

Market Structures

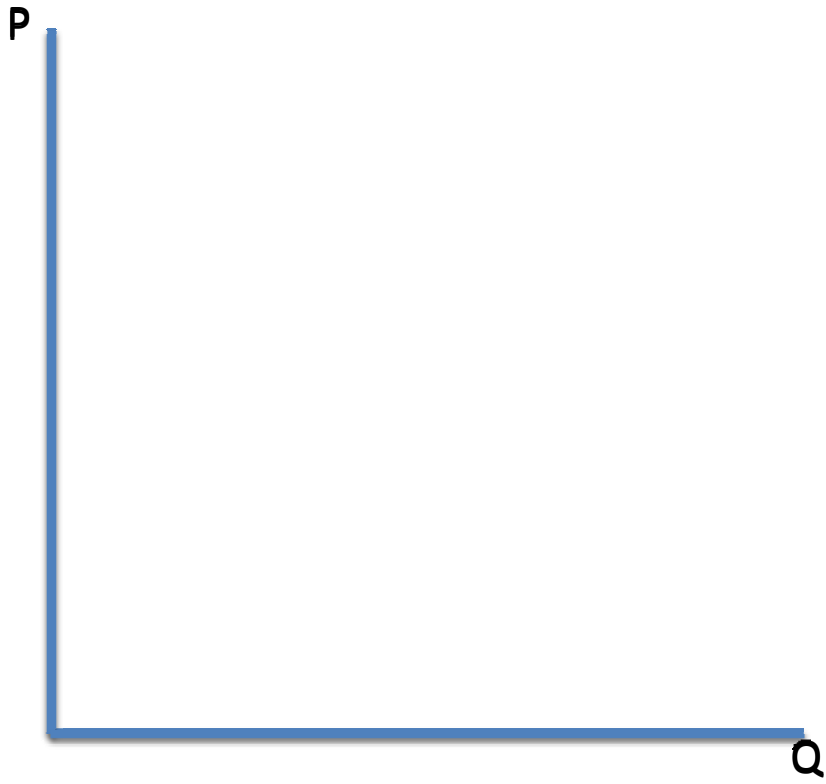
Perfect Competition

The Market for Corn

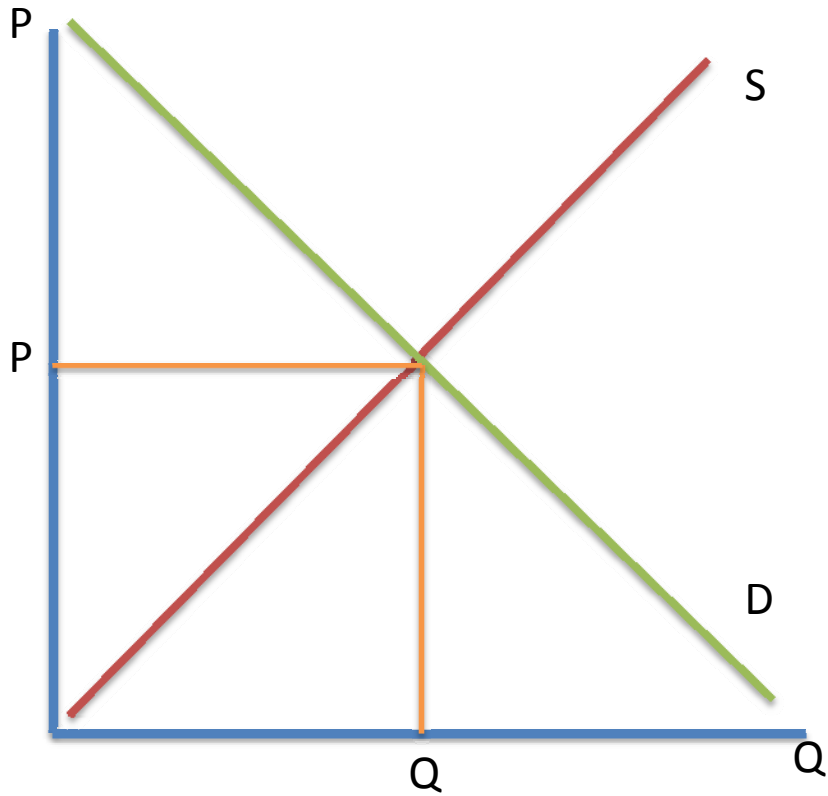


The Market

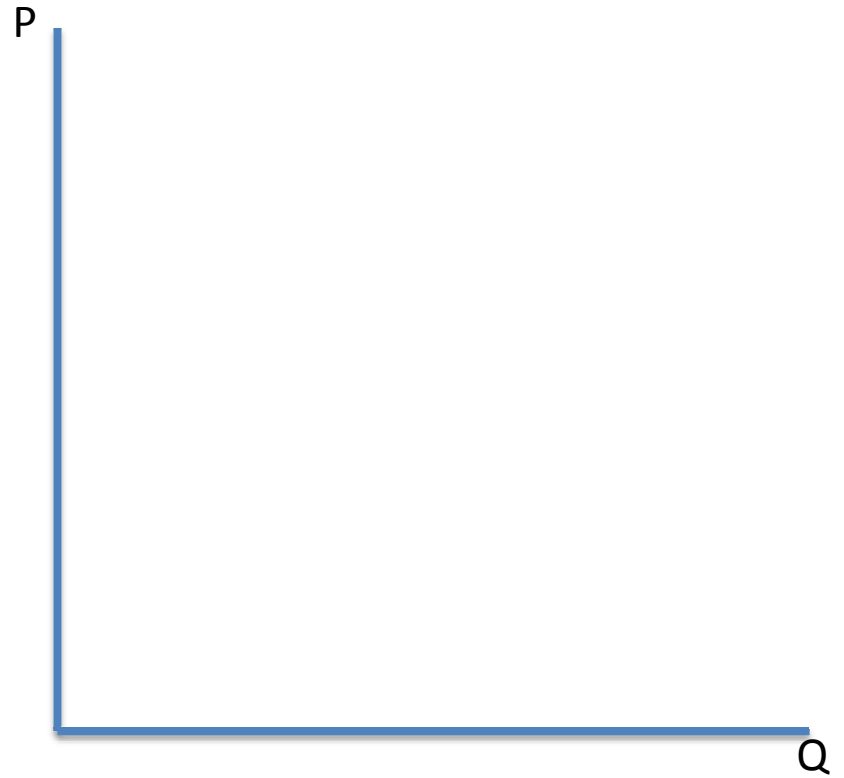
The Firm



The Market

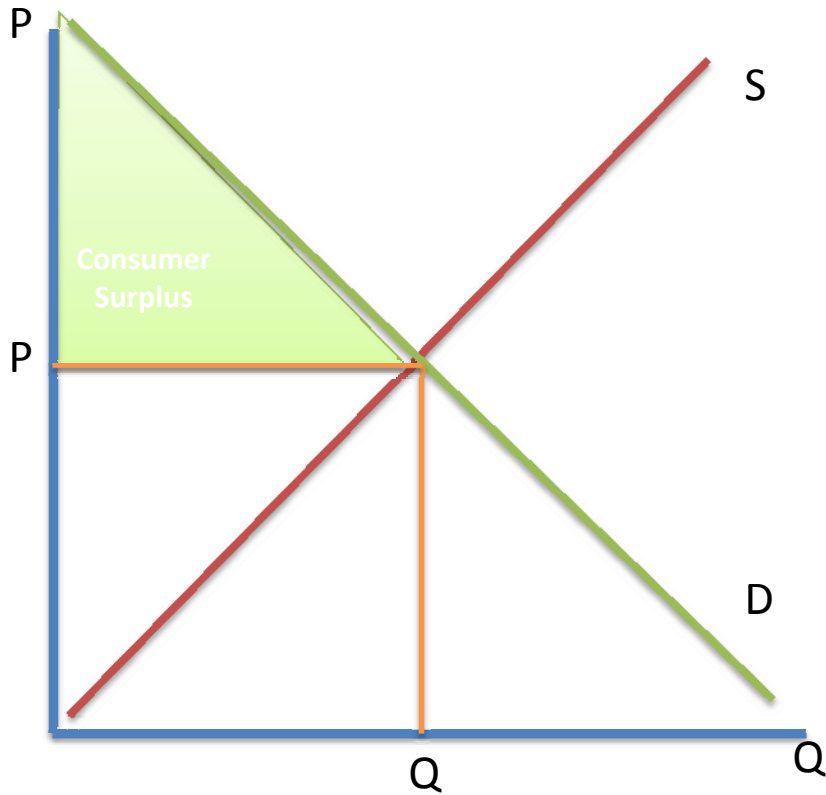


The Firm

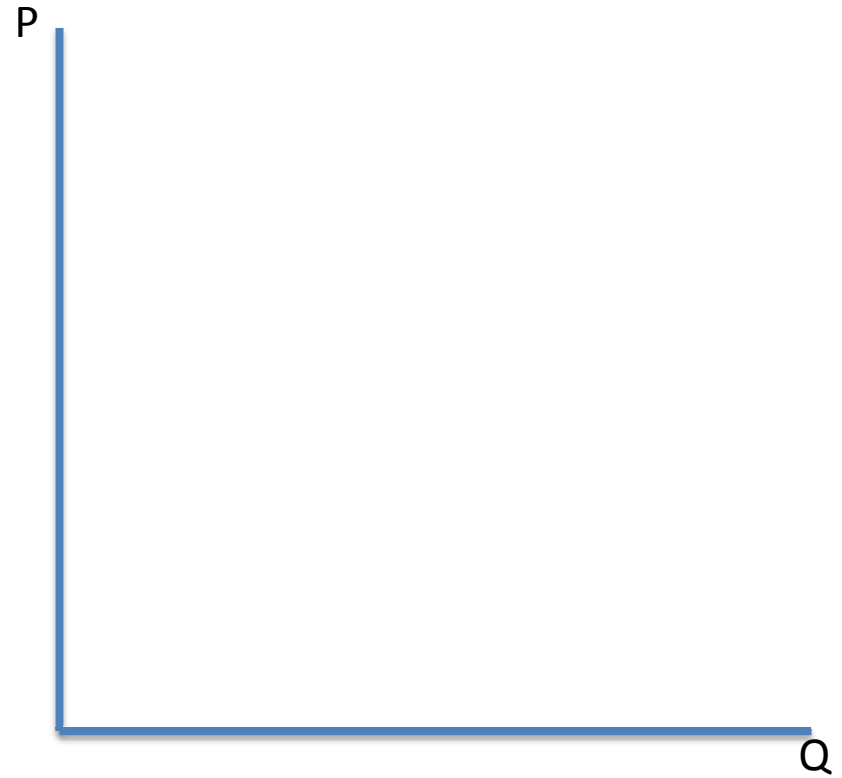


Market interactions determine the equilibrium price for our corn.

The Market

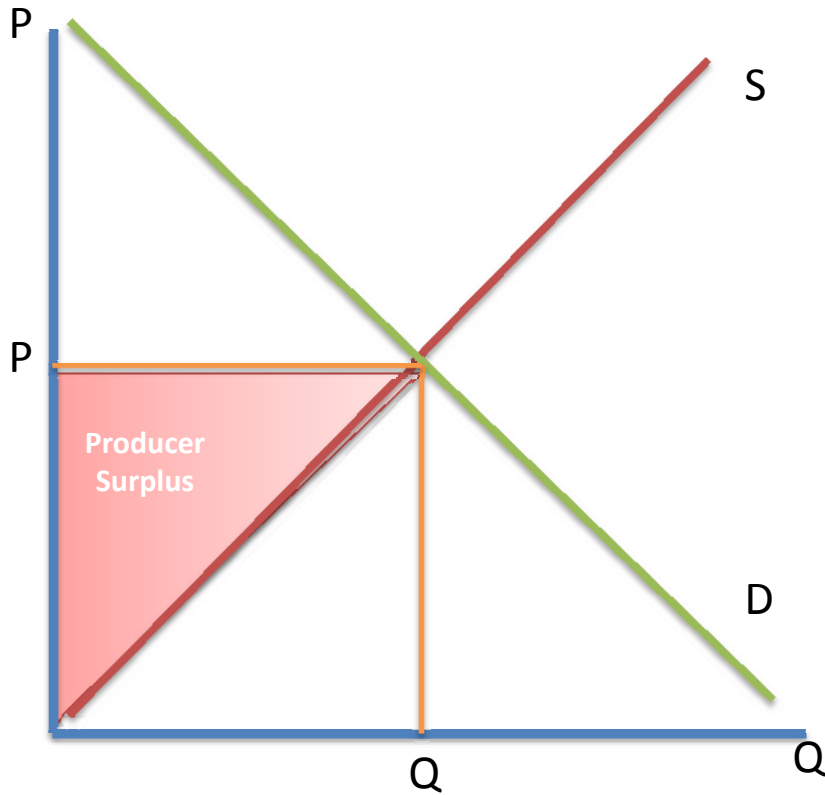


The Firm

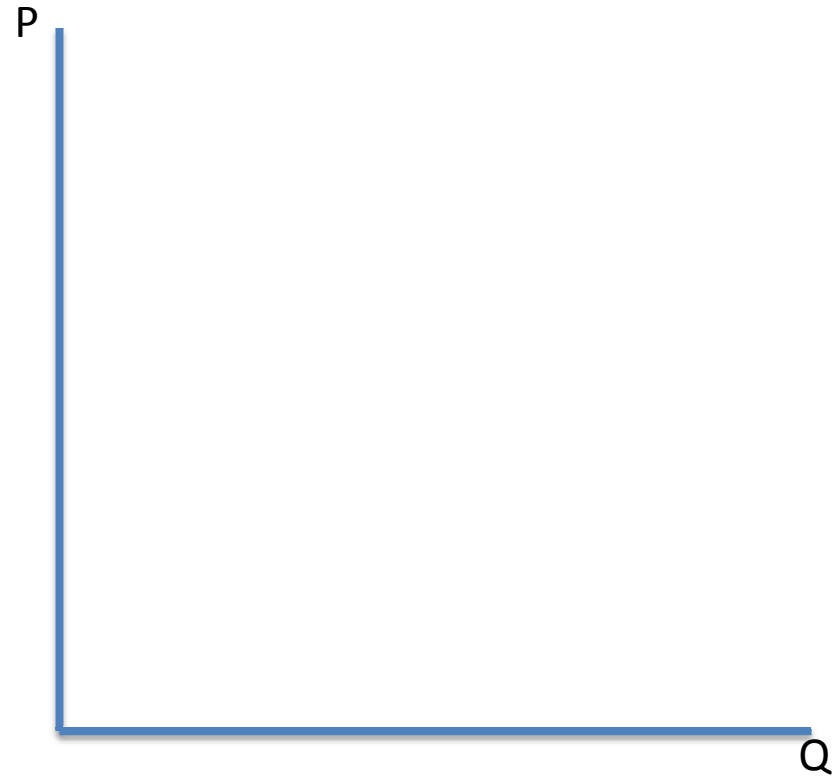


Consumer Surplus: The amount that consumers benefit by being able to purchase our corn for less than the maximum they'd be willing to pay.

The Market

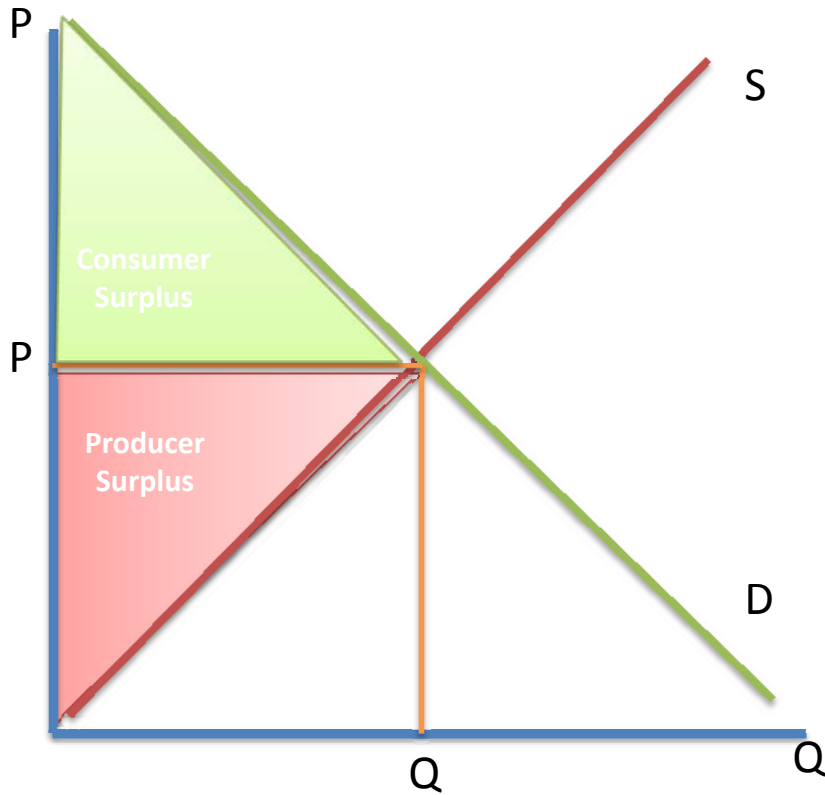


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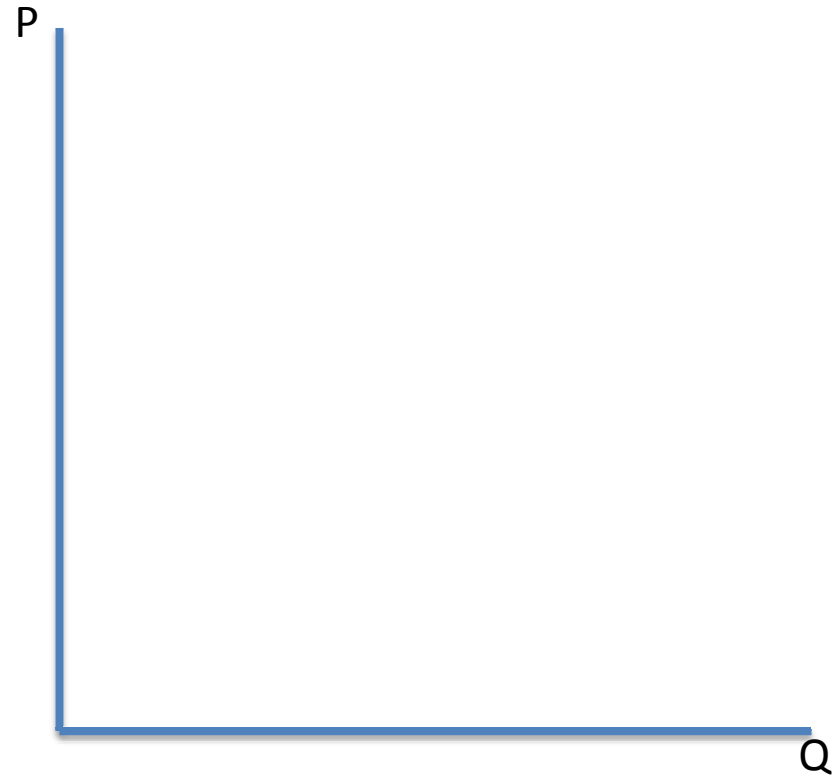


Producer Surplus: The amount that producers benefit by being able to sell corn for more than the minimum they'd be willing to receive.

The Market

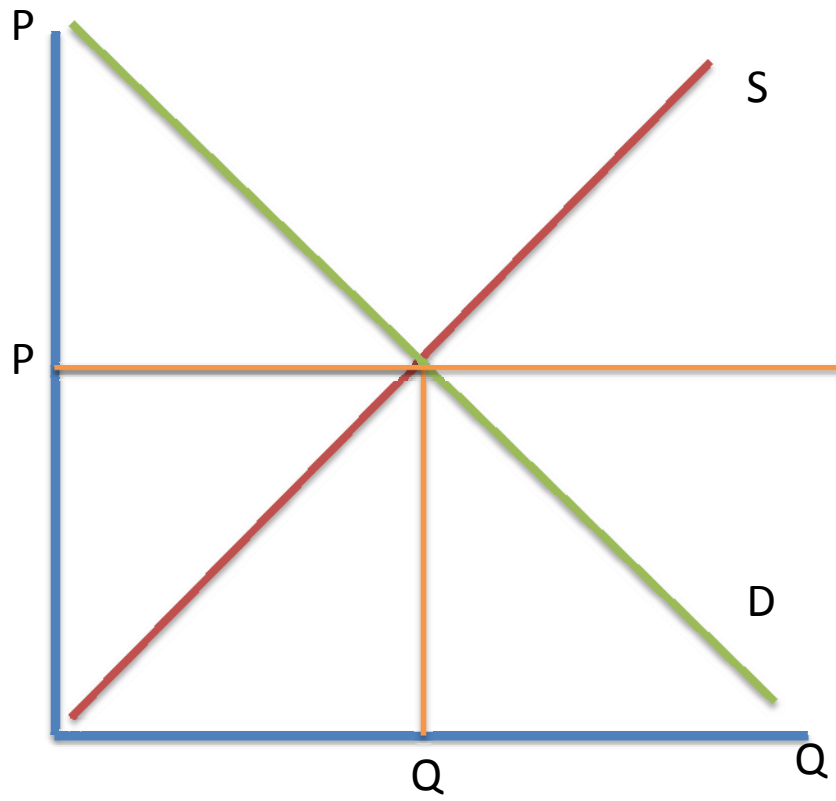


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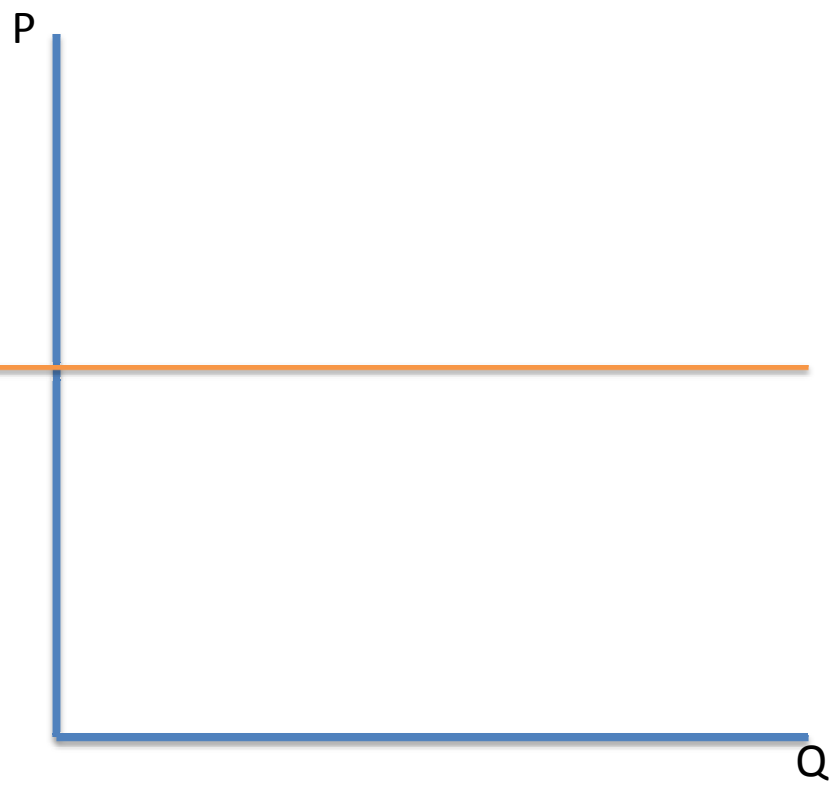


Total Surplus = *social surplus*.
Markets tend toward maximizing social surplus. Consumers get the lowest price possible while producers get the highest. It's great!

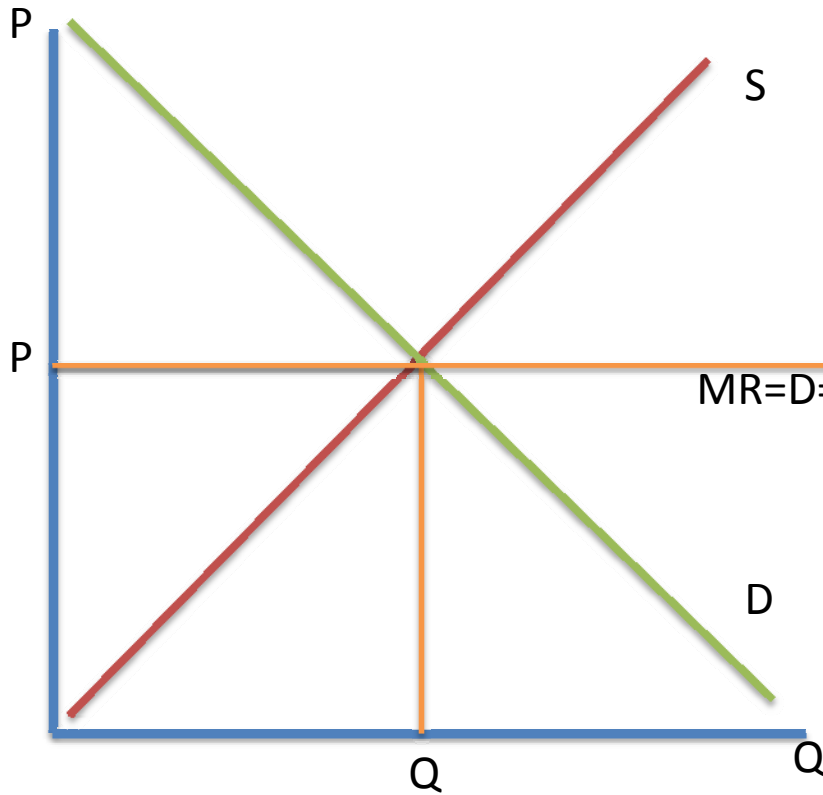
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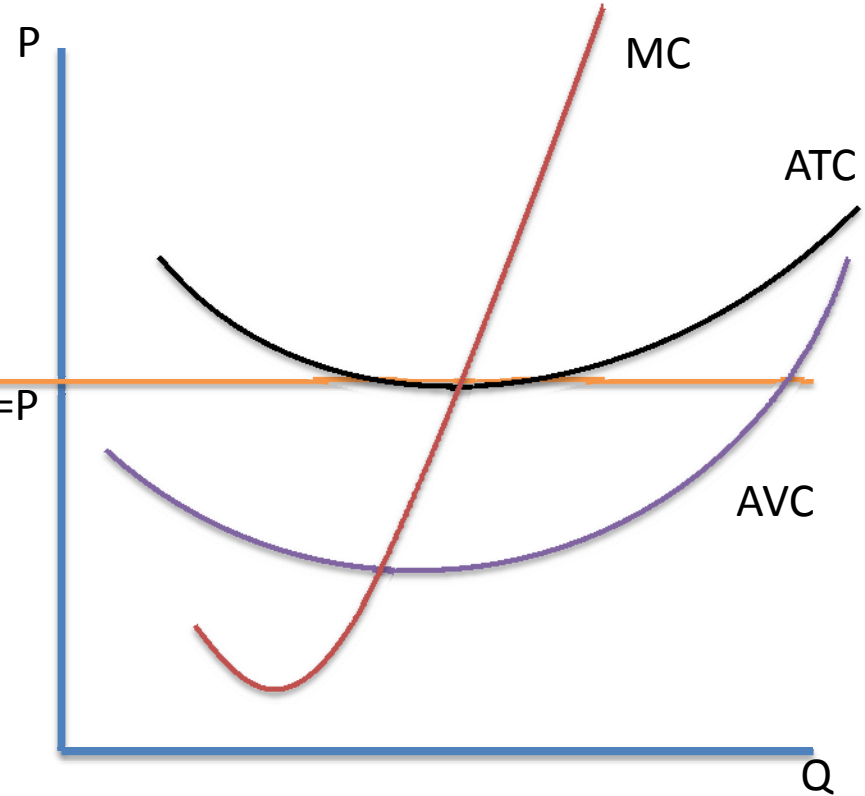
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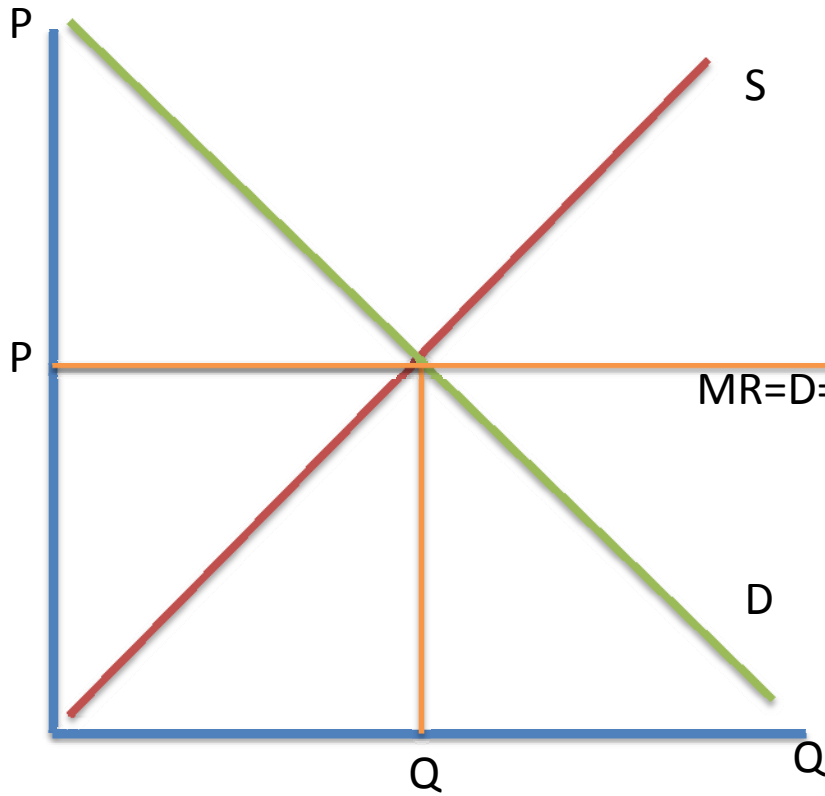
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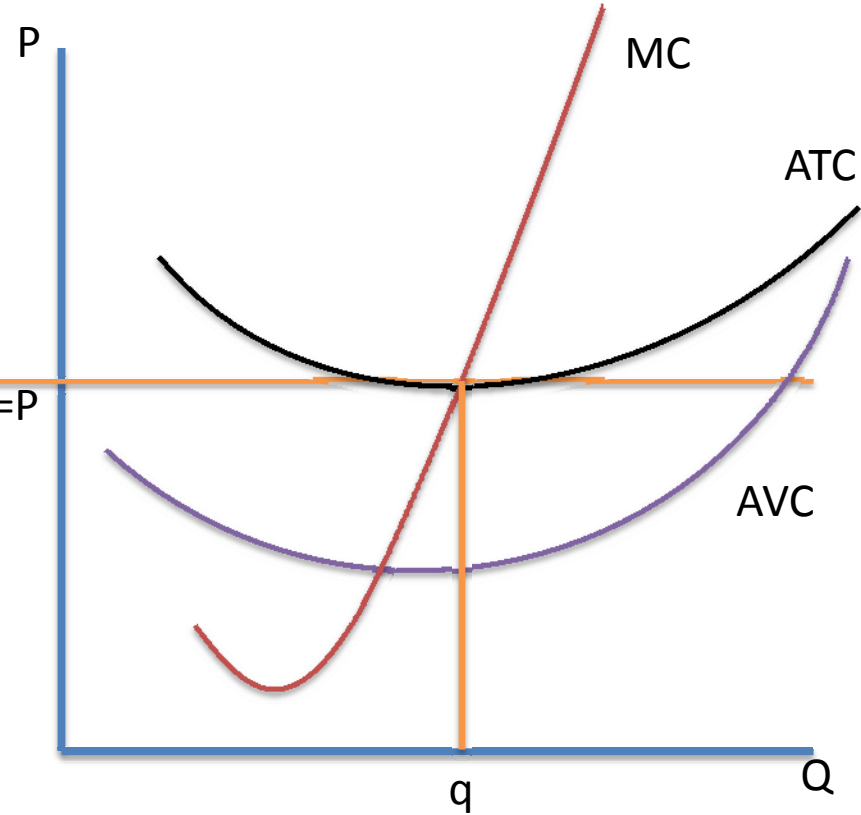
Marginal Revenue = (perfectly elastic) Demand = Average Revenue = Price (given by the market)

3 important cost curves for the firm are Average Total Cost (ATC), Average Variable Cost (AVC) and Marginal Cost (MC). Average Fixed Costs (AFC) can be calculated from the difference between ATC and AVC.

The Market

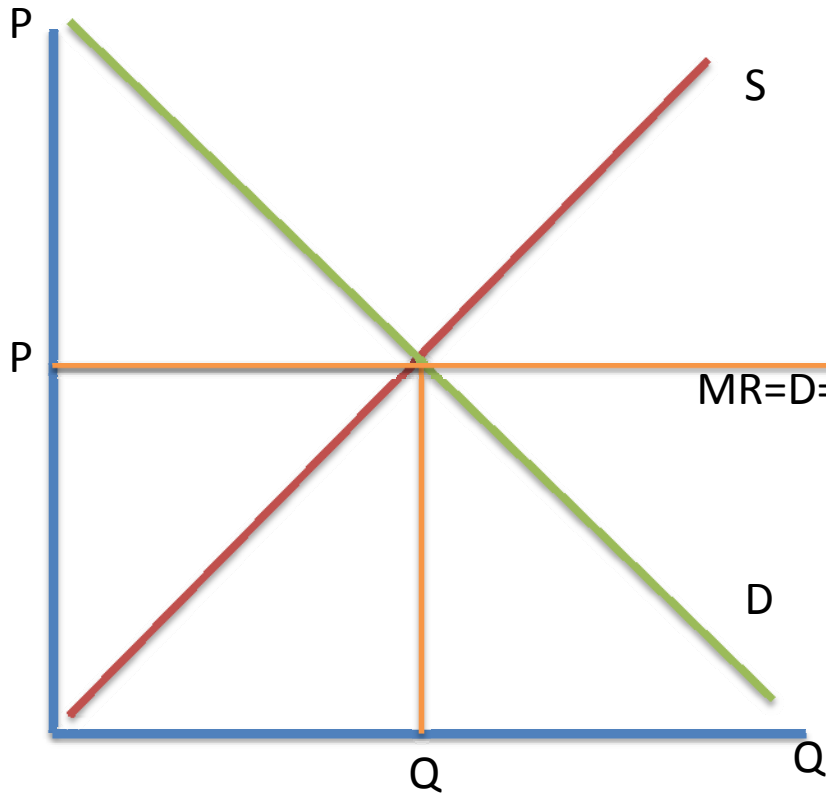


The Firm

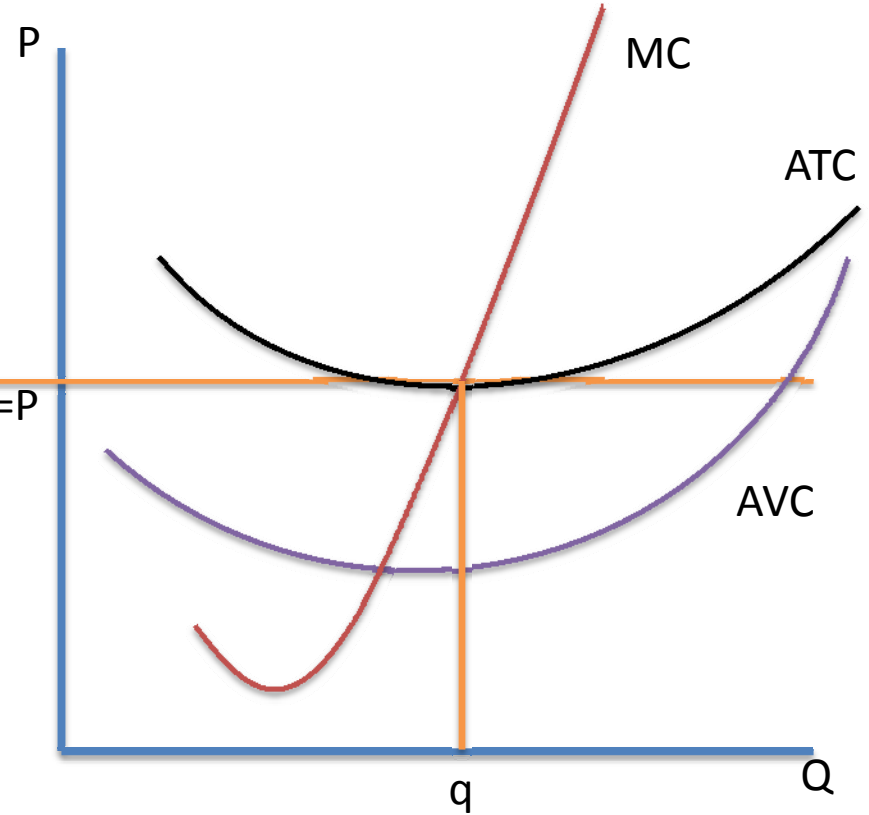


The firm sets output where $MR = MC$, in other words, the point at which it costs as much to produce one more unit as that unit will fetch in the market.

The Market

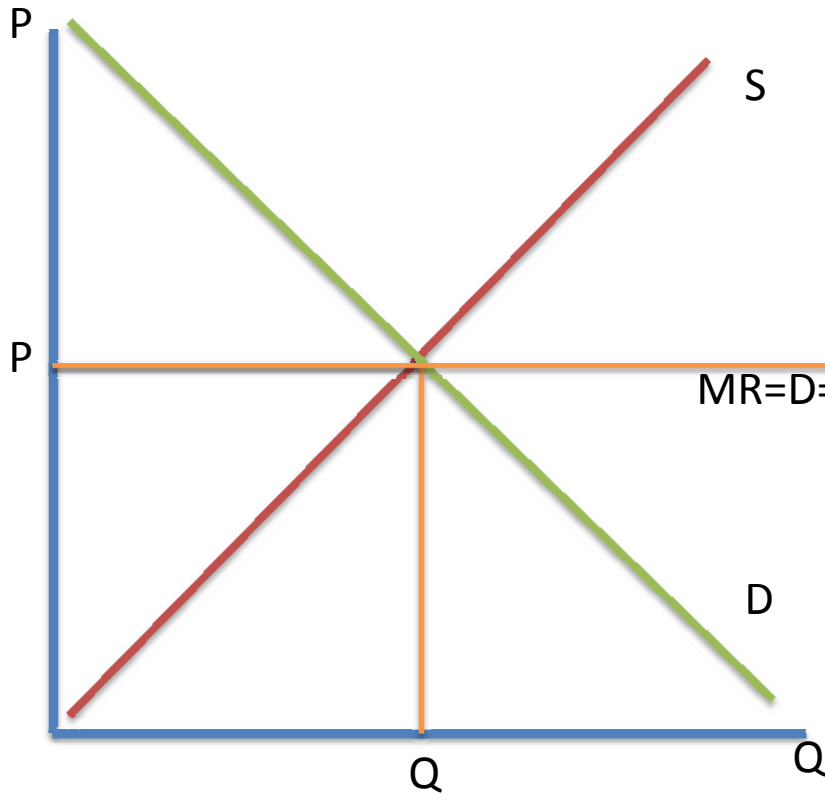


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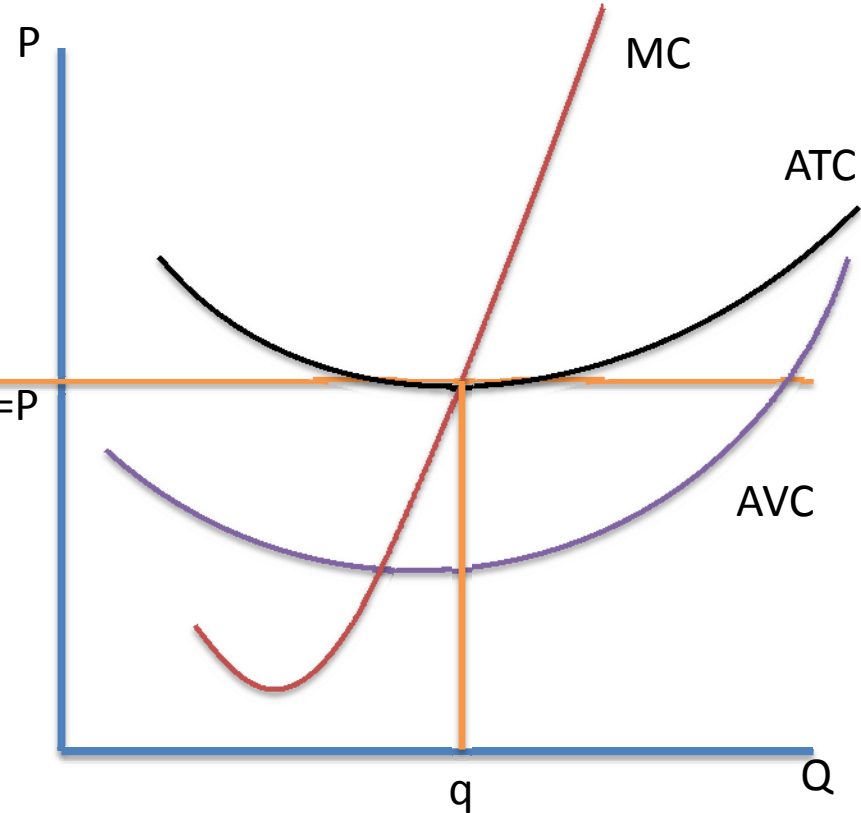


If $MC < MR$, the firm should increase output because there's more profit to be gained (profit being the difference between cost and revenue).

The Market

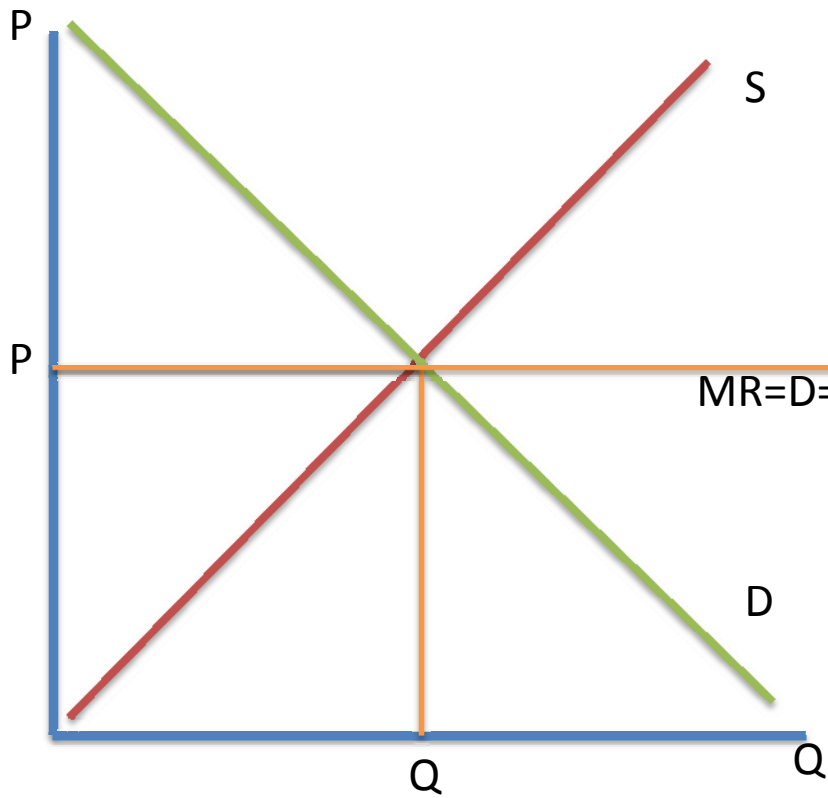


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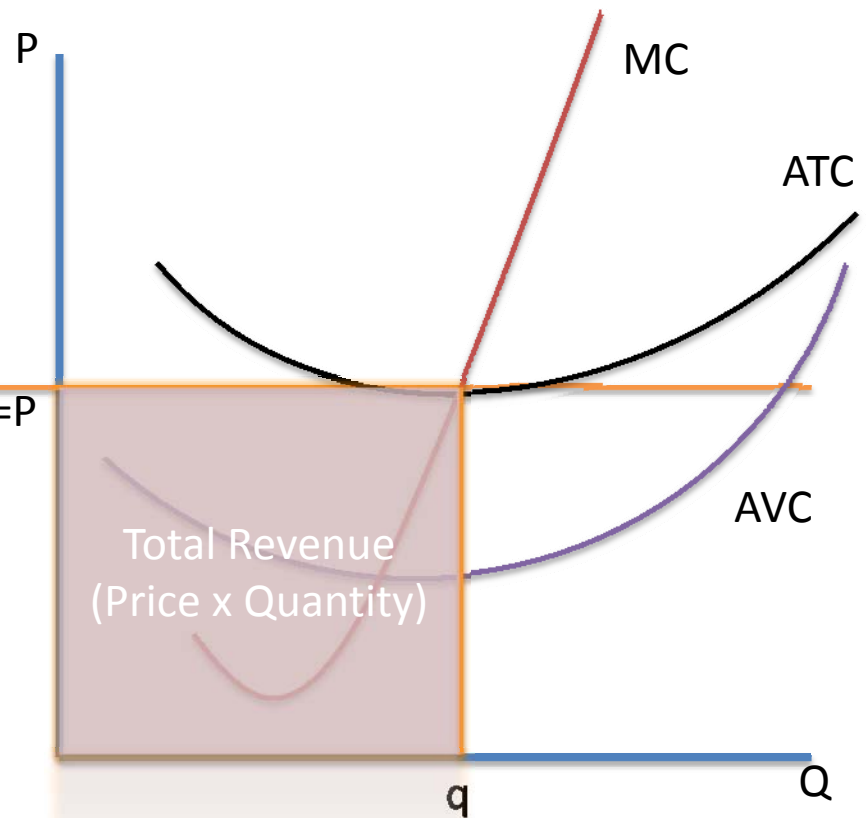


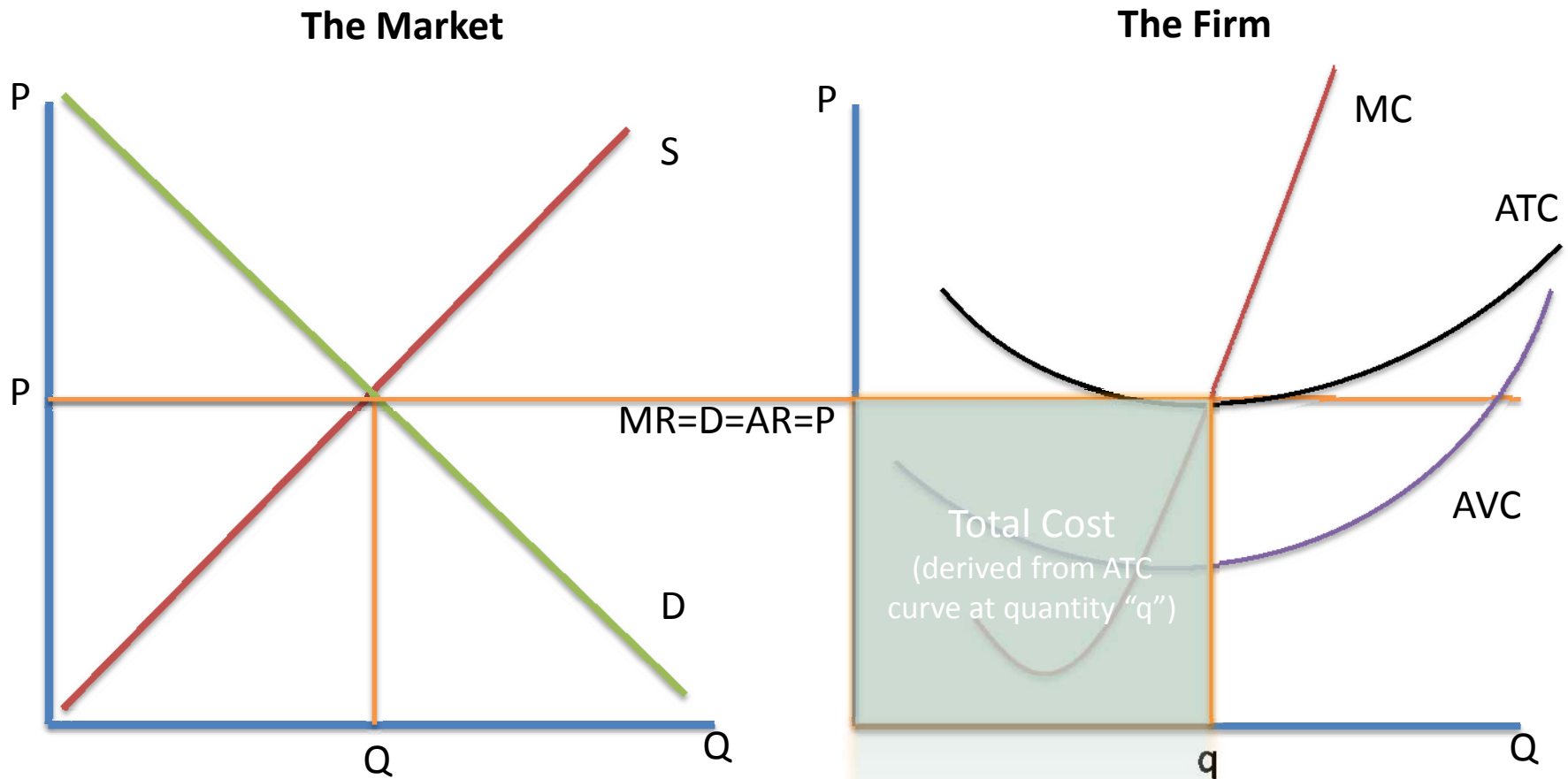
If $MC > MR$, the firm should decrease output because there's less profit to be gained (it's costing you more to produce the next unit than the additional revenue that unit would fetch in the market).

The Market

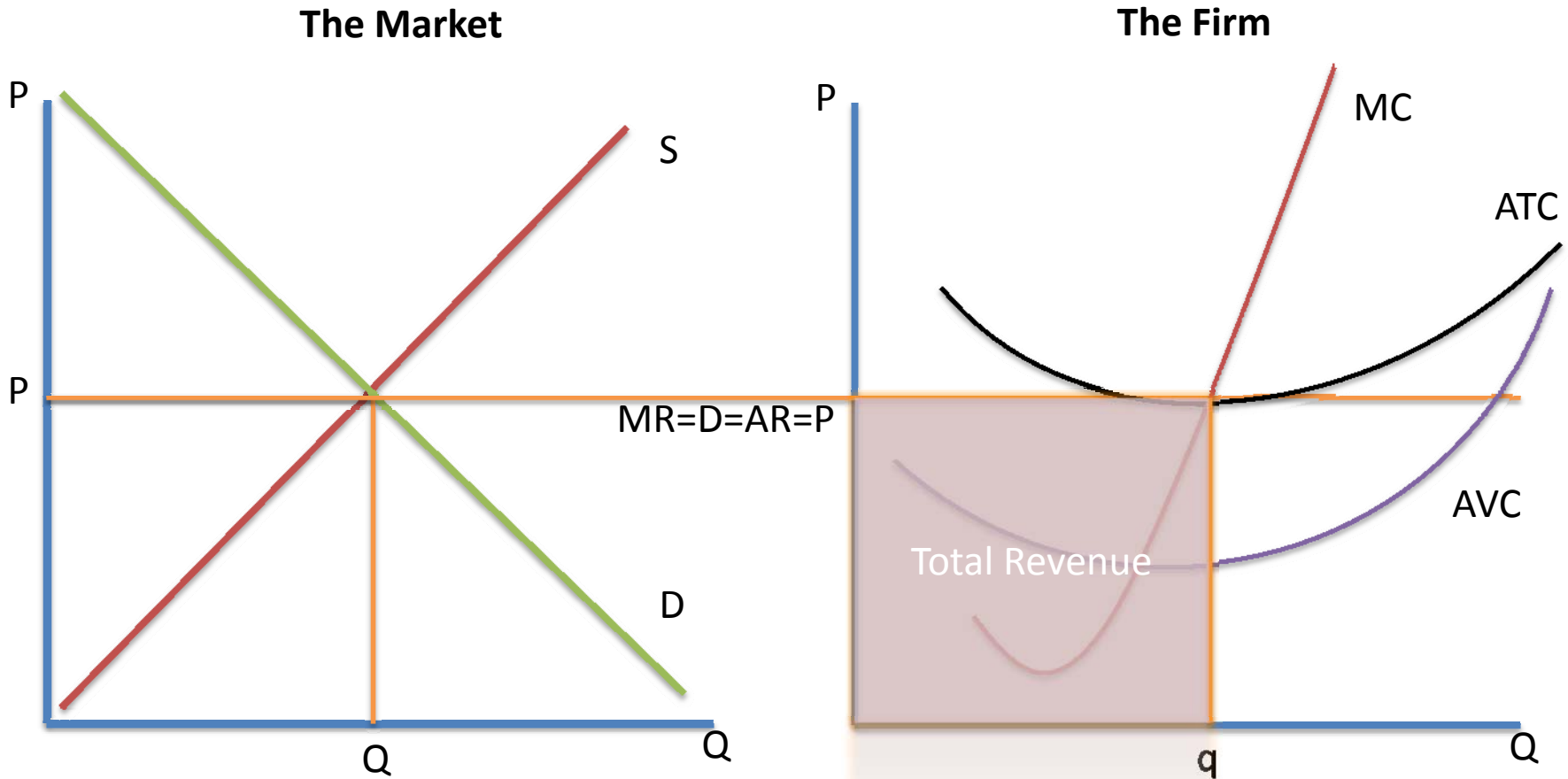


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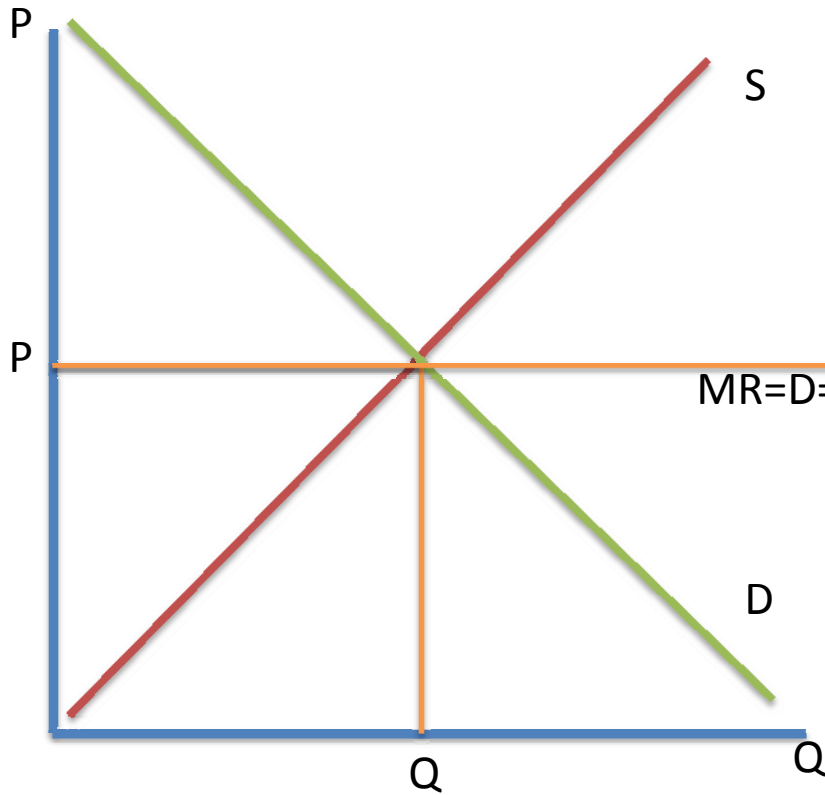


Long Term Equilibrium in perfectly competitive markets is illustrated by showing the firm producing at the Break Even Point, where $P = MC = ATC$ and *economic profits* are at zero ($TR = TC$).

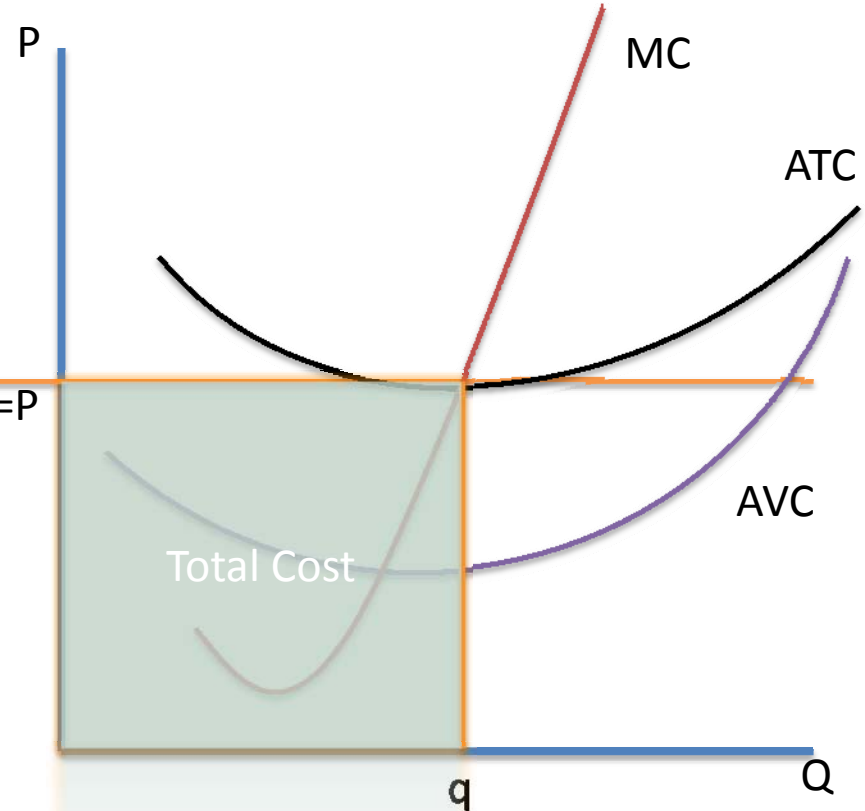


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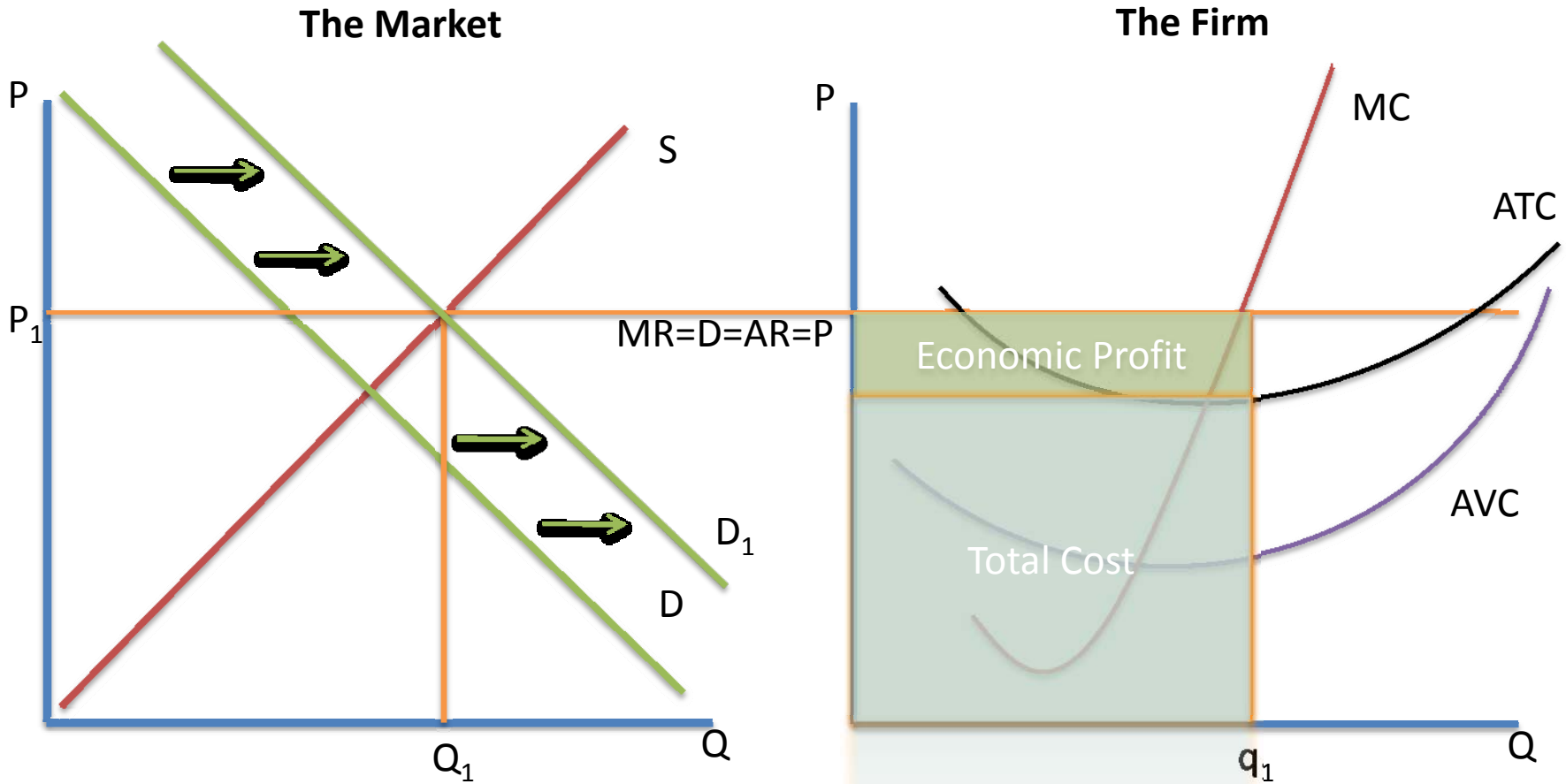
The Market



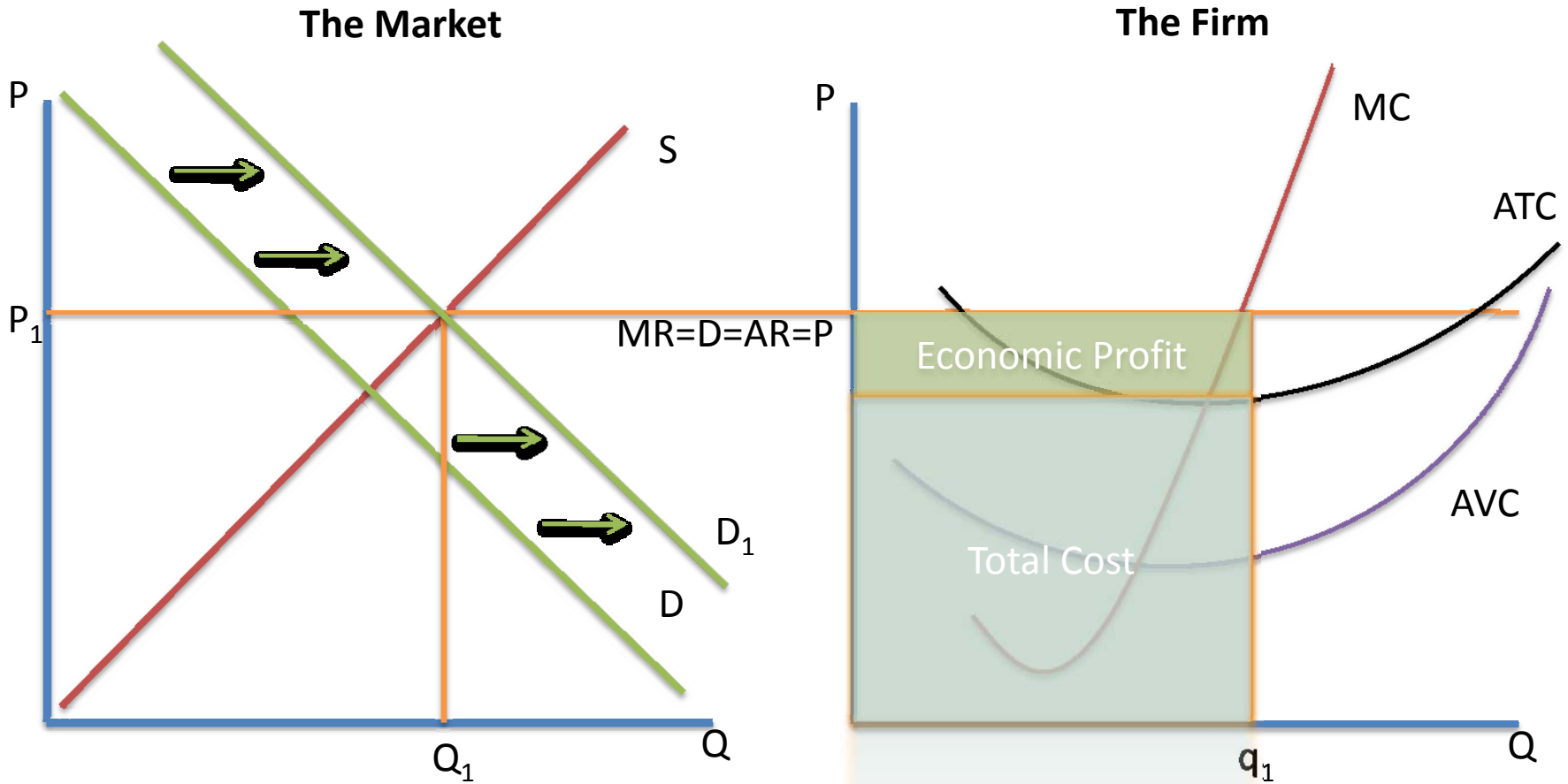
The Firm



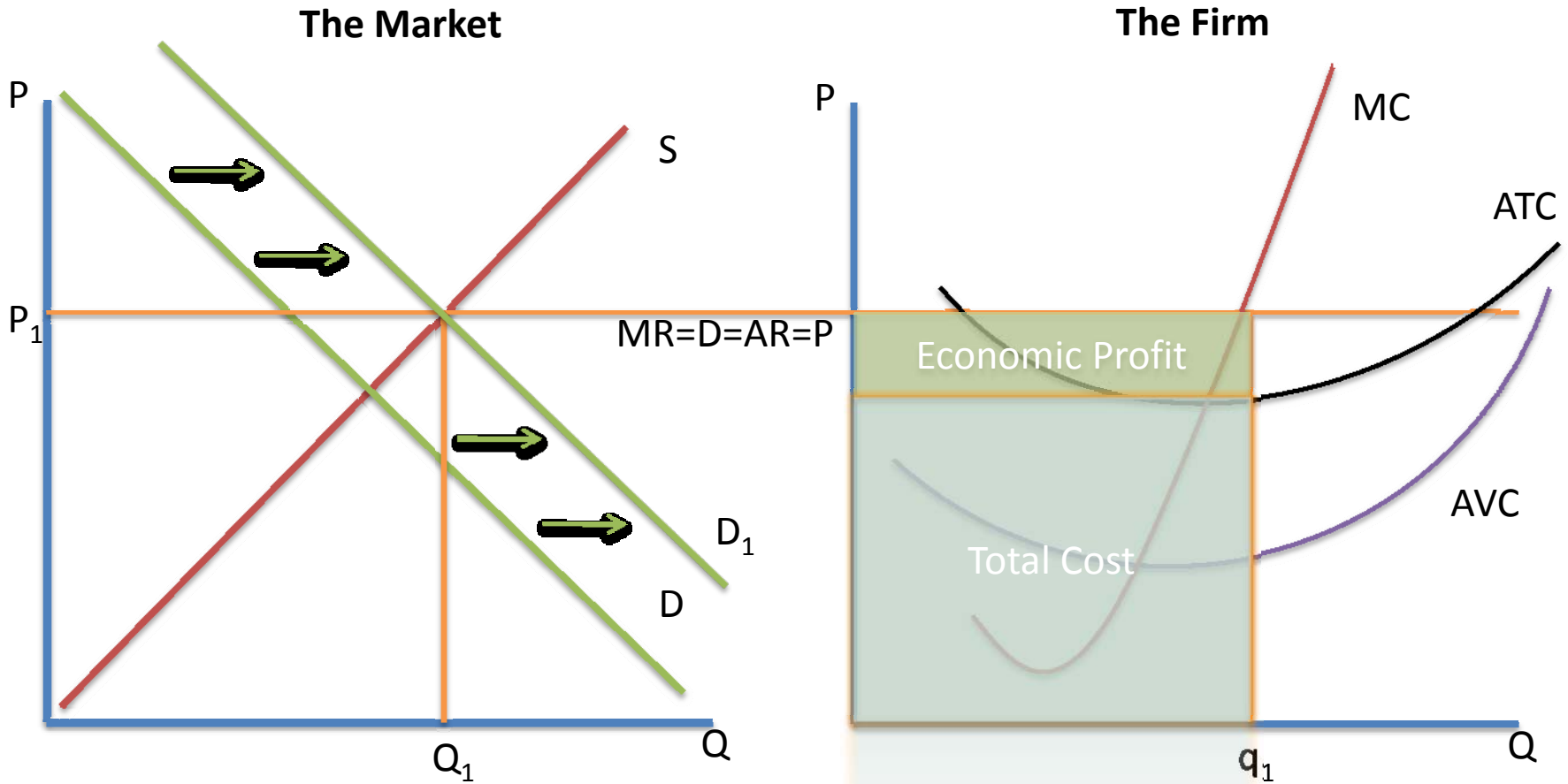
Of course, in the Short Term, many scenarios and situations can occur. For example, what if there were to be a news story exalting the benefits of consuming corn.



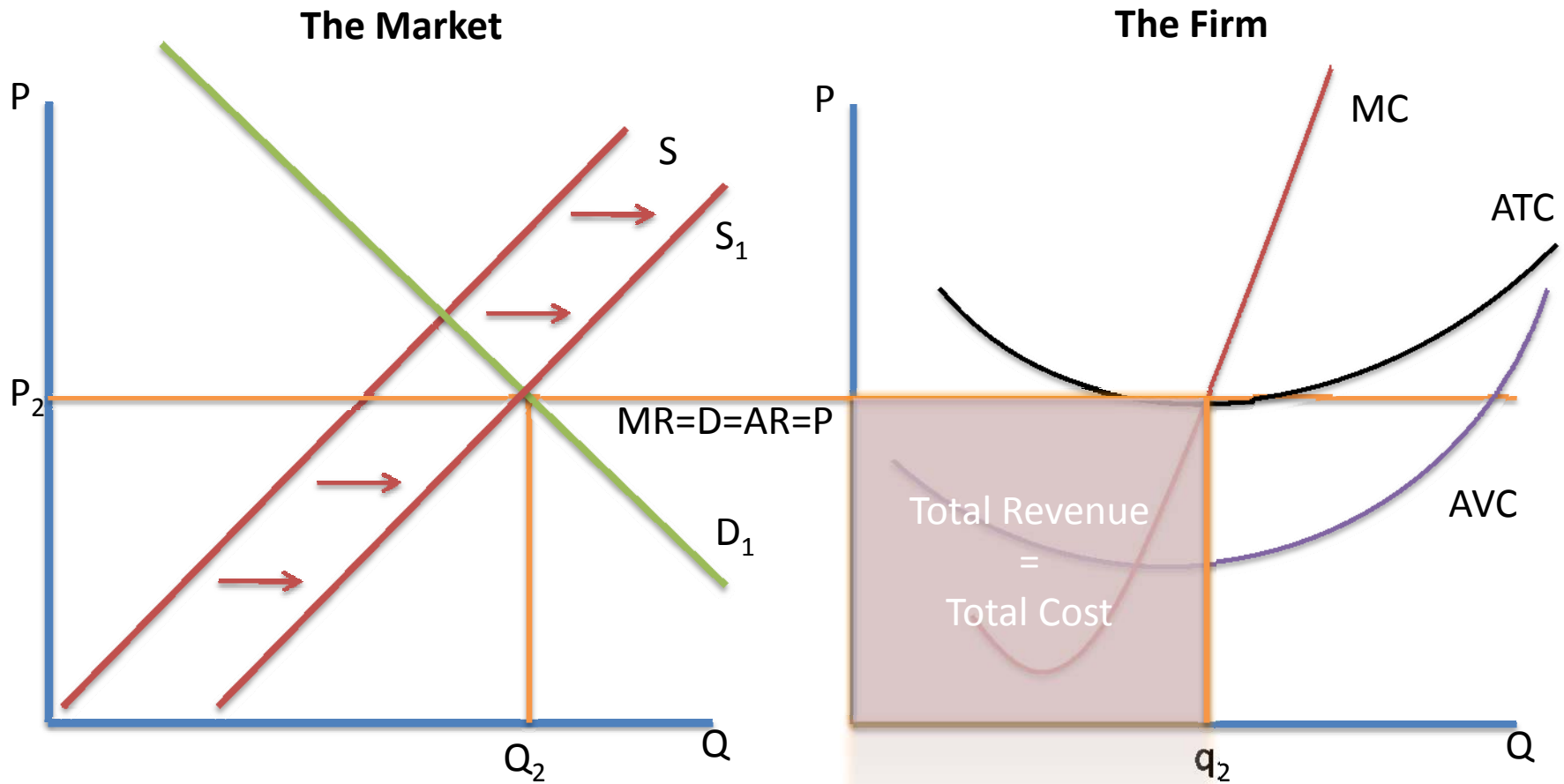
This would shift the demand curve to the right, thus raising the price of corn in the market place and signaling our firm to increase output from q to q_1 (where $MR = MC$). Given that our costs have already been established (the ATC curve), we find ourselves making an *Economic Profit*.



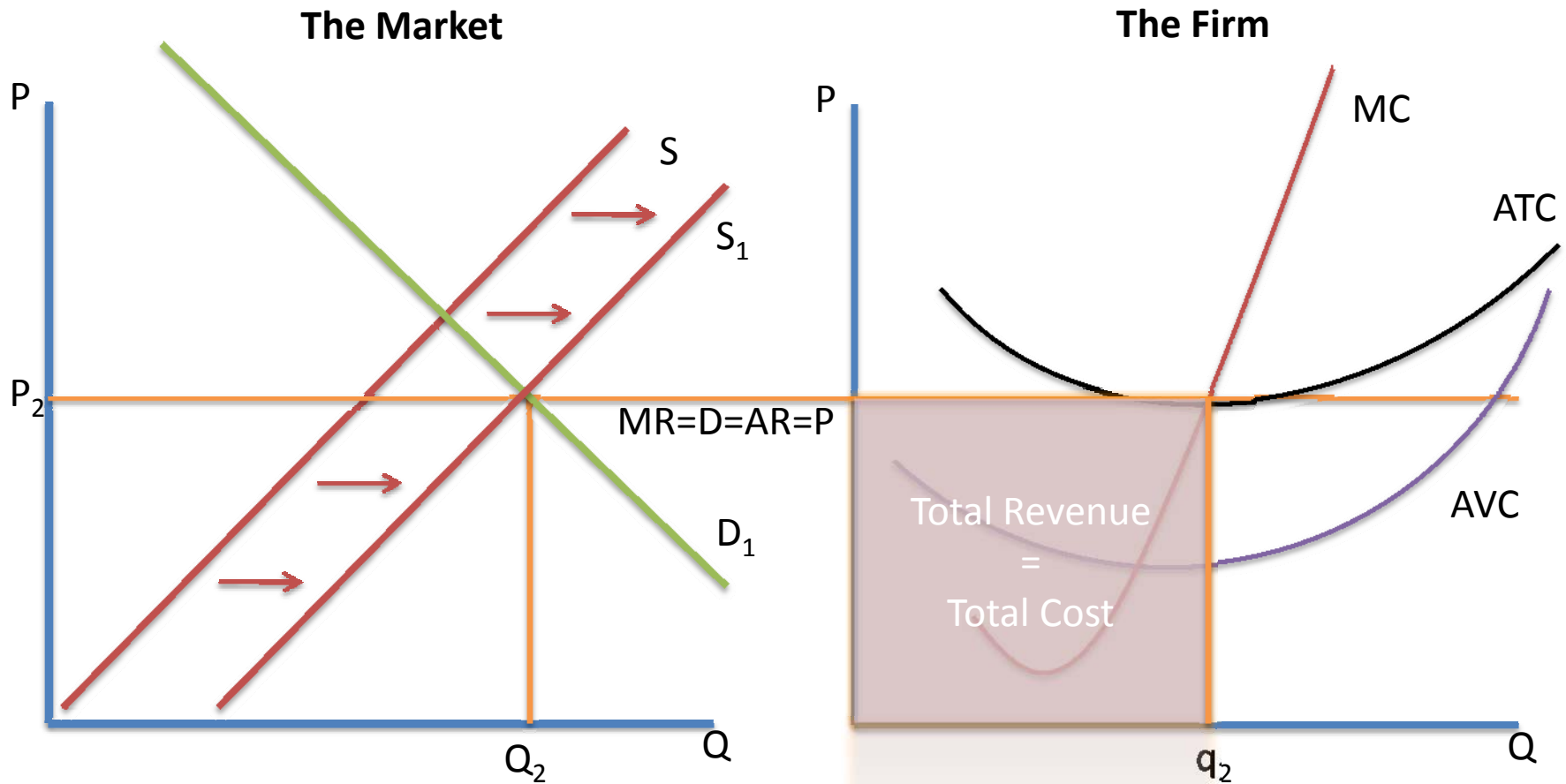
Economic Profit simply means that all Opportunity Costs are taken into consideration – this profit is better than the next best thing you could do with your land, labor and/or capital.



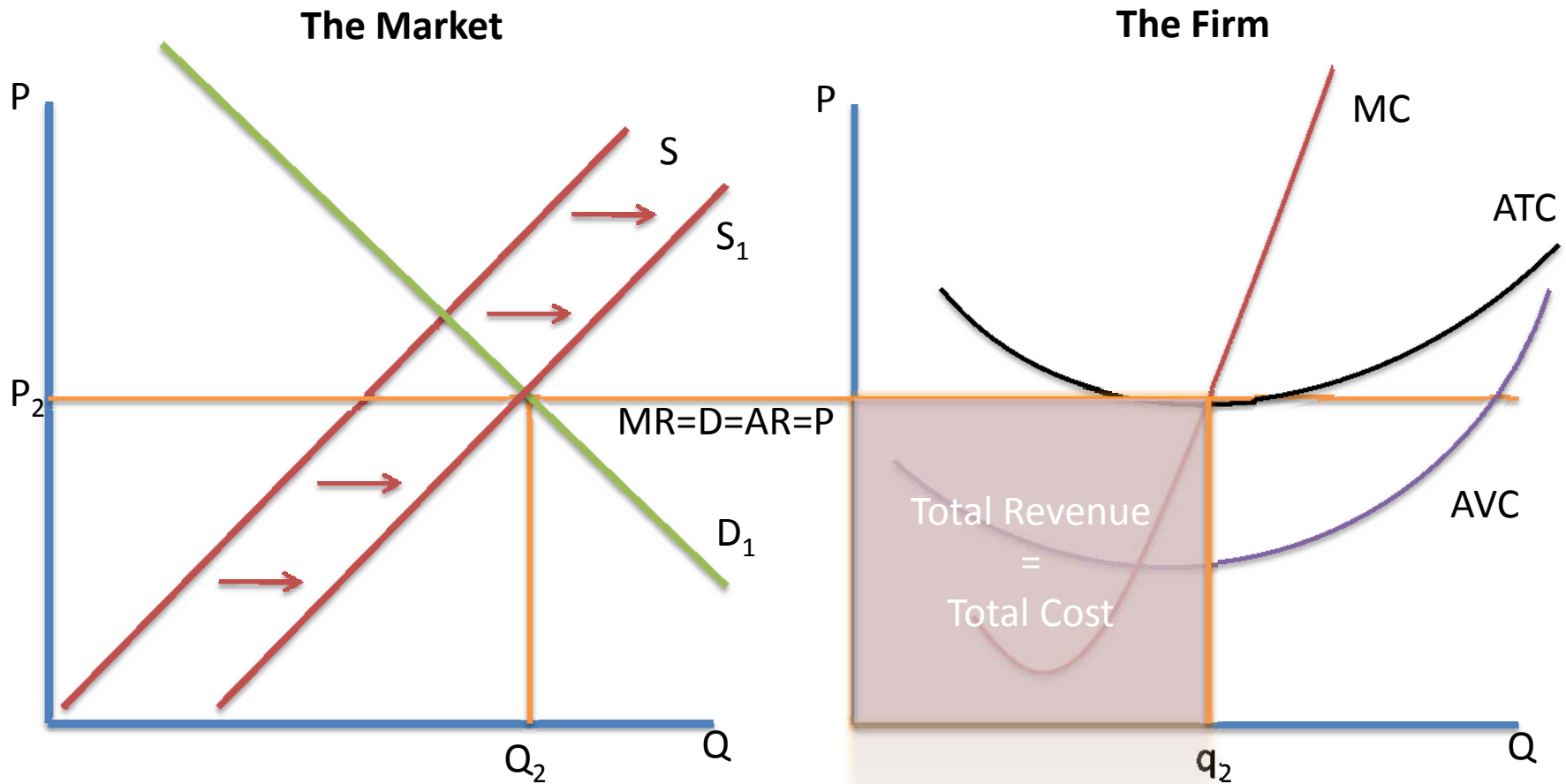
Economic Profit also attracts more entrepreneurs looking for something better to do with their own land, labor and/or capital...



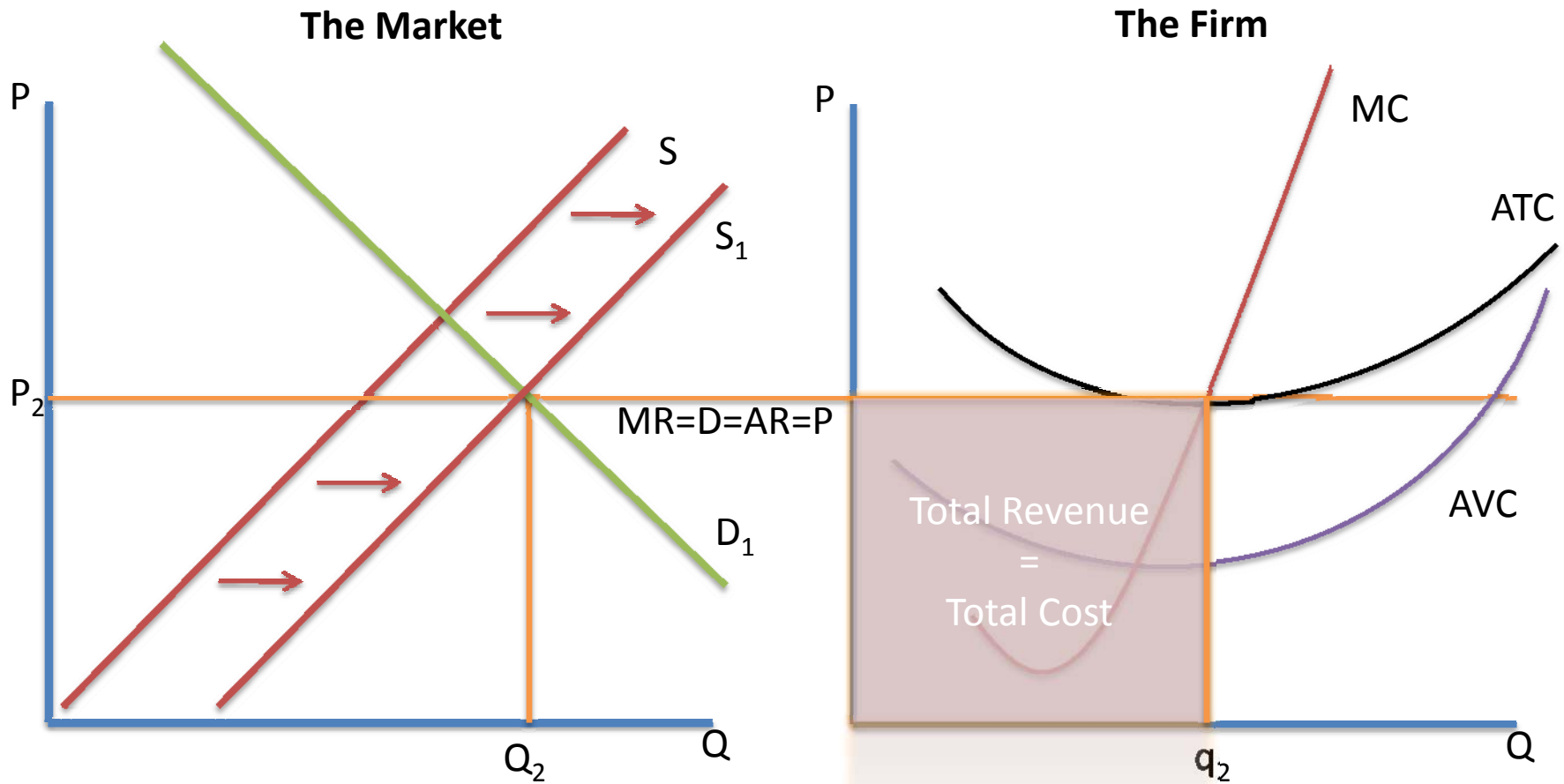
Attracted by our economic profits, more firms enter the market and shift the supply curve further out to the right. This has the predictable effect on price.



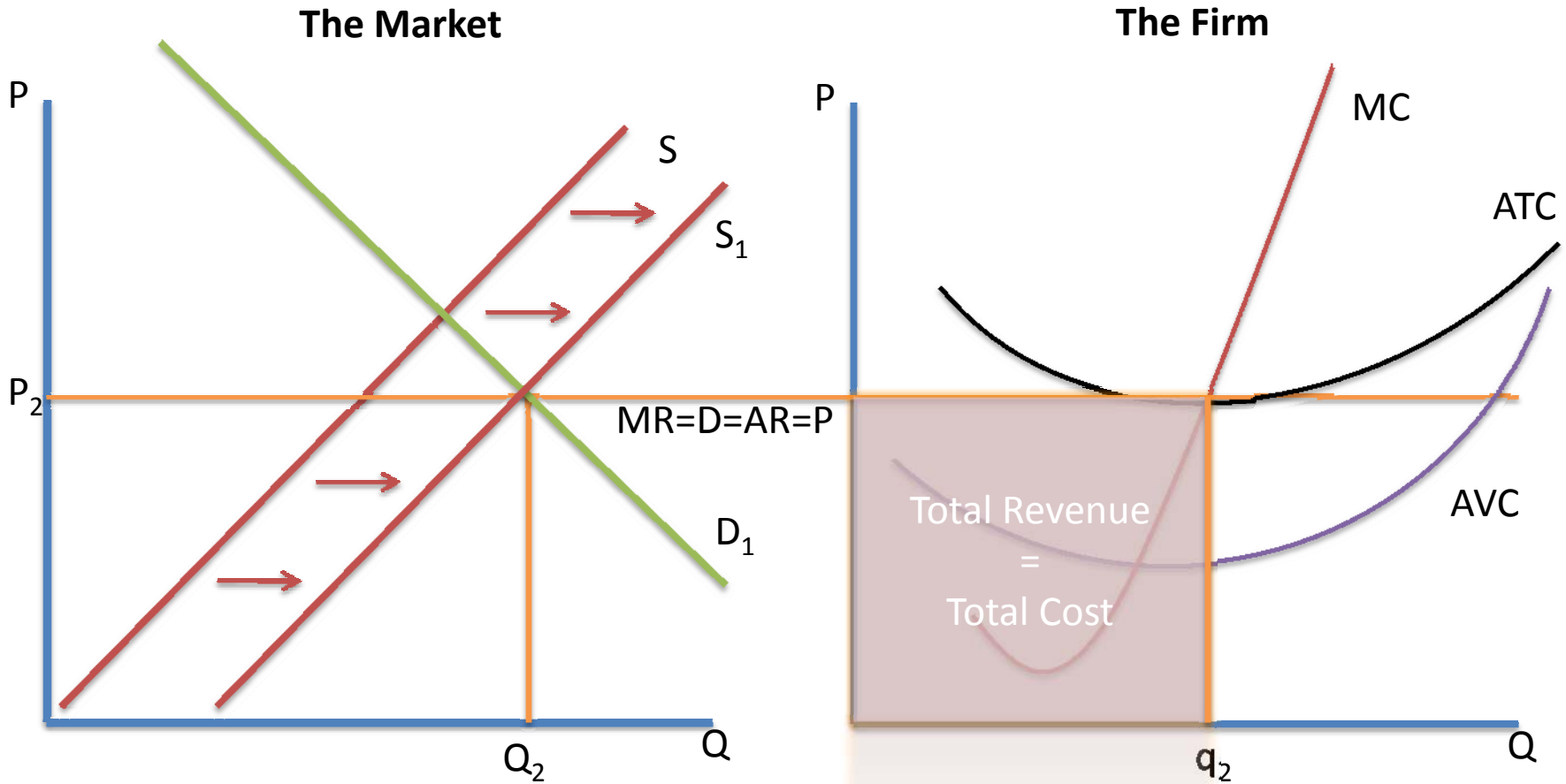
The firm continues to follow the $MR = MC$ rule, decreasing output to q_2 . It is now back to the Break Even Point, which means that it is covering its costs (including capital depreciation and some opportunity costs) and earning *Normal Profits*.



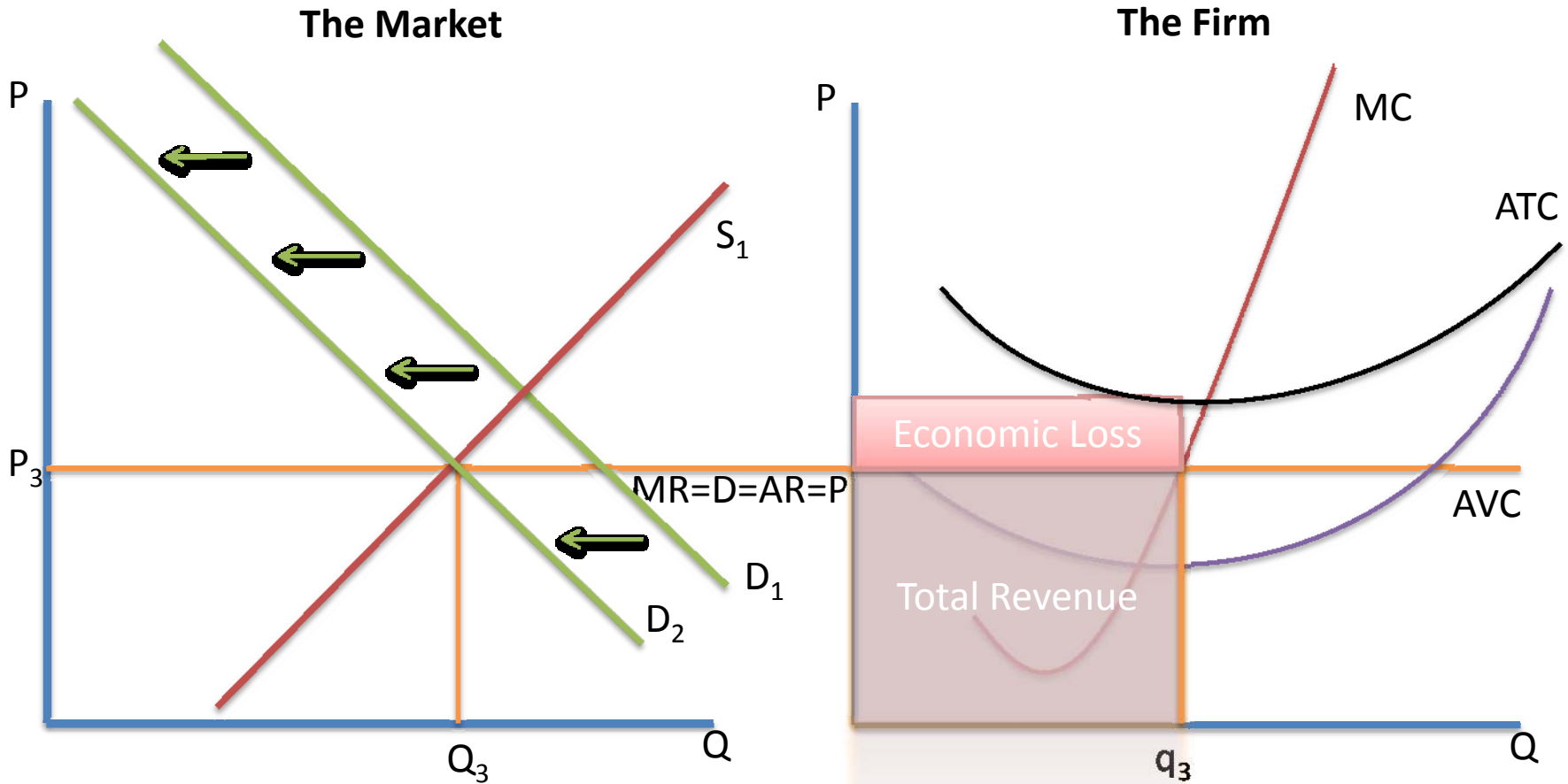
Accounting profits at this point are actually positive, even though it appears that $TR = TC$. This is because accounting practices do not allow for *implicit* (opportunity) costs, only *explicit* ones. Accounting practices would provide for some rate of return or depreciation of capital equipment as explicit costs, so that on a balance sheet it may appear to an accountant that there is a profit when $TR = TC$.



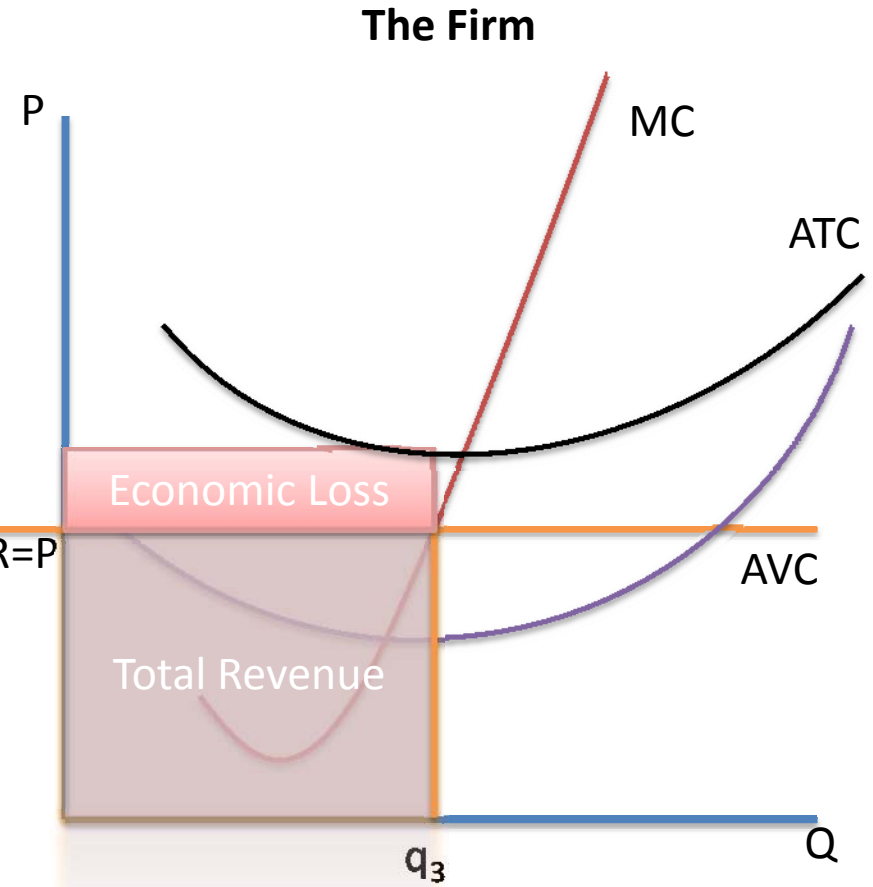
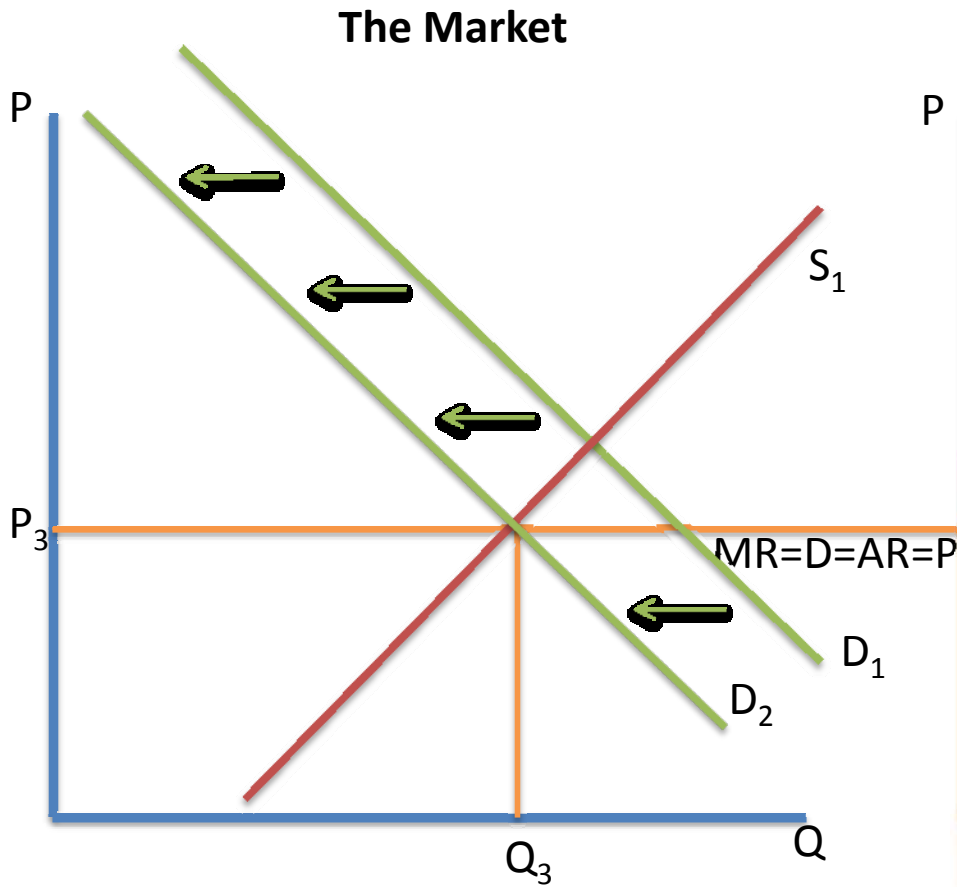
As economists, we want to know what else the factors of production could be doing in the economy. Therefore, *Economic Profit* is only earned when $TR > TC$ (explicit costs AND implicit costs).



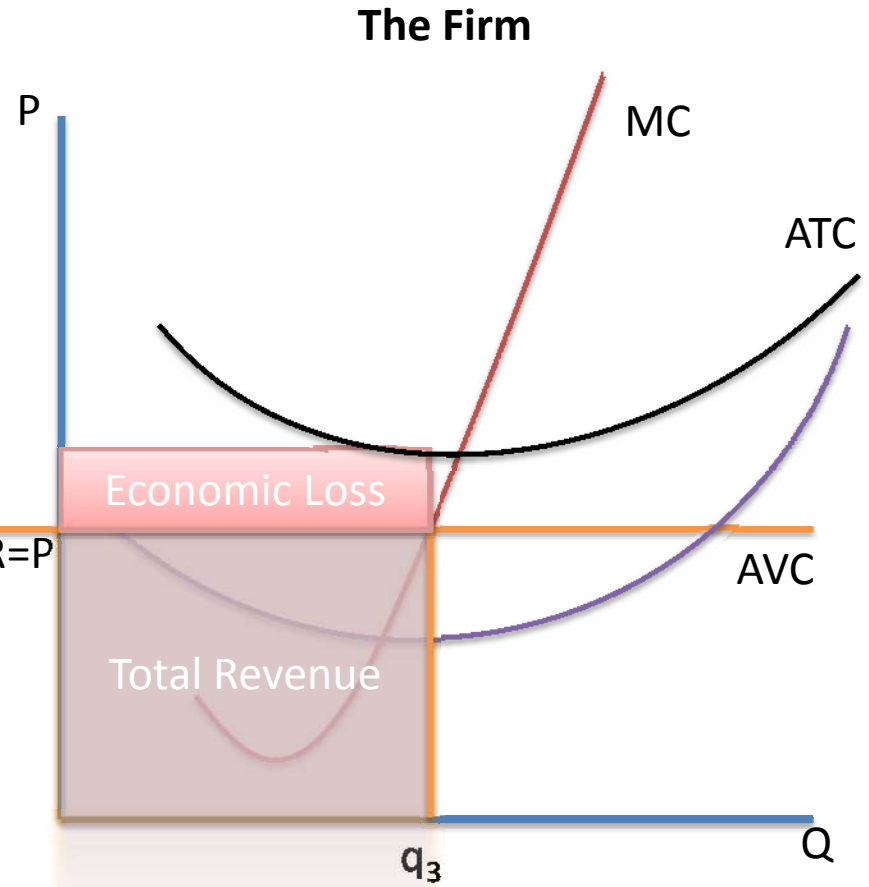
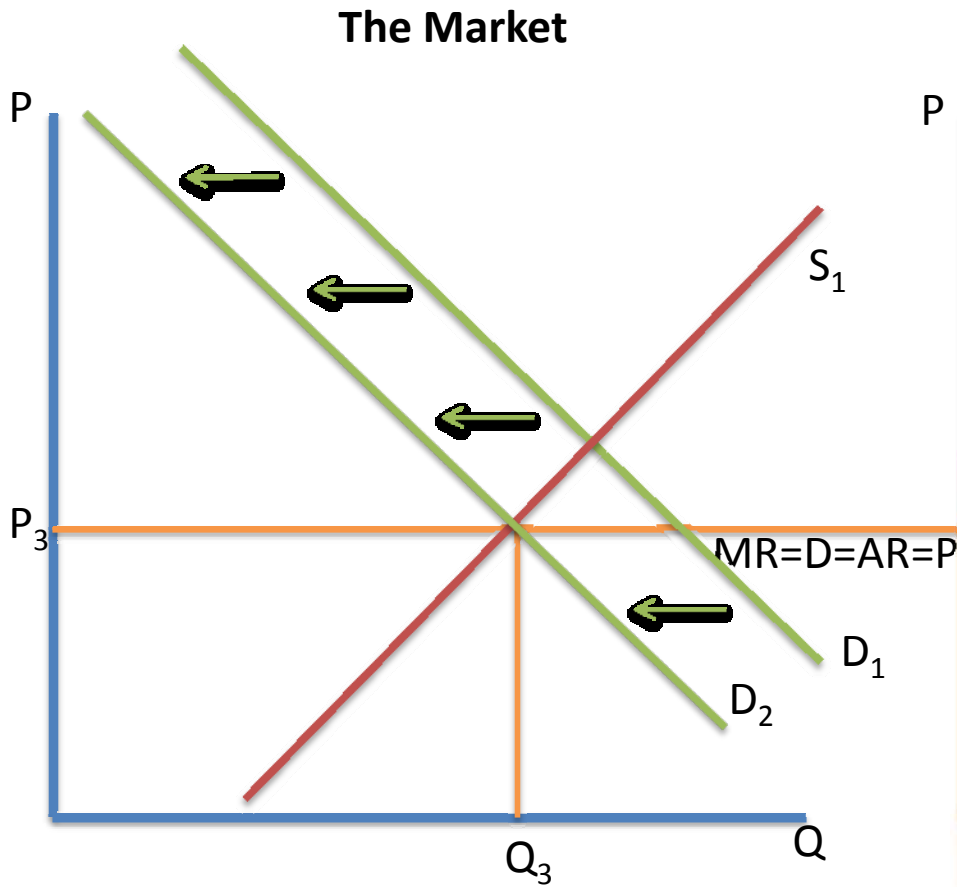
Back to our scenario, let's imagine that there's a nasty recession and consumer income declines by 10% across the economy. Since corn is obviously a normal good, what happens to the market?



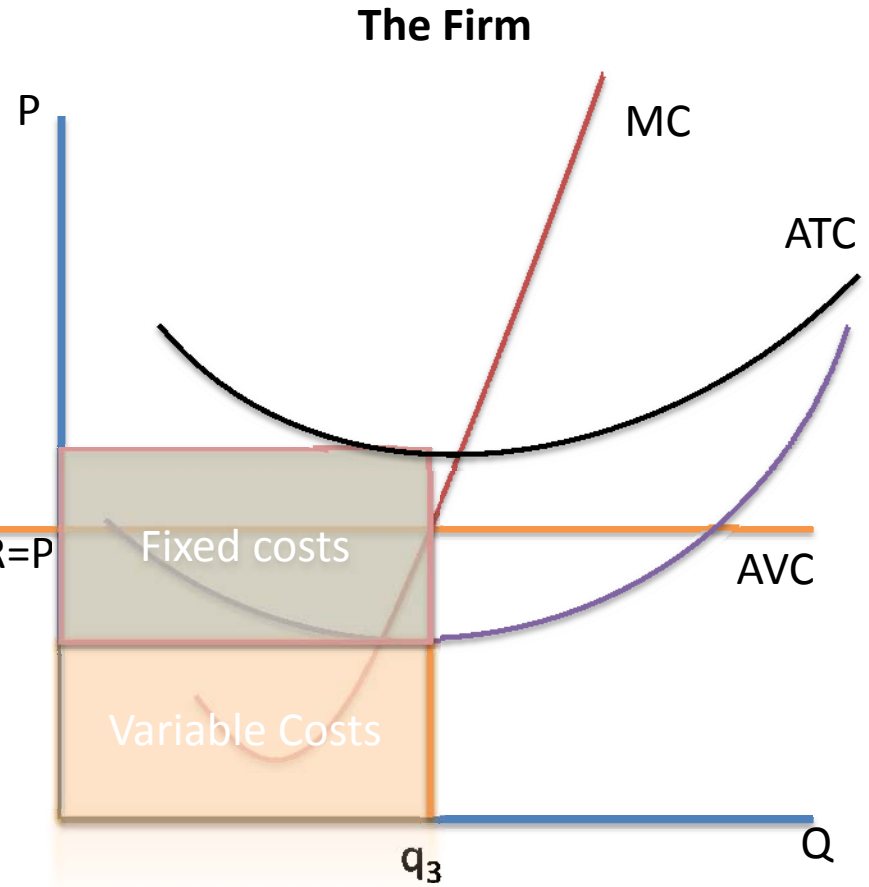
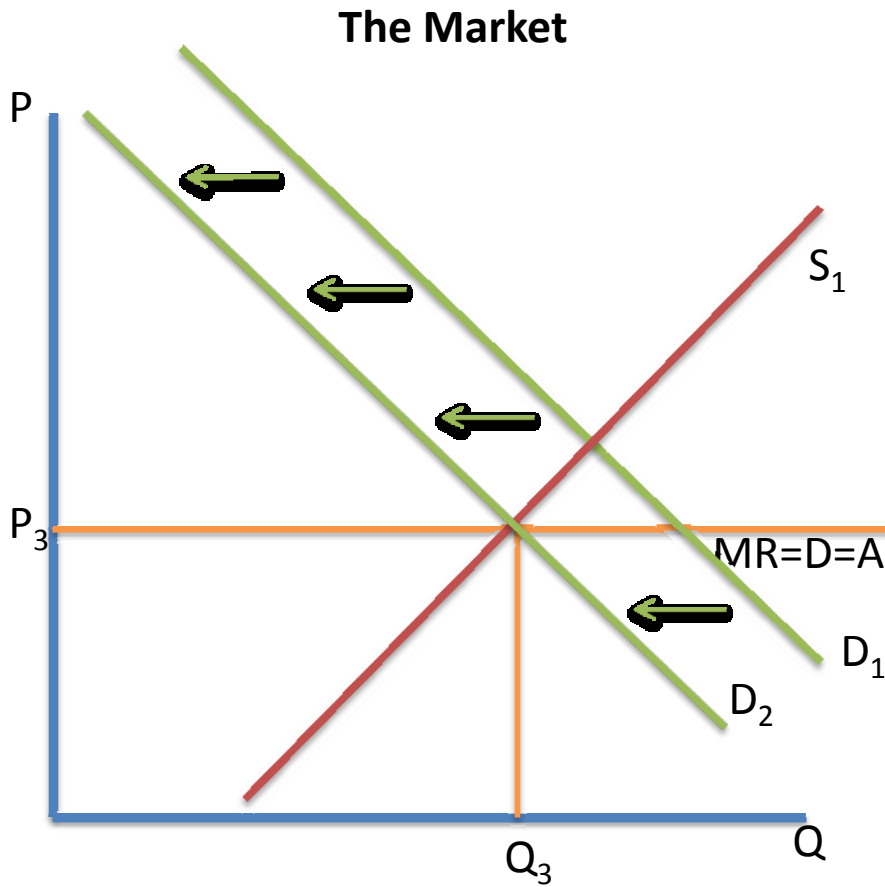
The loss of income shifts demand to the left, depressing price to P_3 . Our firm must decrease production to q_3 and incur a short term economic loss. Should we stay in business?



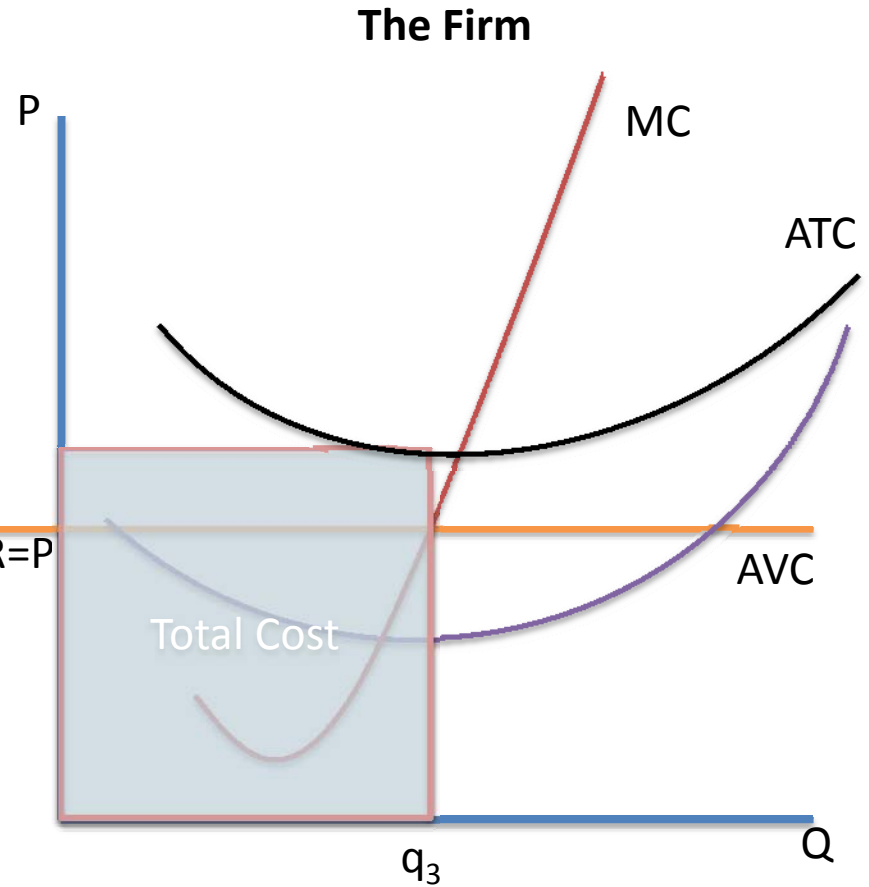
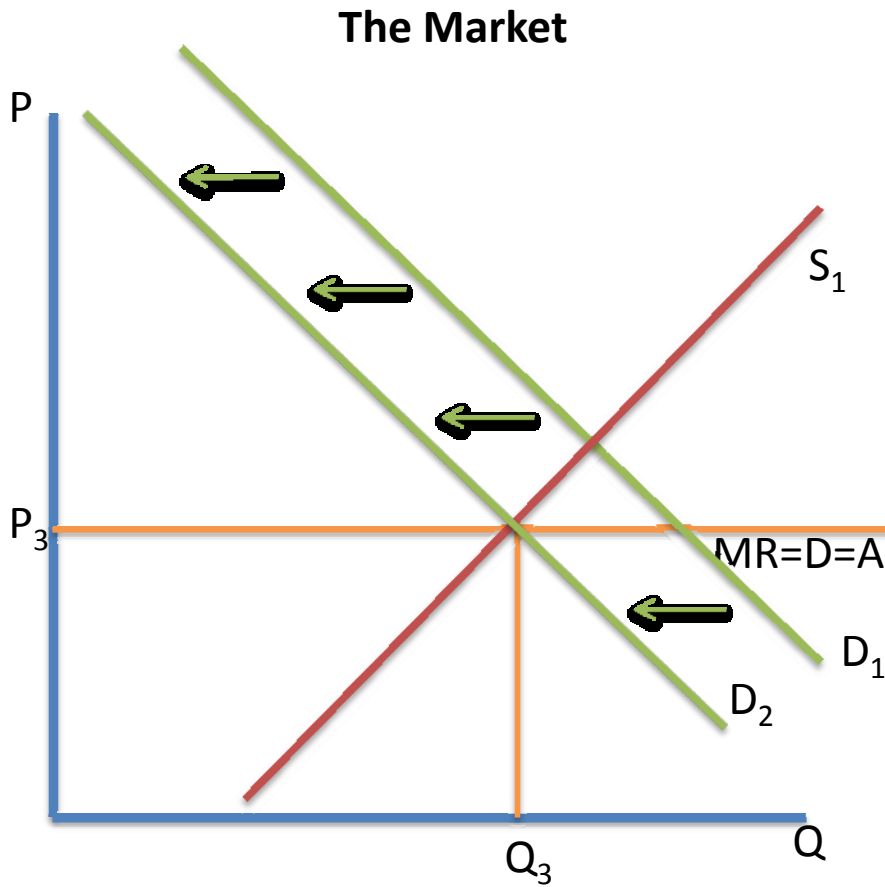
As long as the market price (our marginal revenue) is above our average variable cost (AVC), it makes sense for us to stay in business.



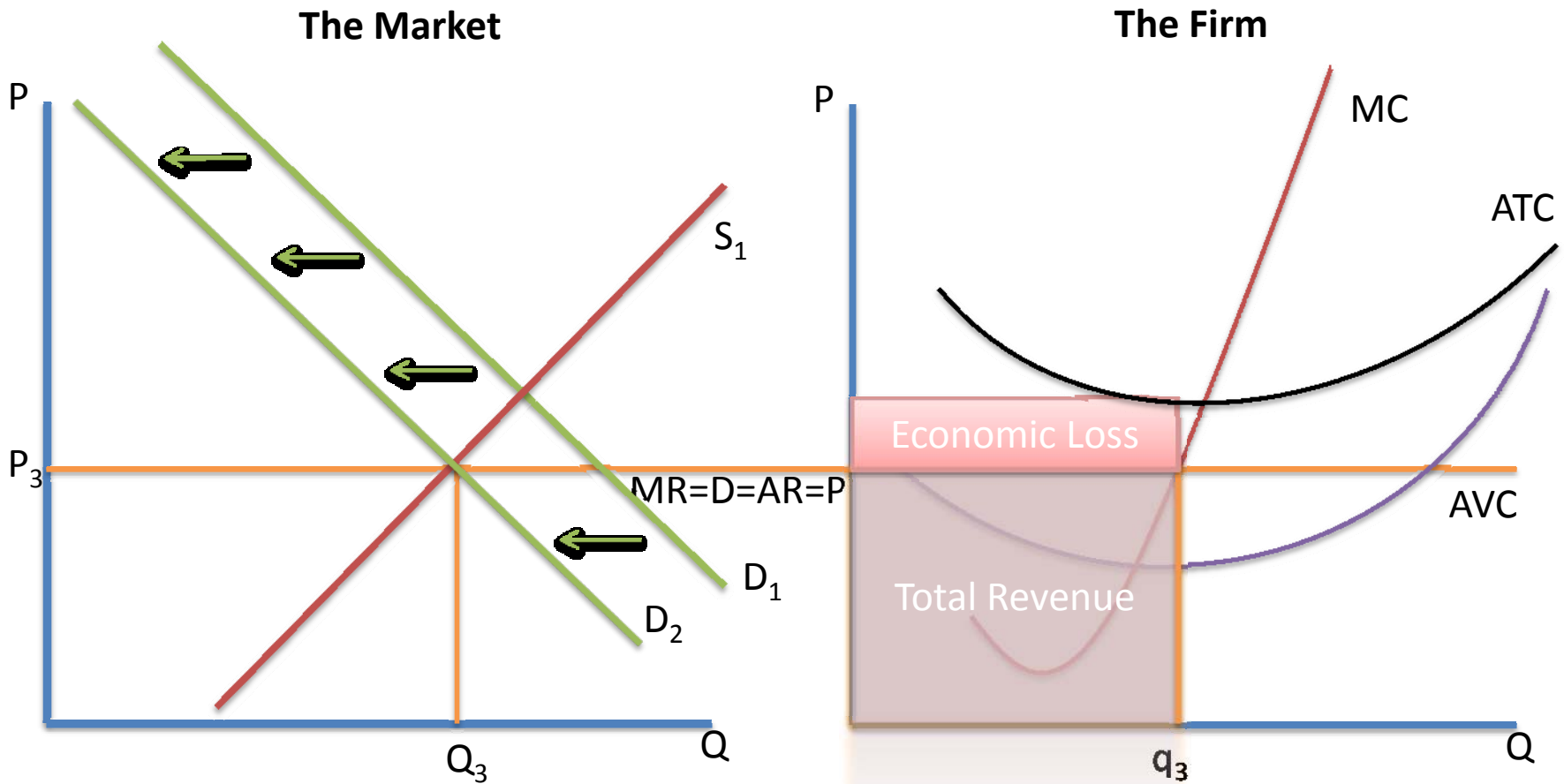
This is because our total cost is made up of fixed and variable costs.



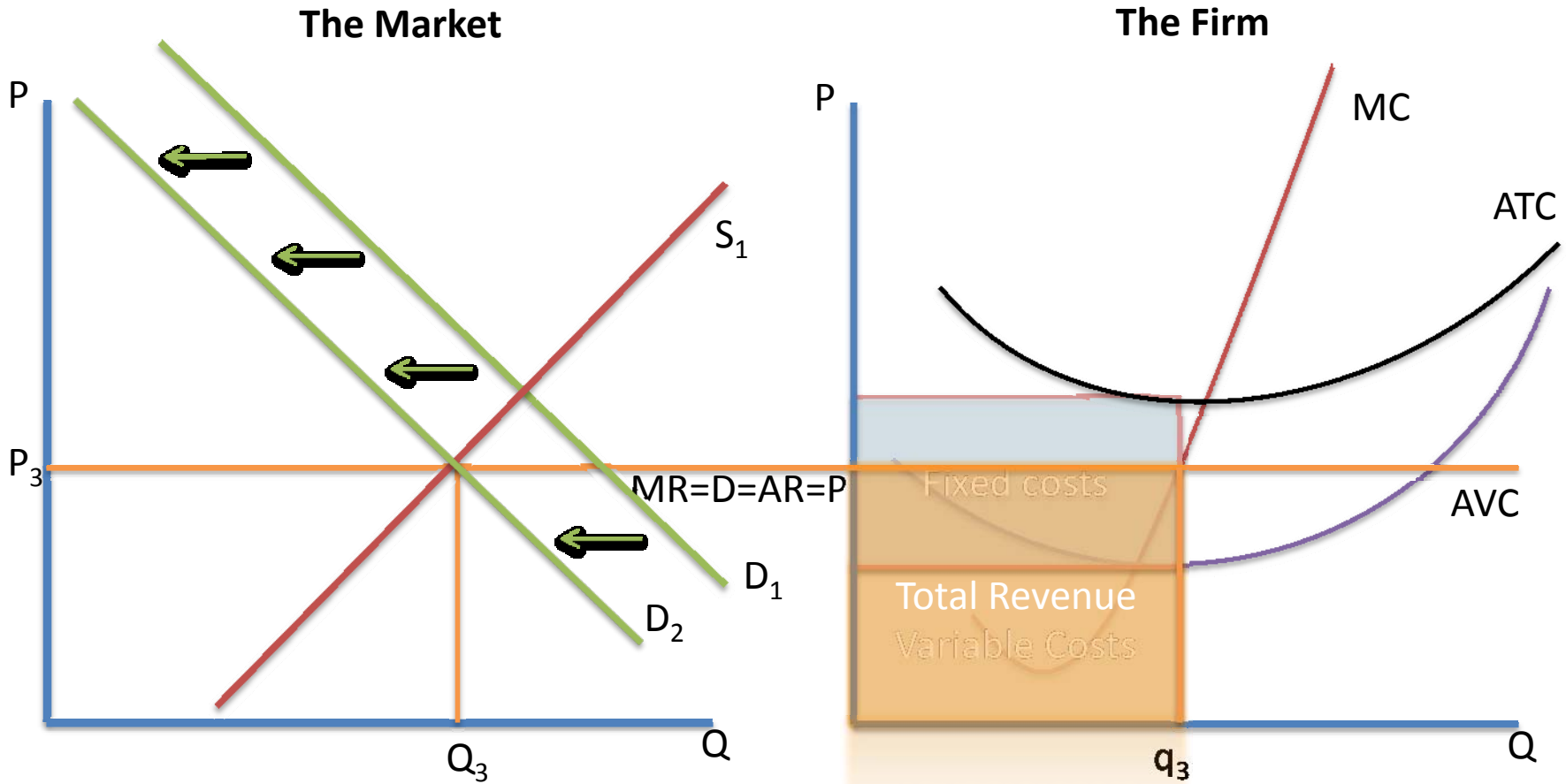
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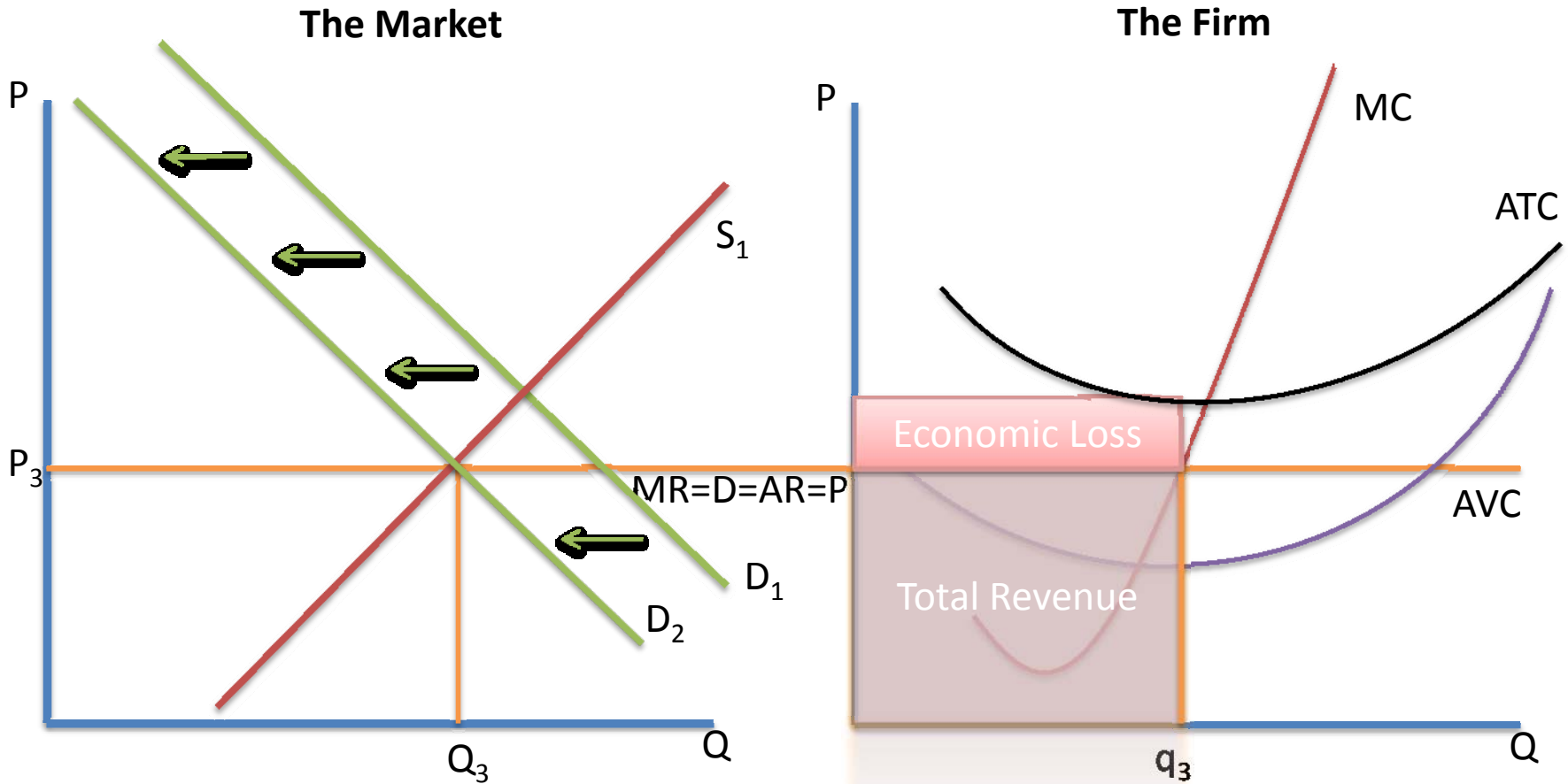
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Because we must pay our fixed costs regardless of how much we produce, the rule is that we keep producing as long as we can pay ALL of our variable costs and at least SOME of our fixed costs.



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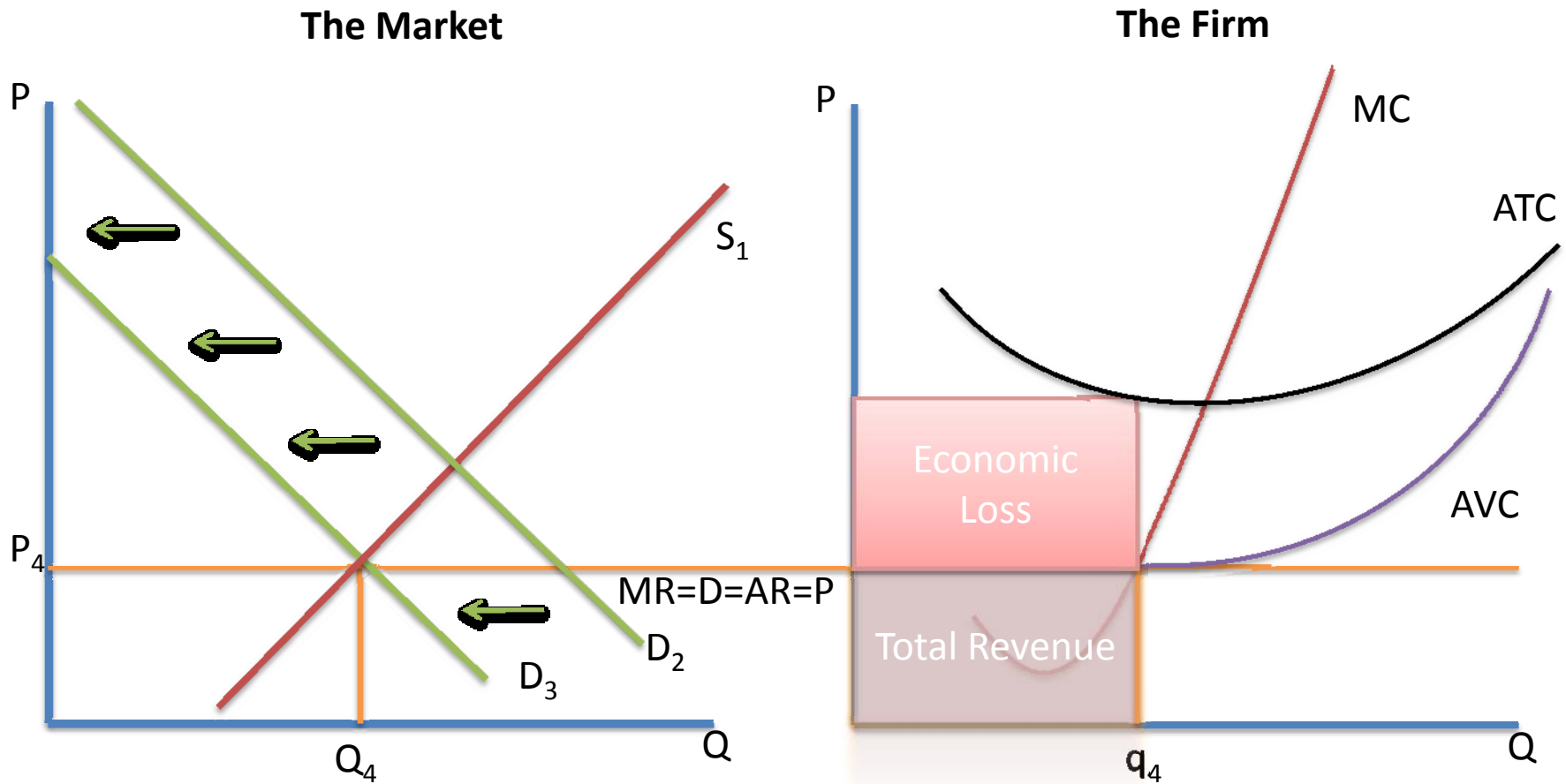
Of course, we don't enjoy this situation and we hope and pray that the market price will pick up somehow...maybe we can outlast our competition and they will leave the market before we are forced to shut down...

The Market

The Firm

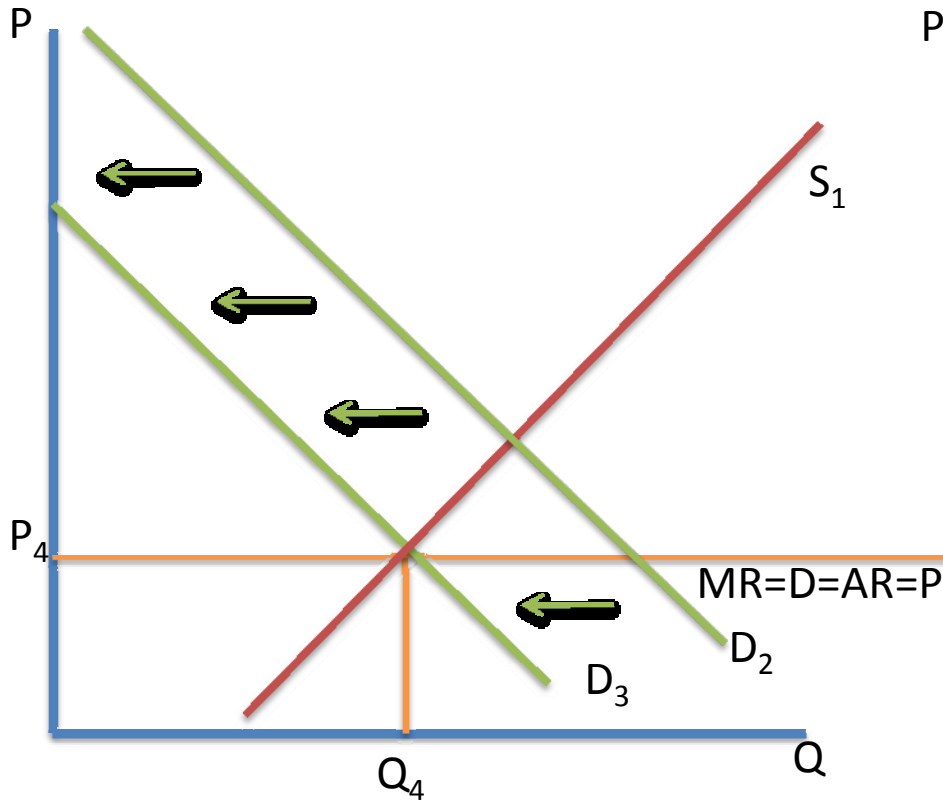


Oh no! A news story comes out that says cows who are fattened on corn need to be pumped full of antibiotics at the feedlot to counteract the devastating effects to the cows' health that come from eating corn instead of grass!

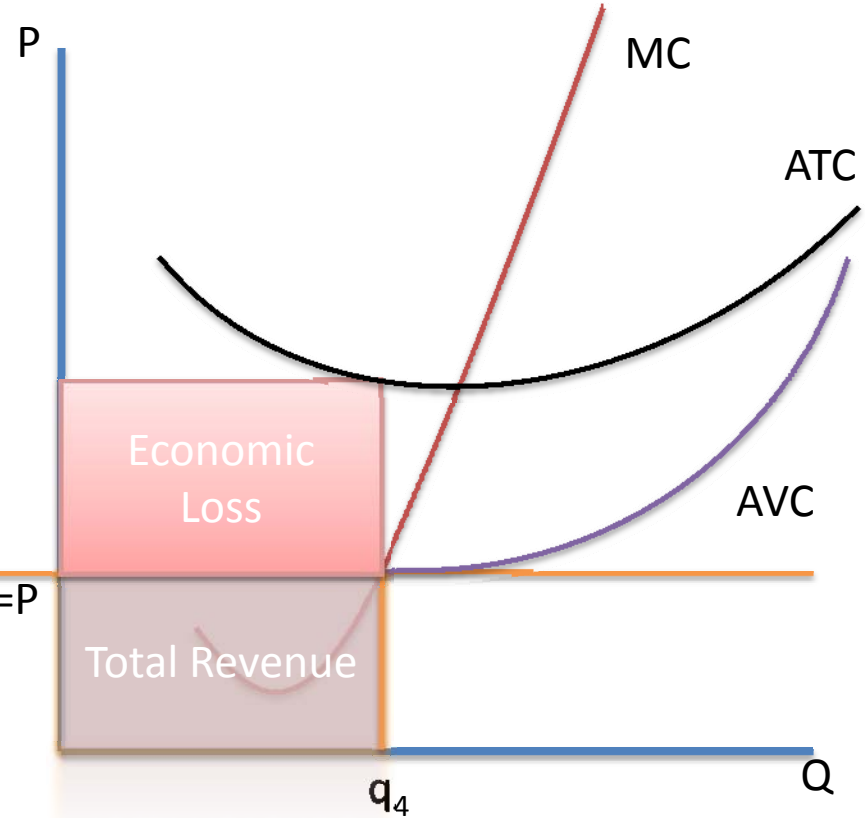


At this point, we are indifferent as to whether we go on producing or not. However, if the market price drops anywhere below this point, we **MUST** shut down and continue to pay only our fixed costs out of any savings we had accumulated. No sense in adding variable costs to our bill if the market price won't support it.

The Market



The Firm



If the market price doesn't turn around soon, we will most likely be forced to sell any capital equipment and other assets just to pay our fixed costs. Depending on how long we last, we may be forced to file for bankruptcy protection.

The end!

