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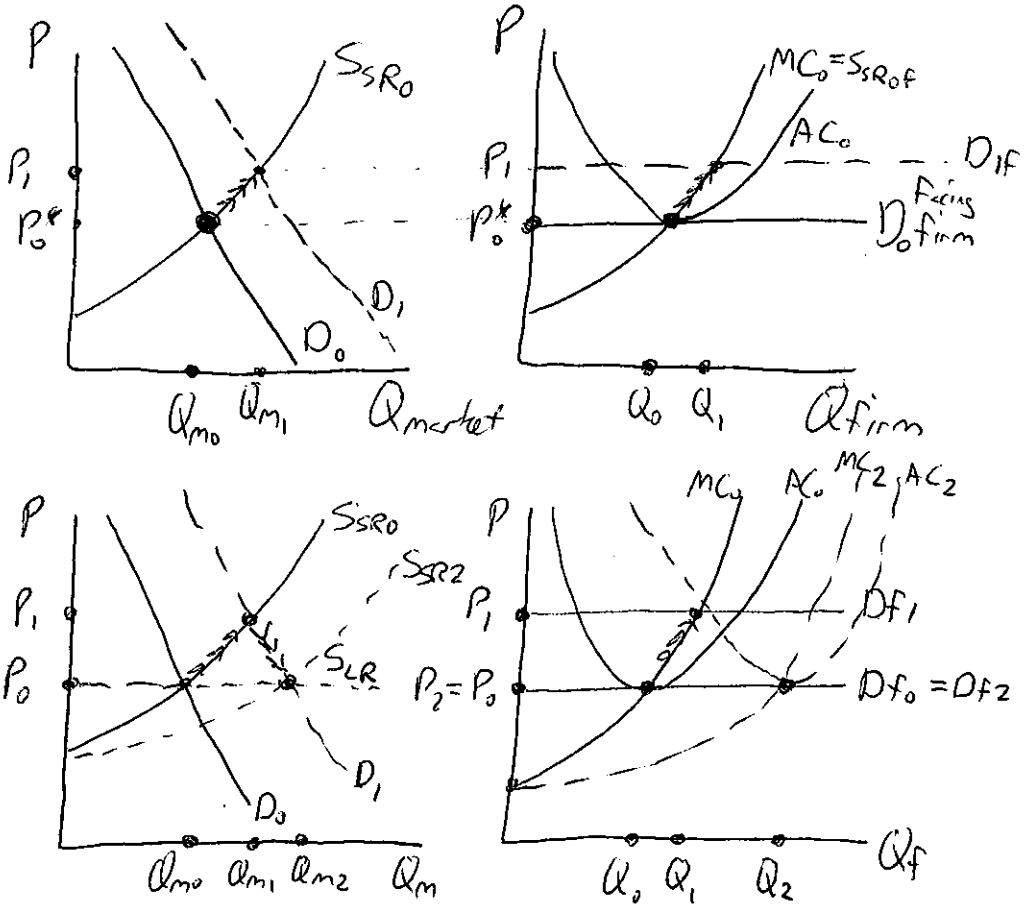
Viner and U-shaped Cost Curves



(0) The firm produces Q_0. Profits are zero.

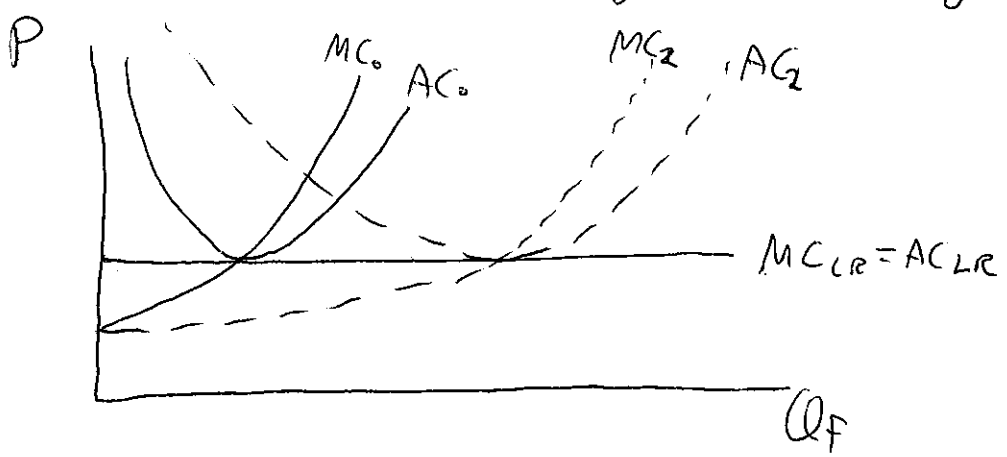
(1) Demand rises to D_1. Price rises to P_1. The firm increases output to Q_1, and $\pi > 0$. All firms do that, so $Q_{m0} \rightarrow Q_{m1}$.

(2) Firms expand and produce Q_2 now. New firms enter, too. Thus, SR_2 shifts out. That reduces the market price to $P_2 = P_0$. The firm has $\pi = 0$ again.

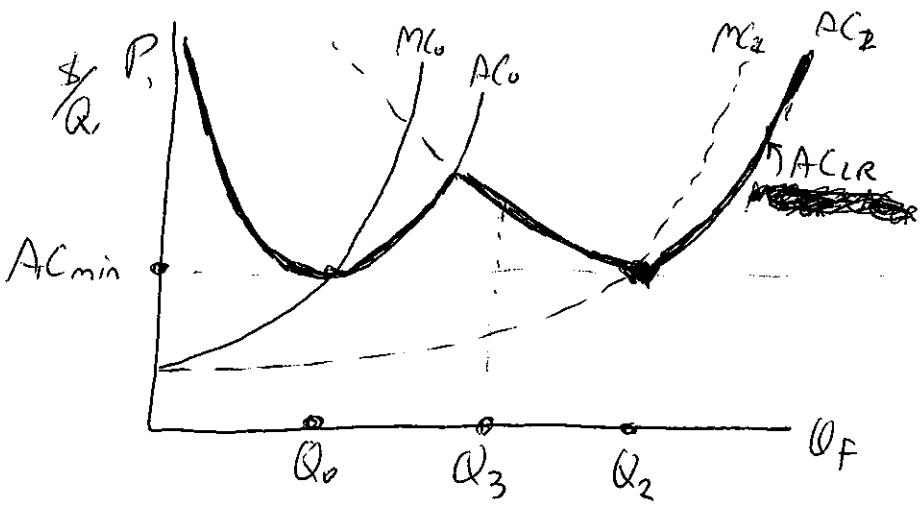
We've gotten back to LR equilibrium.

The SR profits are <u>quasi-rents</u> — temporary profits.

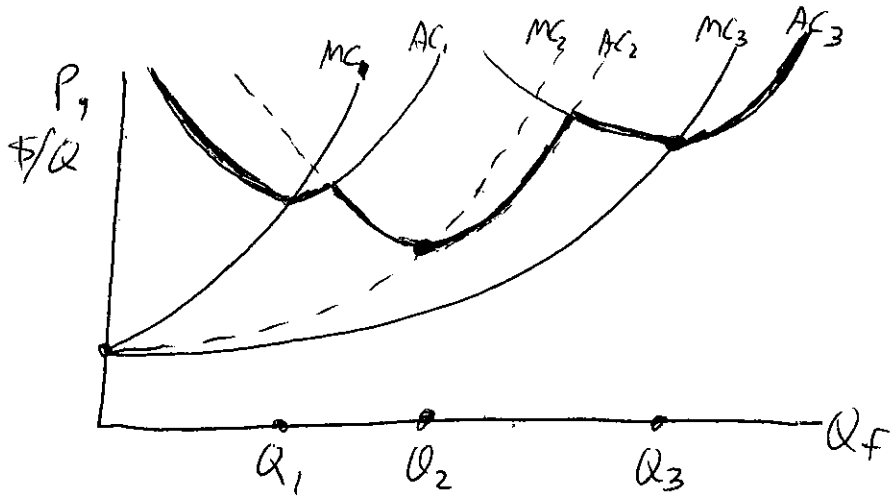
This assumes that in the SR "capacity" is fixed but in the LR any Q_f can be produced at the same average cost by choosing the capacity appropriately.



But with just two

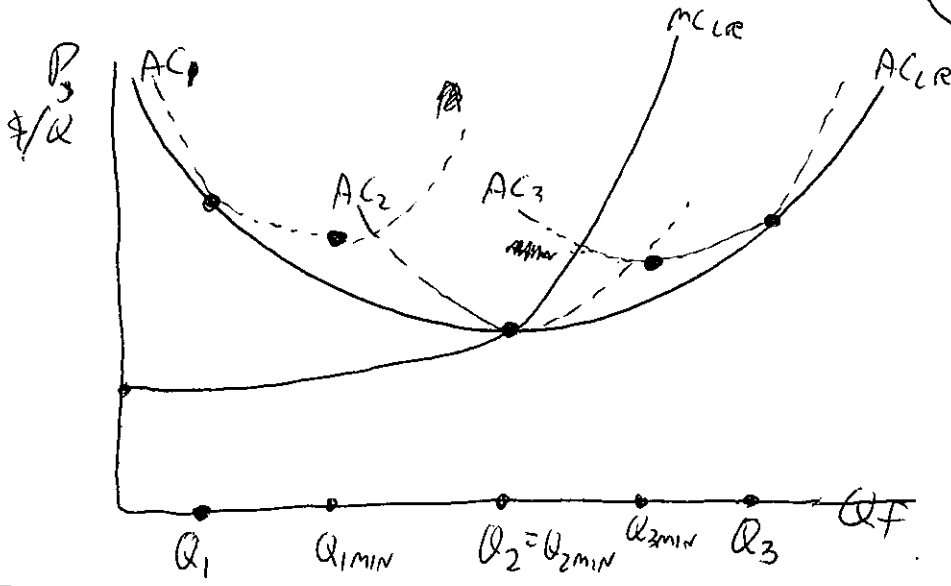


Another possibility — an integer problem — only two possible plant sizes, Q_3 is more expensive than either Q_1 or Q_2. Firms will be at either size Q_0 or Q_2, nothing else.



Here, the minimum efficient scale is Q_2, of the 3 possible firm sizes. Only firms producing Q_2 survive in the LR.

(The MC_{LR} for a firm — a monopolist, say, ~~Pollard~~ I'm not sure about)

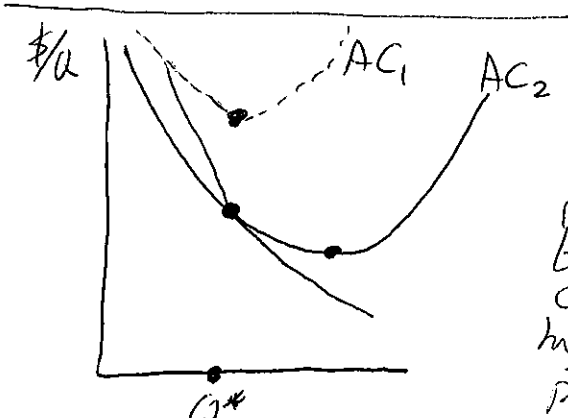


Here the AC_{LR} is V-shaped.

Interpretations

1. Bigger plant sizes have lower technological costs but higher administrative costs (firm level — each firm's Q_F independent).

2. If a firm increased output by itself, it would have flat AC_{LR}. But if all increase together, there are external economies and diseconomies. At low industry output there are economies — bigger industry, lower costs per firm. But as industry output rises, so do input prices, a pecuniary diseconomy.



~~The~~ The Worst Theorem

It is better to produce Q^* by running a low-cost big plant below capacity than a high-cost small plant at capacity.