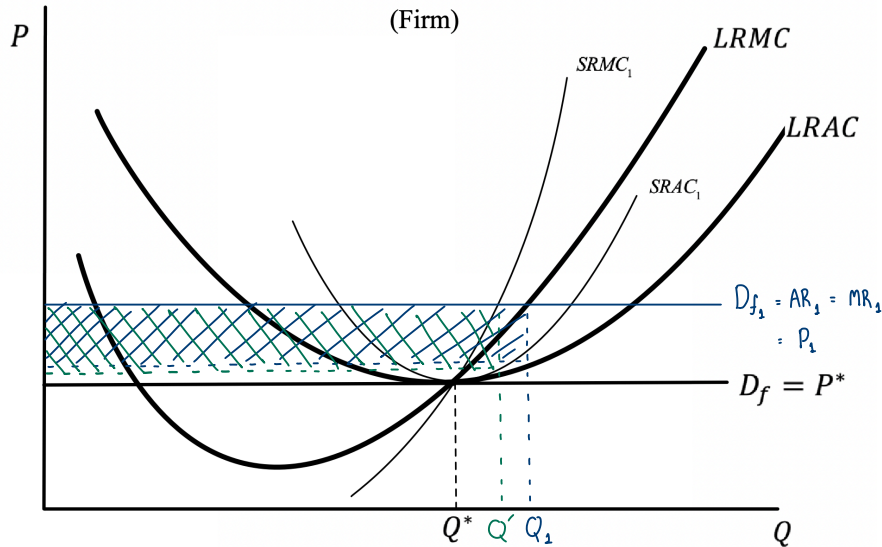


HW#13 Due May 13, 2021

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.



In short run : output increases from Q^* to Q'

● - profit received in Long Run

In long run : output increases from Q^* to Q_1

● - profit received in Short Run

At Q' , LR profit > SR profit since LRAC is lower than SRAC

However, the profit at Q' is not maximum in LR because

$MR(Q') > LRMC(Q')$. Profit is maximized at Q_1 where

$MR(Q_1) = LRMC(Q_1)$ and slope $MR(Q_1) < \text{slope } LRMC(Q_1)$

\therefore LR profit at $Q_1 > \text{LR profit at } Q' > \text{SR profit at } Q'$