

**Long Run Equilibrium:**

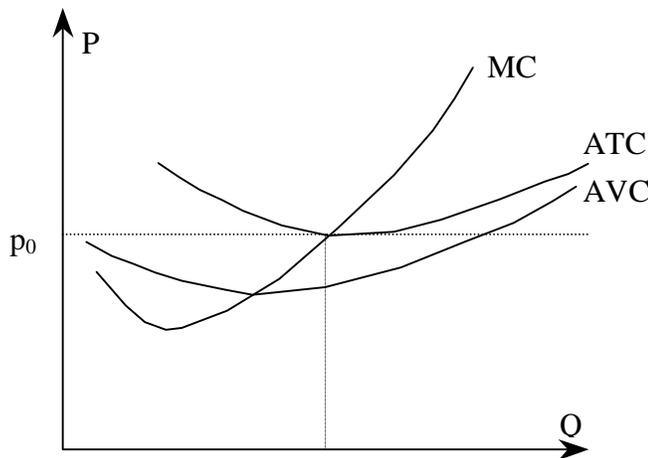
The long run is enough time for a firm to enter or leave an industry. When a firm shuts down they still have to pay the fixed price. This is different from a firm leaving the market, because when a firm leaves the market that firm no longer has to deal with fixed costs.

The shutdown condition:  $p < \min AVC$

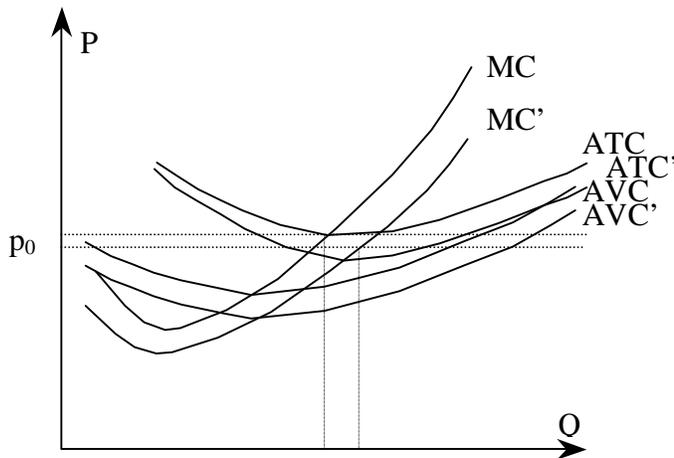
Leave market condition: Economic profits  $< 0 \implies \text{economic } \min ATC > p$

Assume **Perfect Competition** : the firms are price takers.

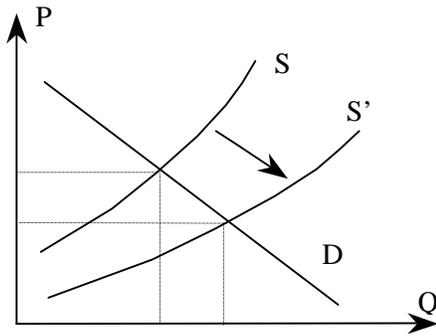
*In Long Run Equilibrium all firms in a perfectly competitive industry make zero economic profits.  $p = \min ATC = MC$ .*



If labor costs go down by 10% for every firm in the market, (labor being the only variable costs) then the ATC, changes, and the  $p > \min ATC$  for a while.



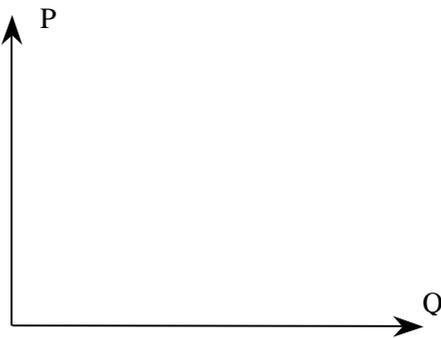
At first the price would be at  $\min ATC$ , and in the short run the price and  $\min ATC$  would be such that  $p > \min ATC$ . So now firms are making positive economic profits. So more firms would enter the industry and supply would shift left until price equals  $\min ATC$ .



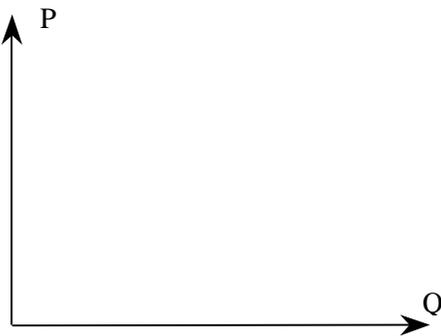
The supply curve shifts right and the price goes down to the new minATC as new firms enter the market.

There would be entry until  $p = \text{new minATC}$ . Q per firm goes back to where  $\text{minATC} = \text{MC} = p$ . The price goes down in the long run.

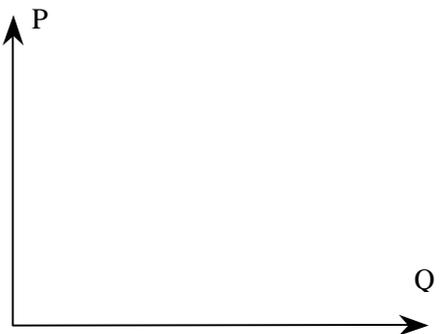
Suppose that the demand curve shifts right. What happens in the short run, what about the long run?



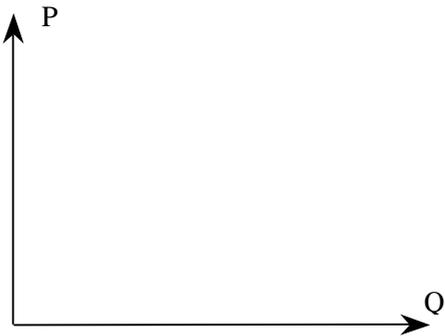
What if the government institutes a tax of \$1000 car per car made. Think about what it does to the minATC.



Now suppose that there is an import quota placed on foreign cars instead. What happens to the equilibrium for domestic cars in the short run, and in the long run.



What if the government instead paid \$1000 of the price of a new domestic car for all buyers. What happens to the short run equilibrium, what about the long run? Hint. Think about the demand curve, and what happens to minATC.



What if the government adds 10% extra quantity to the market of homes for example. What happens in the short run, what about the long run? Hint think about where in the demand curve  $p=\text{minATC}$ , and how much is supplied by private producers.

