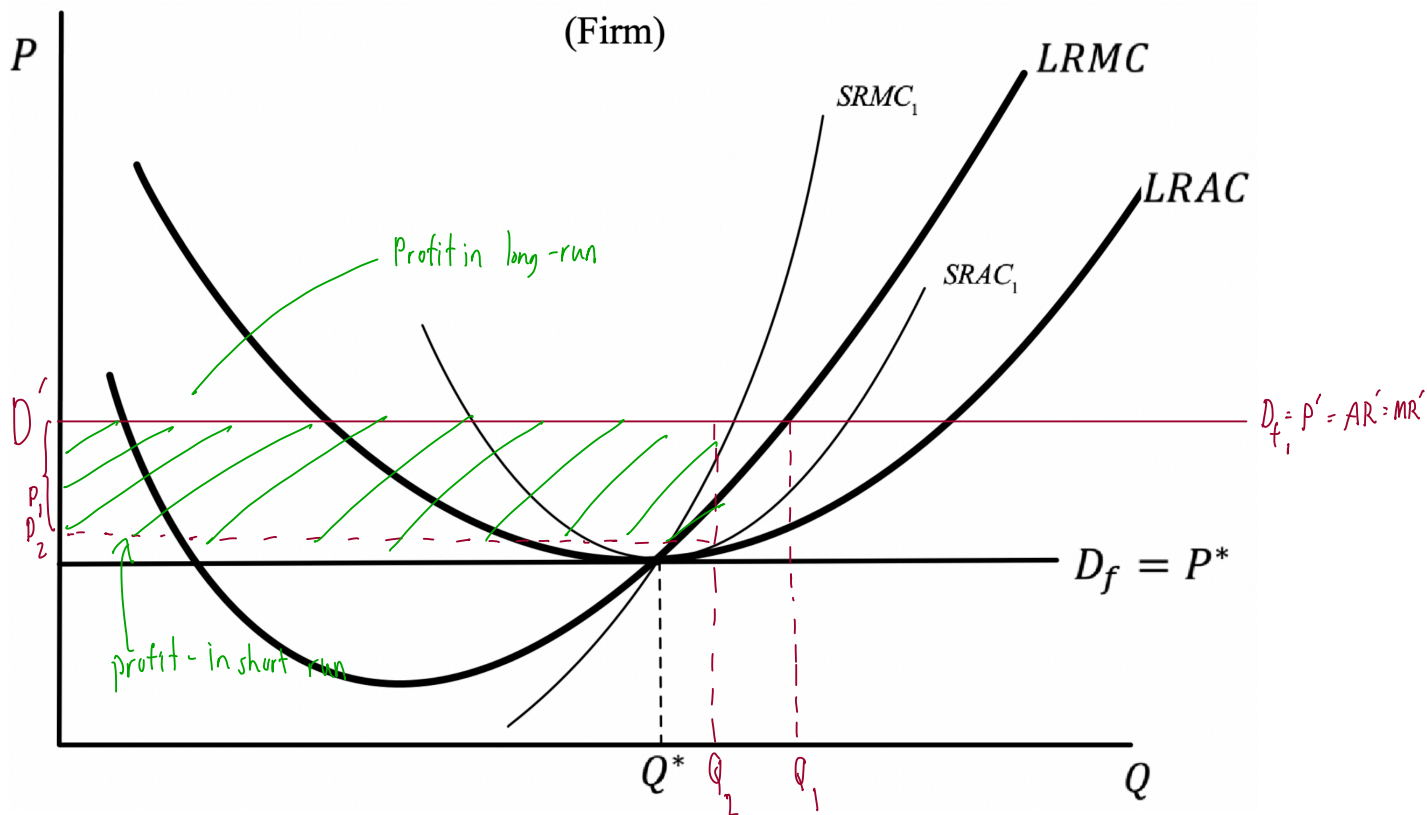


HW#16

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, the Quantity will increase from Q^* to Q_1 as price increased. because at Q_1 the firm reach equilibrium conditions, where $LRMC(Q_1) = MR'(Q_1)$ and slope of $LRMC(Q_1) > \text{slope of } MR'(Q_1)$

In short-run, the quantity also increase from Q^* to Q_2 as price increased. because at Q_2 the firm reach equilibrium conditions, where $SRMC_1(Q_2) = MR'(Q_2)$ and slope of $SRMC_1(Q_2) > \text{slope of } MR'(Q_2)$

c.) Because there is a fixed cost in short run, that make $SRAC_1(Q) \geq LRAC(Q)$ at any Q . Moreover, In long-run the firm can produce more at Q_2 .