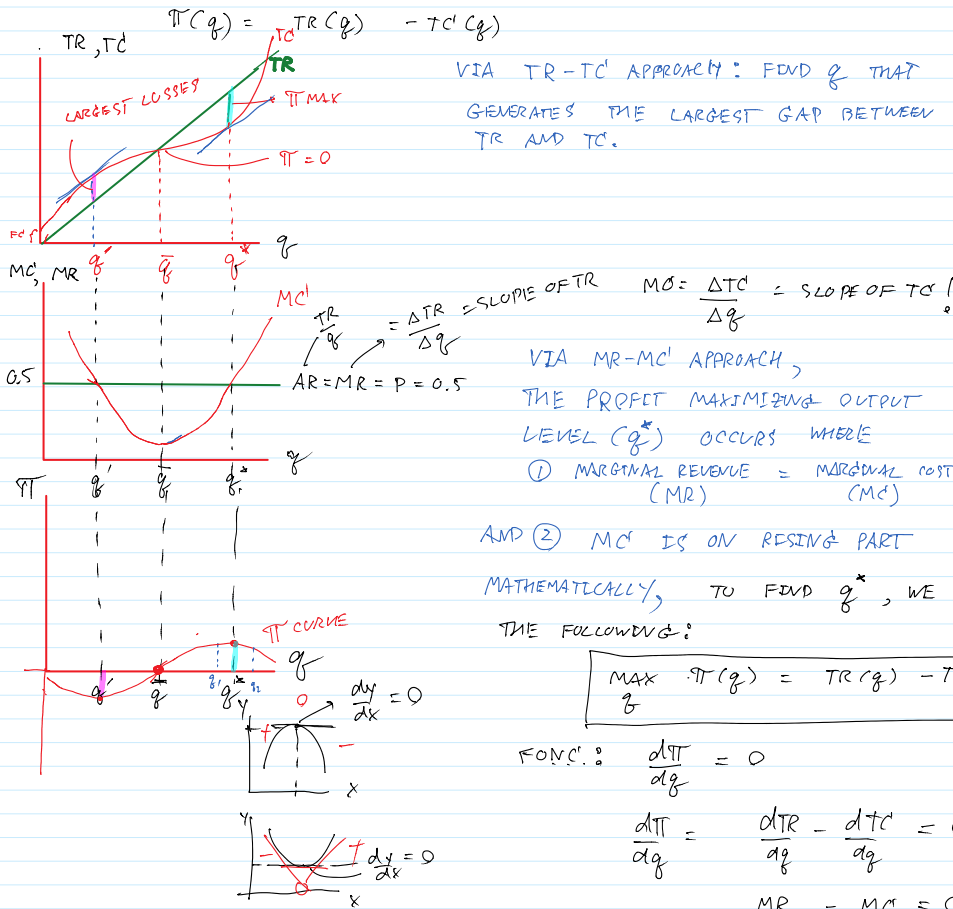
BOTH HAVE NO INFLUENCE ON THE MARKET PRICE.



PROFIT MAXIMIZATION FOR A PRICE TAKING FIRM

Q: WHICH q^* MAXIMIZES THE FIRM'S PROFIT?

$$\text{PROFIT } (\pi) = \text{TOTAL REVENUE (TR)} - \text{TOTAL COST (TC)}$$



$$\frac{d\pi}{dg^2} < 0$$

$$\frac{d\pi}{dg^2} = 0$$

$$\frac{dMR}{dg} - \frac{dMC}{dg} < 0$$

$$\frac{dM^d}{d\alpha} > 0$$

OUTPUT RULE OR PROFIT MAXIMIZING RULE (OR CONDITION)

Hand-drawn graph illustrating the loss in profit due to production at q_1 and q_2 compared to the profit-maximizing quantity q^* .

The graph shows the Marginal Revenue (MR) curve (green line) and the Marginal Cost (MC) curve (red curve). The profit-maximizing quantity q^* is determined by the intersection of MR and MC.

The loss in profit if production is at q_1 (yellow shaded area) is the difference between the profit at q^* and the profit at q_1 .

The loss in profit if production is at q_2 (purple shaded area) is the difference between the profit at q^* and the profit at q_2 .

A red arrow indicates the direction of adjustment from q_1 towards the profit-maximizing quantity q^* .

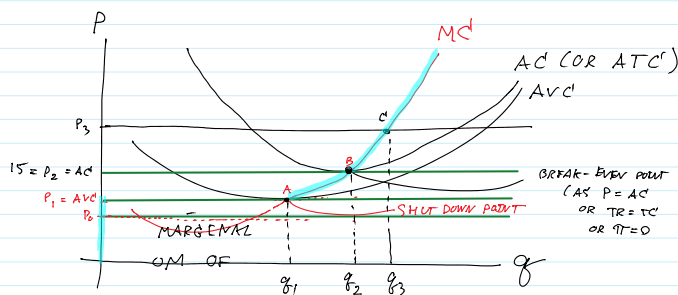
AT q_2 , $MC > MR$.

SHUT DOWN RULE

SELF REVIEW

SHUT DOWN IF $TR < V_d$

OR SHUT DOWN IF $P < AVC'$

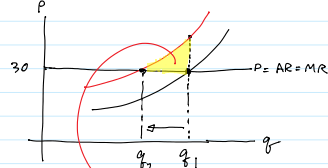


SHORT RUN SUPPLY CURVE FOR A PRICE-TAKING FIRM IS THE UPPER PART OF COST CURVE ^(MC) STARTING FROM MIN AVERAGE VARIABLE COST CURVE (AVC)

WHAT IF INPUT P S?

with MC_1 , $q^* = q_1$

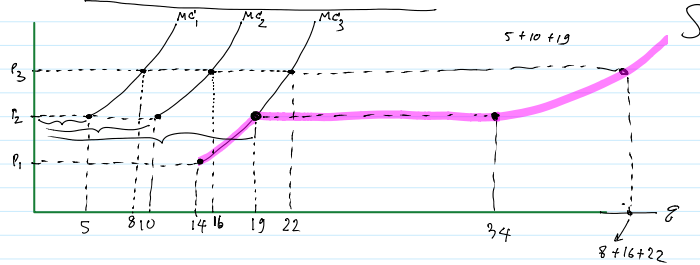
WHAT IF INPUT P



WITH MC_1 , $q^* = q_1$
 SUPPOSE INPUT PRICE $\uparrow$...
 MC SHIFTS UPWARD
 FROM MC_1 TO MC_2
 q^* FALLS FROM q_1 TO q_2 .

WHEN INPUT PRICE $\uparrow$ TO AVOID THIS LOSS IN PROFITS,
 THE MANAGER SHOULD LOWER THE PRODUCTION LEVEL
 FROM q_1 TO q_2 .

SHORT-RUN INDUSTRY SUPPLY CURVE



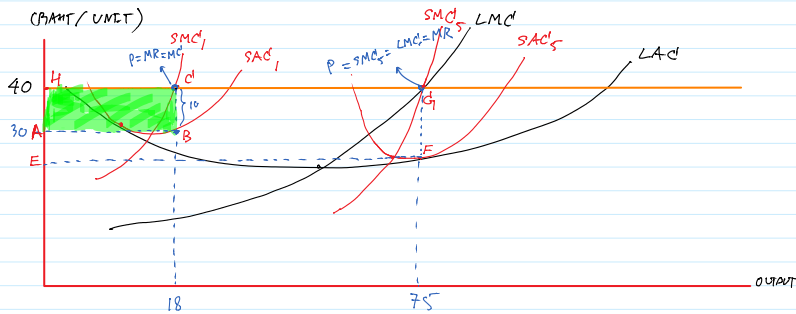
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CHOOSING OUTPUT IN THE LONG RUN

IN THE LONG RUN, ALL INPUTS CAN BE ADJUSTED, i.e., NO FIXED INPUT. ENTRY OCCURS WHEN PROSPECT OF PROFITS ARISES. EXIT OCCURS WHEN EXISTING FIRMS IN THE MARKET INCUR LOSSES.

IN THE LONG RUN, A FIRM CAN ADJUST ITS PLANT SIZE AND ITS RATE OF OUTPUT TO MAXIMIZE ITS PROFIT.

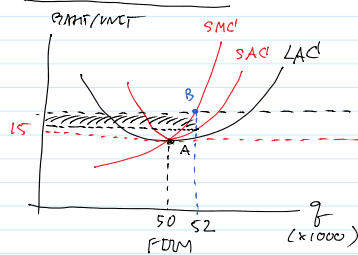
(BATH/UNIT)



WHEN THE FIRM INCREASES ITS AMOUNT OF MACHINE FROM 1 TO 5 MACHINES, IN THE LONG RUN, ITS PROFIT INCREASES FROM ABCD TO EFGH.

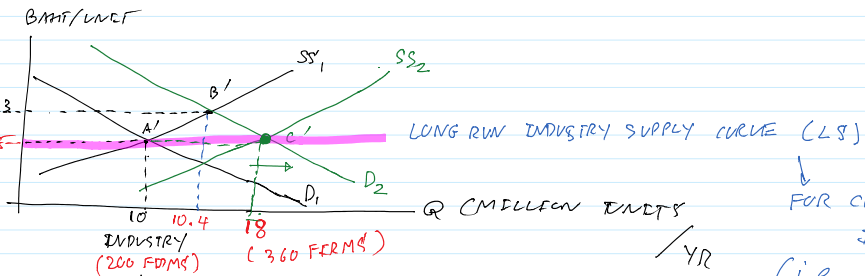
SO, WE SEE THAT THE FIRM CAN INCREASE ITS PROFITS BY EXPANDING ITS MACHINE (= FIXED INPUTS WHICH NOW BECOME VARIABLE INPUTS)

ENTRY & EXIT



SUPPOSE WE HAVE 200 IDENTICAL FIRMS, EACH OF 200 FIRMS PRODUCES AT ITS MINIMUM EFFICIENT SCALE OF 50,000 UNITS/YR. (POINT A).

SUPPOSE DEMAND INCREASES FROM D_1 TO D_2 , SHORT RUN EQUILIBRIUM PRICE INCREASES TO 23 BATH/UNIT (POINT B'). EACH FIRM INCREASES ITS OUTPUT TO 52,000 UNITS/YR AND ENJOY POSITIVE ECONOMIC PROFIT EQUAL TO THE SHADED AREA (). OPPORTUNITY TO EARN PROFITING PROBLEM ...



FOR CONSTANT-COST INDUSTRY

(i.e., WHEN INCREASE IN DEMAND

DOES NOT AFFECT THE PRICE OF INPUTS)

OPPORTUNITY TO EARN POSITIVE PROFITS INDUCES THE NEW ENTRANTS, WHICH SHIFTS THE SUPPLY CURVE RIGHTWARD! UNTIL IT REACHES

SS₂.

AT THE NEW EQUILIBRIUM (C'), INDUSTRY NOW HAS 360 FIRMS, EACH FIRM IS AGAIN PRODUCES 50,000 UNITS OF OUTPUT/YR AND EQUILIBRIUM PRICE IS AGAIN 15 BATH/UNIT.

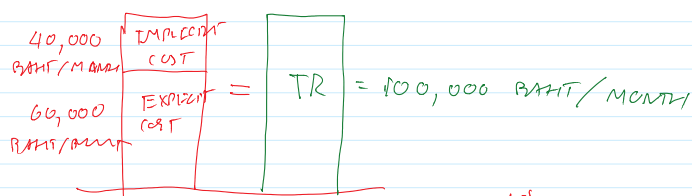
TOTAL QUANTITY OF INDUSTRY OUTPUT = $50,000 \times 360 = 18$ MILLION

AT THE END OF THE STORY, ALL FIRMS RECEIVE UNIT

ZERO ECONOMIC PROFITS (AT POINT A)

RECALL :
THAT

ECONOMIC PROFIT (π^{EC}) = TR - EXPLICIT COSTS - IMPLICIT COSTS



SO $\pi^{EC} = 0$ ($\pi^{AC} = 40,000$ BATH/MONTH)

WHAT DOES PERFECT COMPETITION TEACH US?

*** "IF ANYONE CAN DO IT, YOU CAN'T MAKE MONEY" ***

THE LESSON OF THE THEORY OF PERFECT COMPETITION FOR

MANAGERS IS THAT IF YOU BASE YOUR FIRM'S STRATEGY ON SKILLS THAT CAN EASILY BE IMITATED OR RESOURCES THAT CAN BE ACQUIRED, YOU PUT YOURSELF AT RISK FROM THE FORCES THAT ARE HIGHLIGHTED BY THE THEORY OF PERFECT COMPETITION : IN THE LONG RUN, YOUR ECONOMIC PROFITS WILL BE COMPLETED AWAY.