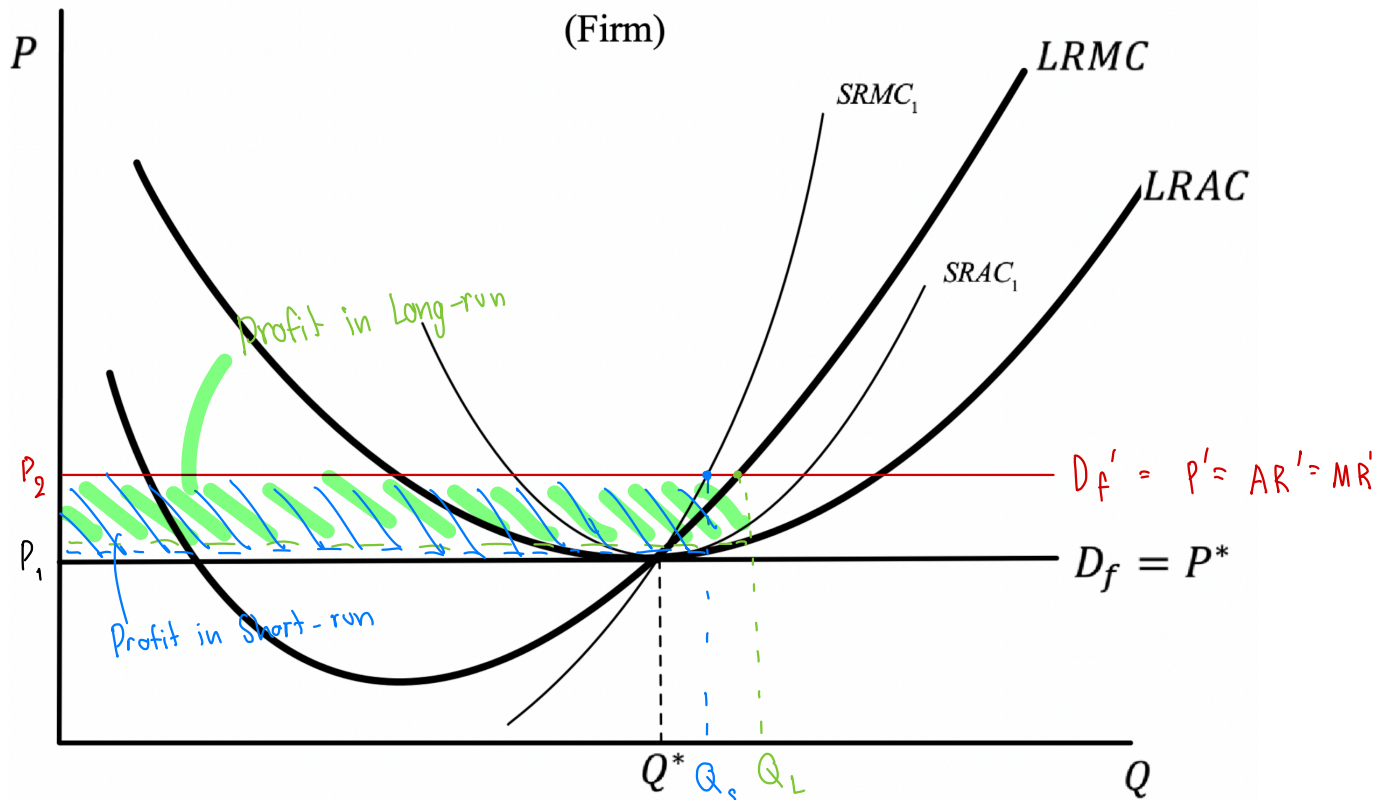


HW#16

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 long run, as price increases, the quantity will increase from Q^* to Q_L . There will be the new equilibrium where $MR'(Q_L) = LRMC(Q_L)$ and slope of $MR'(Q_L) <$ slope of $LRMC(Q_L)$.

In short run, as price increases from P_1 to P_2 , the quantity will increase from Q^* to Q_s . There will be the new equilibrium where $MR'(Q_s) = SRMC(Q_s)$ and slope of $MR'(Q_s) <$ slope of $SRMC(Q_s)$.

c) The profit in Long Run is bigger than profit in short run because $SRAC(Q^*) \geq LRAC(Q^*)$. Moreover, $SRAC$ sticks with labour and capital in fixed cost but $LRAC$ is flexible in cost at any quantity. And also, in long run the firm can produce more than short run as well at Q_L .