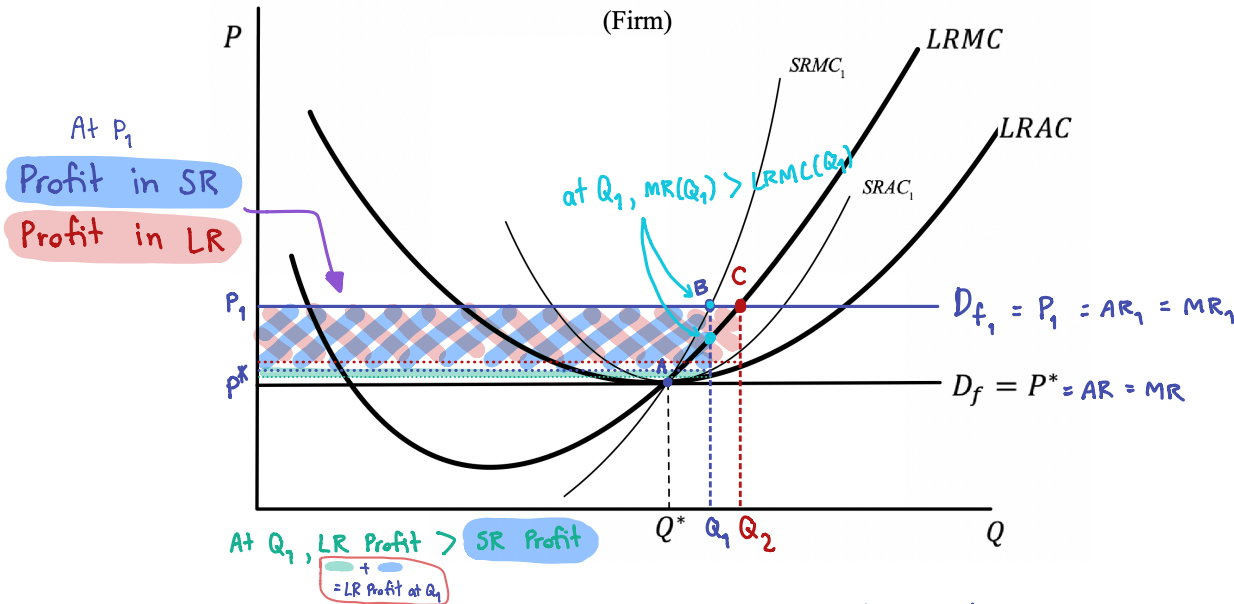


New sellers entering the market

HW#13 Due May 13, 2021

Suppose that the market is in a Long-Run equilibrium where the price is at (P^*) and each firm produces (Q^*) . With the given $SRMC_1$ and $SRAC_1$ and $LRMC$ and $LRAC$, the market price increases from P^* to P_1 .

- Show how the firm will change its output in Short Run and Long Run.
- Indicate the profit the firm receives in Short Run and Long Run.
- Explain why the profit in Long Run is bigger than profit in Short Run.



a) In Short Run, if the market price increases from P^* to P_1 the firm will change its output to maximize profit.
 \therefore Eq. will change from A to B where the firm will produce more from Q^* to Q_1 and satisfy the eq. conditions

- $MR(Q_1) = P_1 = MC(Q_1)$
- slope $MR(Q_1) = 0 < \text{slope } MC(Q_1) \oplus$

In Long Run

Eq. will change from A to C where the firm will produce more from Q^* to Q_2 and satisfy the eq. conditions

- $MR(Q_2) = LRMC(Q_2)$
- slope $MR(Q_2) < \text{slope } LRMC(Q_2)$

C) LR Profit at Q_1 is not maximum

because at Q_1 , $MR(Q_1) > LRMC(Q_1)$

Profit is maximized at Q_2 where $MR(Q_2) = LRMC(Q_2)$

and $\text{slope } MR(Q_2) < \text{slope } LRMC(Q_2)$

• • LR Profit at $Q_2 >$ LR Profit at Q_1
 $>$ SR Profit at Q_1 #