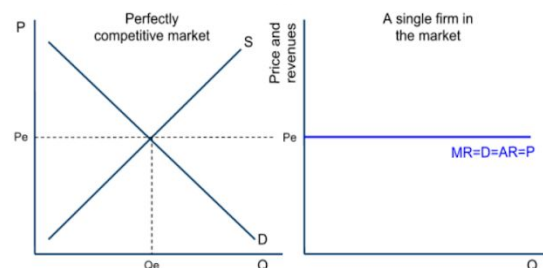


Assumptions of perfect competition

- The industry is made up of a very large number of firms
- Firms are small relative to the size of the industry, so its output has no effect upon the output of the whole industry. Meaning that the firm cannot shift the supply curve of the industry, and so cannot affect the price of the product.
- Firms are price takers, as they have to sell at whatever price is set by the demand and supply of in the industry as a whole
- Homogeneous products. Impossible to distinguish between a good produced by one firm and another. No brands or marketing.
- No barriers to entry → free to enter or leave the industry.
- Producers and consumers have perfect knowledge of the market.

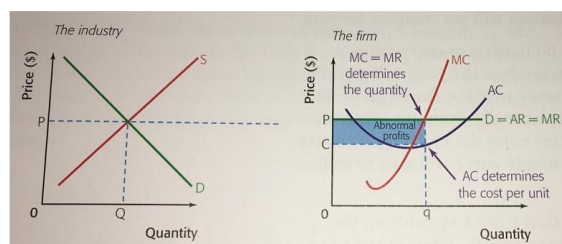
Demand curves for the industry and the firm in perfect competition

- The industry faces a normal demand curve and supply curve.
- Individual firms → will have to sell at the industry price because they are price-takers. If they try to sell at a higher price then consumers will just buy the product from another firm, since they are homogeneous. They can sell at any level of output at the determined price because the it does not affect the industry supply curve and therefore, the price.

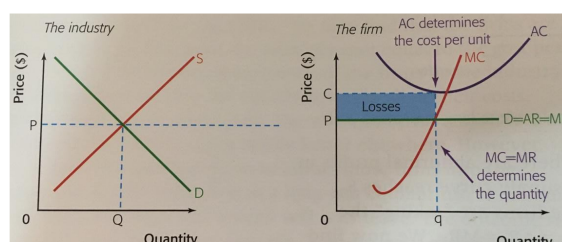


Possible short-run profit and loss situations in perfect competition

- Short-run abnormal profits: The firm is more than covering its total costs, including opportunity costs. MR is the same as the demand curve, and so at the level of output that the firm is producing at, the AC is less than the MR, meaning that abnormal profits are being gained.



- Short-run losses: The firm is not covering its total costs. MR is the same as the demand curve, and so at the level of output that the firm is producing at, the AC is greater than the MR, meaning that losses are being made. The firm is still producing at the “profit-maximizing” level of output because any other output would create a greater loss. (loss minimizing)



Movement from short-run to long-run in perfect competition

- If firms are making either short-run abnormal profits or losses, other firms begin to react and the situation starts to change until an equilibrium point is reached in the long-run.

Short-run abnormal profits to long-run normal profits

- If the firm is making abnormal profits, it will not last for long.
- Because there is perfect knowledge and no barriers to entry, firms outside the industry will enter attracted by the possibility of making abnormal profits.
- At first, this will have no real effect because the firms are relatively small. But as more firms enter the industry, the industry supply curve will shift to the right.
- Because of this, the industry price will fall from P to P_1 . Because the firms of that industry are price takers, the price that they can charge will fall as well. Demand curve shifts downwards.
- Abnormal profits start to be *competed away*
- Entrepreneurs are satisfied because they are exactly covering the opportunity costs. But there are no abnormal profits to attract producers to the industry and so long-run equilibrium situations of making normal profits, where $P=AC$.

Short-run losses to long-run normal profits

- Firms in the industry will start to leave.
- At first, this will have no real effect because the firms are relatively small. But as more firms enter the industry, the industry supply curve will shift to the left.
- Because of this, the industry price will rise from P to P_1 . Because the firms of that industry are price takers, the price that they can charge will rise as well. Demand curve shifts upwards.
- Losses become smaller.
- There are no reasons for entrepreneurs to leave.
- Less quantity traded in the industry.

Productive efficiency:

- A firm is said to be productively efficient if it is producing at the lowest possible unit cost
- $AC=MC$, since MC always cuts AC at its lowest point
- If a firm is productively efficient, then they are combining their resources as efficiently as possible and resources are not being wasted by inefficient use.

Allocative efficiency:

- Called the socially optimum level of output.
- $P>MC$, then consumers would value the good more than it cost to make it.
- If both were to meet in the optimal mix, then the output would expand to the point where $AR/P=MC$
- MC = cost to producers
- AR = The value to consumers
- It is impossible to make one person better off without making another one worse off.

Productive and allocative efficiency in the short run in perfect competition:

- If a firm is making abnormal profits or losses in perfect competition, although they are producing at the profit-maximizing level of output, where $MC=MR$ and at the allocative

efficient level of output ($MC=AR$), it is not producing at the most efficient level of output (q_1), where $MC=AC$.

Productive and allocative efficiency in the short run in perfect competition:

- The firm is producing at its profit-maximizing level of output, allocative efficient level of output and productively efficient level of output.
- Because all firms face the same cost curves, and because there is perfect knowledge.