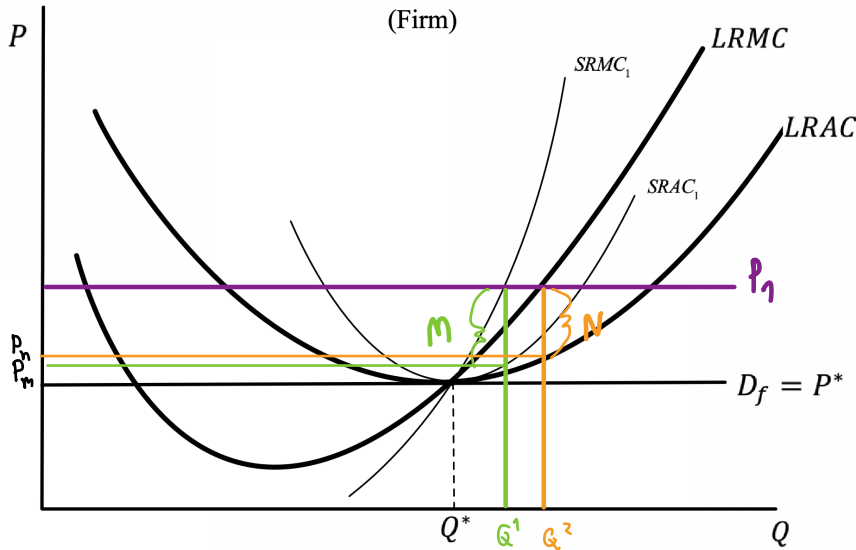


HW#13 Due May 13, 2021

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)
- short run : Output = Q^1 , change = $Q^1 - Q^*$
 - Long run : Output = Q^2 , change = $Q^2 - Q^*$

- b)
- short run : Profit = $Q^1 \times M = Q^1 \times (P_1 - P_m)$
 - Long run : Profit = $Q^2 \times N = Q^2 \times (P_1 - P_n)$

c) It is because that processing business in Long Run can choose the fixed cost appropriate for its desired level of production, so it can minimize average total cost (ATC). As a result, the Long Run cost is less than Short Run cost, in other words, the Long Run profit is more than the Short Run profit.