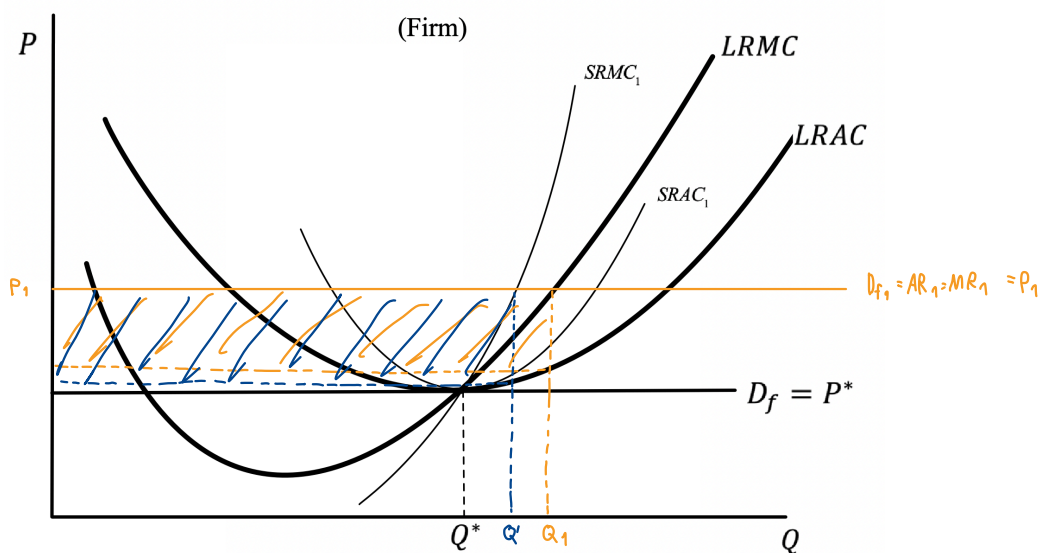


**HW#13 Due May 13, 2021**

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 long run  $\rightarrow$  output increase from  $Q^*$  to  $Q_1$

  $\rightarrow$  This area is the profit received in long run

In short run  $\rightarrow$  output increase from  $Q^*$  to  $Q_1$

  $\rightarrow$  This area is the profit received in short run

As you can see in the graph at  $Q_1$ , LR profit  $>$  SR because LRAC is lower than SRAC. And  $MR(Q_1) > LRMC(Q_1)$  that made  $Q_1$  is not Maximum.

The profit will maximized at  $Q_1$  when  $MR(Q_1)$  equal to  $LRMC(Q_1)$

and slope of  $MR(Q_1)$  need to be less than  $LRMC$

So LR profit at  $Q_1$  is greater than LR profit at  $Q'$  and LR also greater than SR profit at  $Q'$