IMPERFECT COMPETITION

Looking back on Perfect Competition, we saw that there were many firms all producing homogeneous goods. I.e. no choice. In Monopoly, we saw that there was only one firm in the industry producing one good. Again, the consumer doesn't enjoy any choice. If you look into any shop nowadays, you will see a vast array of different products that all perform the same function. These products are substitutes for each other and as such the consumer enjoys a great deal of choice.

Also, we see that each firm tries to distinguish its products from those of its competitors. This gives us competitive advertising. Each firm is trying to prove to the consumer that its products are better than those of its competitors. Therefore, what we see in the real world is not accurately described by either Perfect Competition or Monopoly. However, it is accurately described by the Market Structure known as Imperfect Competition to which we now turn our attention.

Assumptions

1) **Many Firms in the Industry:** Each firm acts independently and an individual seller can influence the quantity sold by the price it charges for its output.
2) **Many Buyers:** Each buyer acts independently, and no individual buyer, by his own actions, can influence the market price of the goods being sold.
3) **Product Differentiation Exists:** The products being sold by each firm are close, but not perfect, substitutes. Each firm is trying to portray its product as superior to the products of its competitors. This is usually attempted through Competitive Advertising and Brand Names.
4) **There is Reasonable Knowledge of both Profits and Costs:** Each firm in the industry has reasonable knowledge as to the profits made by other firms. Also, consumers have a reasonable knowledge of the prices being charged for the different products sold by different firms.
5) **There is freedom of entry and exit into and out of the industry:** Firms already in the industry cannot prevent new firms from entering the industry (no barriers to entry). Also it is possible for existing firms to leave the industry.
6) **Firms are profit maximisers:** Firms produce at the quantity of output where MC = MR (Marginal Cost = Marginal Revenue) and MC is rising.

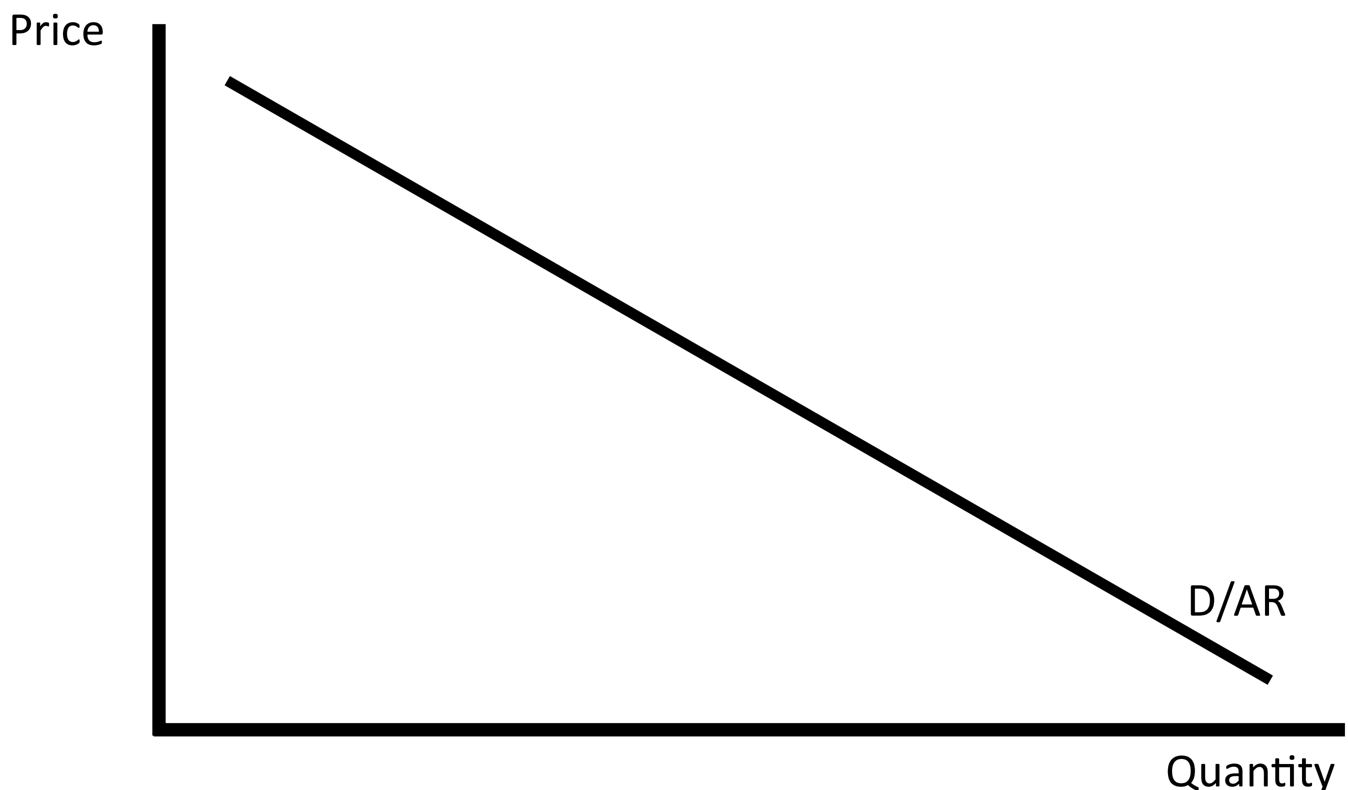
NOTE: As each firm is the only firm entitled to produce their brand we say that each firm has a Monopoly in their own brand name. For this reason, in college, Imperfect Competition is known as Monopolistic Competition.

In the assumptions we said that Product Differentiation exists.

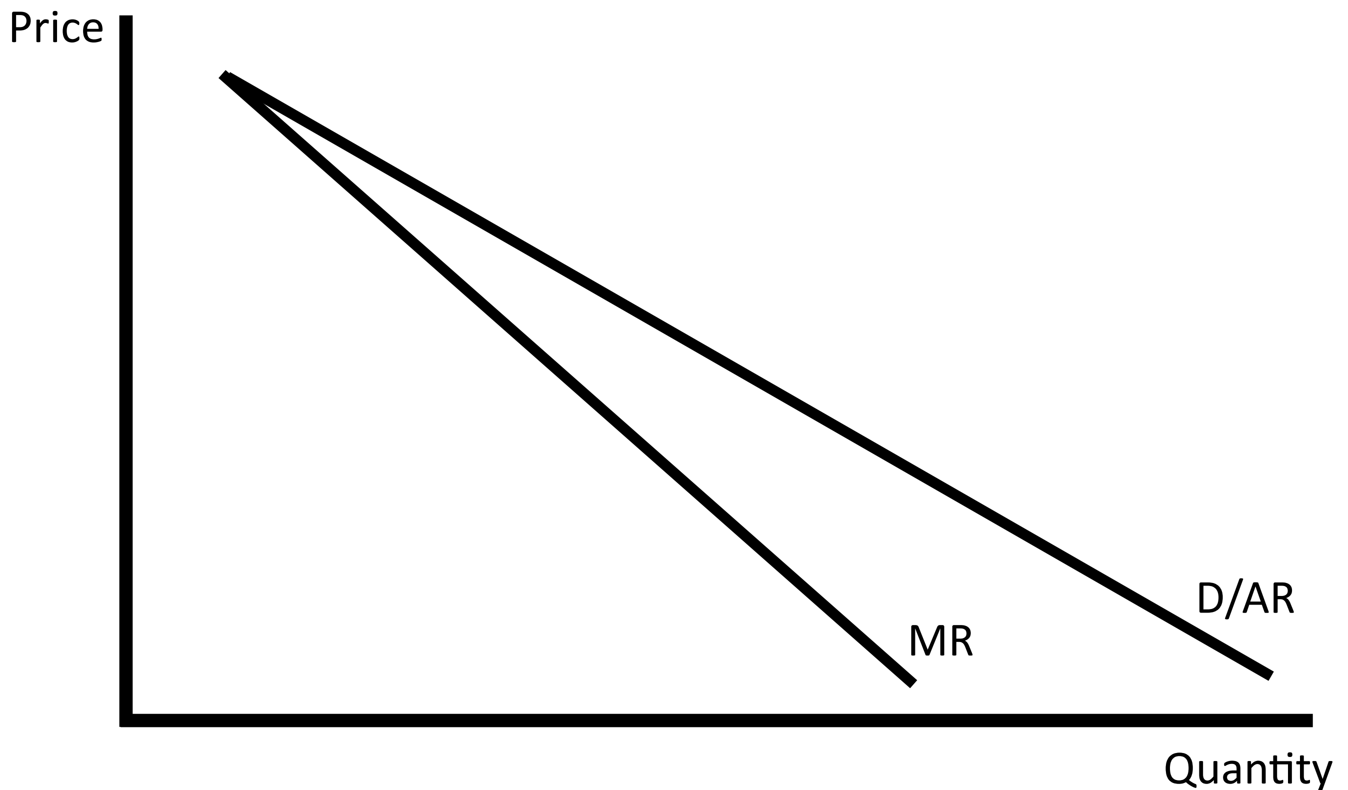
Product Differentiation: means that the products sold by competing firms are similar but have differences. There are close (but not perfect) substitutes available.

Short Run Equilibrium of a Firm in Imperfect Competition

Because there are many goods, which are close substitutes, if a firm increases its price, there will be a reduction in demand, as some consumers will switch to the goods produced by competitors, which have become relatively cheaper. If a firm lowers its price it will increase its sales, as some consumers of other substitute goods will switch to this firm's good because it is relatively cheaper. From this we can deduce that an Imperfectly Competitive firm faces a downward sloping demand curve (AR Curve). See graph below.

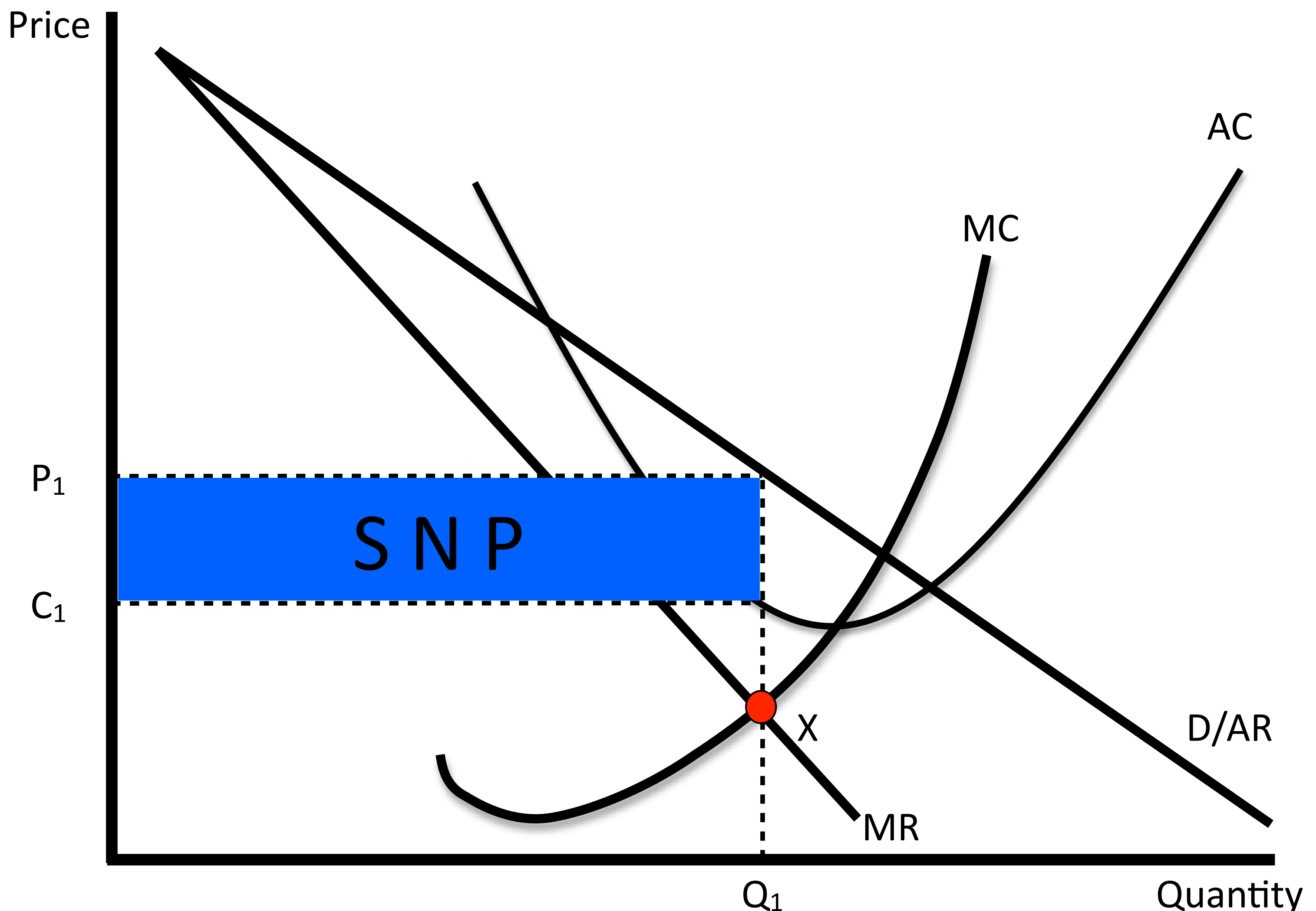


From the revenue and profits handout, if the Average Revenue (AR) Curve is downward sloping (decreasing) then the Marginal Revenue (MR) Curve is also downward sloping (decreasing). Therefore, the Marginal Revenue Curve is less than or lower than the Average Revenue Curve and the Marginal Revenue Curve decreases at a faster rate than the Average Revenue Curve. This means that the Marginal Revenue Curve is drawn below the Average Revenue Curve and it has a steeper slope.



If we superimpose the Marginal and Average cost curves onto the graph above we get the Short Run equilibrium position of the Imperfectly Competitive firm. See graph overleaf.

Short Run Equilibrium Position of an Imperfectly Competitive Firm



Explanation of Short Run Equilibrium

1) **Equilibrium/ Profit Maximisation:** occurs at point X where MC = MR (MC is rising and cuts MR from below).
2) **Price and Quantity:** The level of output produced is Q_1 and the price the firm sells this output at is P_1.
3) **Costs:** The average cost of production is shown at the cost C_1. We can see from the curve that the firm is not producing at the lowest point of the AC curve and as such is wasteful of resource.
4) **Profit:** This firm is earning Super Normal Profits because at the price P_1, AR > AC.
5) The Short Run Equilibrium position of an Imperfectly Competitive firm is where MC = MR **and** AR > AC.

If we look at the diagram overleaf we see that the Short Run equilibrium position of an Imperfectly Competitive firm is almost exactly the same as the Equilibrium position (both Short Run and Long Run) of a Monopolist.

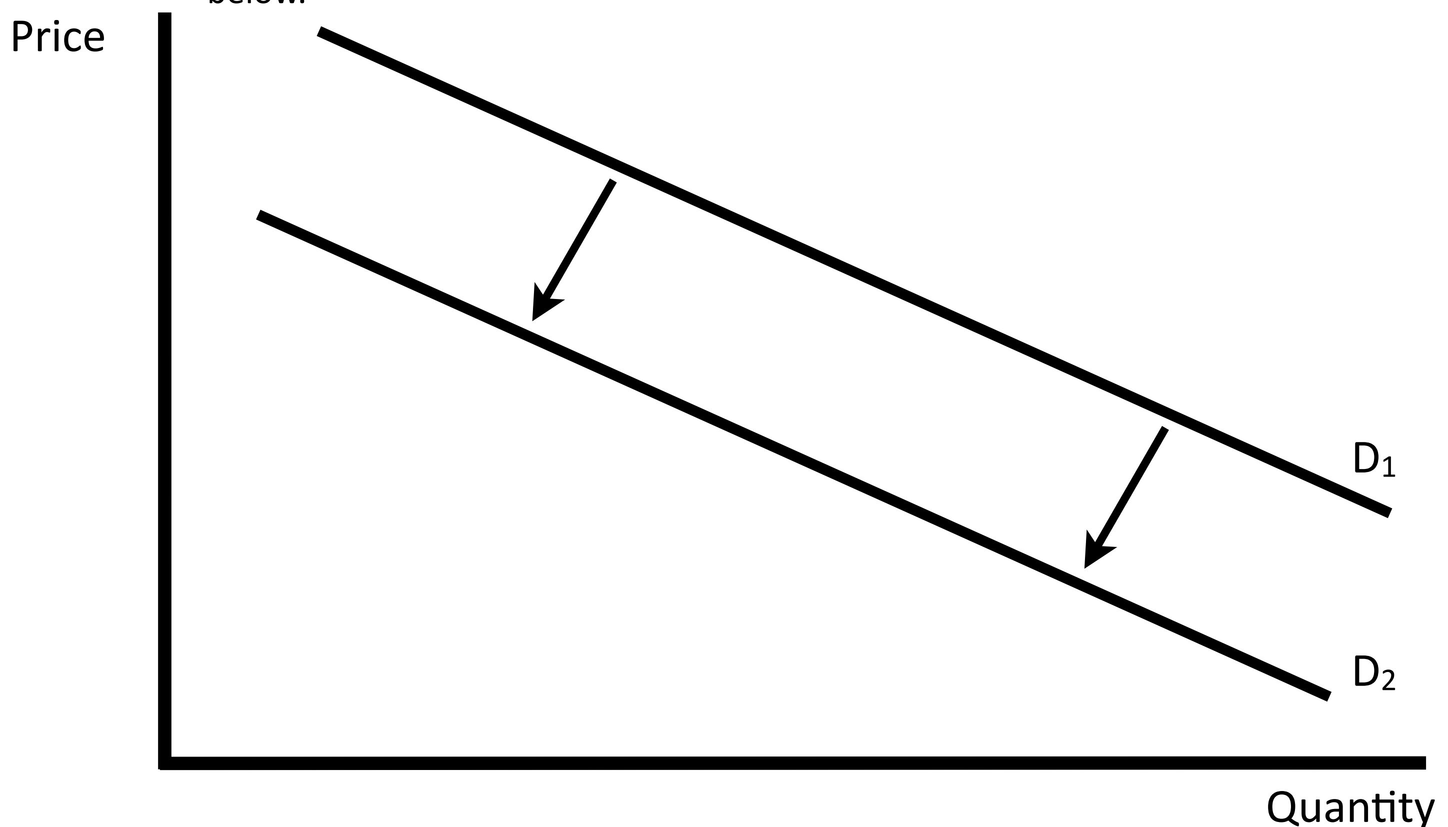
The only difference is that the demand curve for a Monopolist is more inelastic (steeper sloped) than the relatively elastic (flatter sloped) demand curve facing the Imperfectly Competitive firm.

This is due to the fact that the demand curve faced by the Monopolist is relatively inelastic as there are no substitutes available. The Demand Curve faced by an Imperfectly Competitive firm is relatively elastic as there are many close, but not perfect, substitutes available.

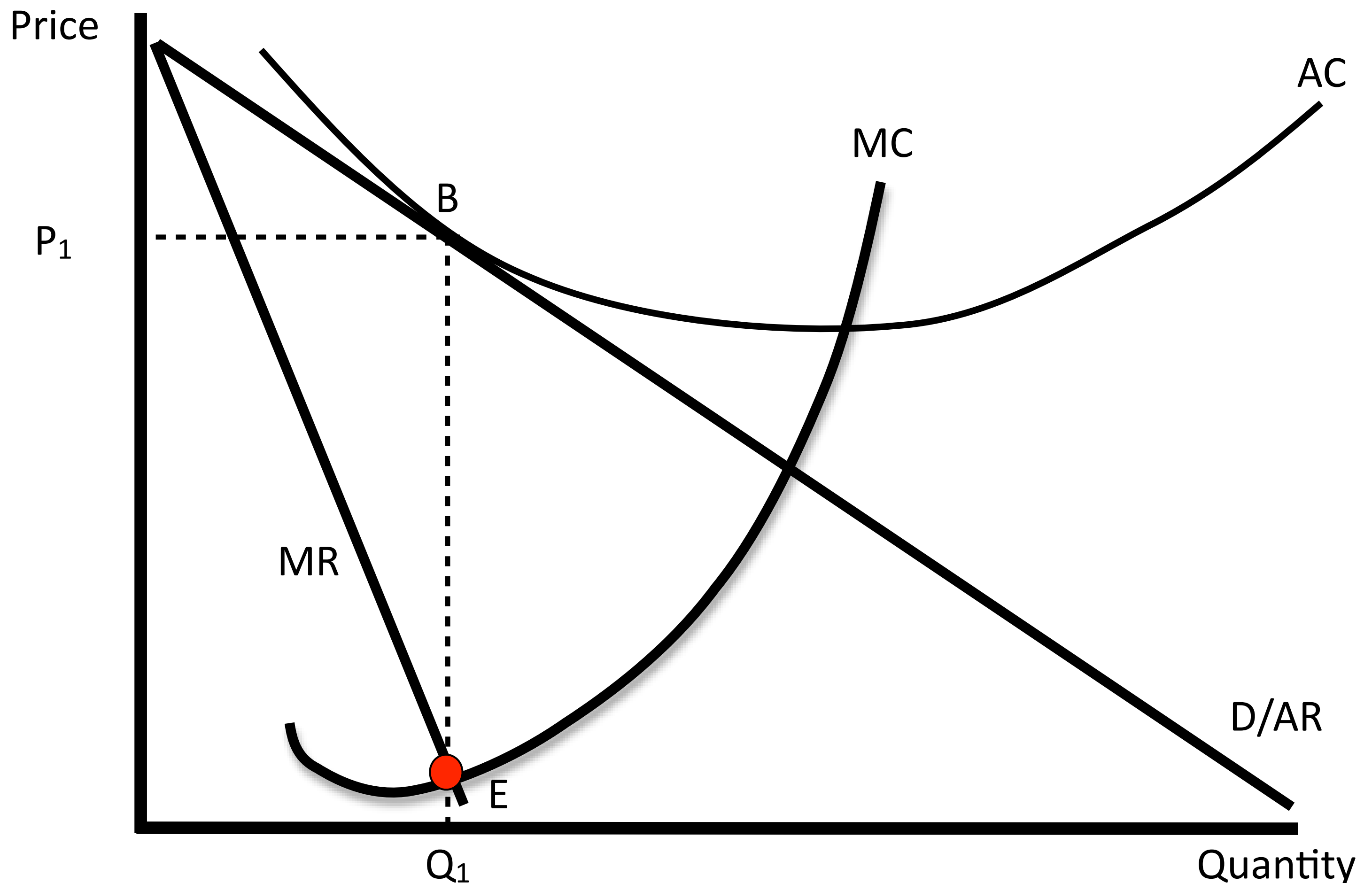
Long Run Equilibrium Position of an Imperfectly Competitive Firm

From the assumptions, we know that there is freedom of entry and exit into and out of the industry, and there is reasonable knowledge of profits and costs. As a result of these assumptions the Imperfectly Competitive firm cannot continue to earn SNP in the Longrun. This is because there are no barriers to entry, unlike Monopoly.

In order to capture some of this Super Normal Profit (SNP), new firms enter the industry, resulting in increased industry supply causing a reduction in the level of demand for each individual firm. See graph below.



The reduction in Average Revenue causes the SNP being earned by each firm to diminish. Due to the assumption of "Free Entry", the SNP earned by each firm will continue to fall until each firm in the industry is earning Normal Profits. That is, the SNP will eventually fall to zero. See graph below.



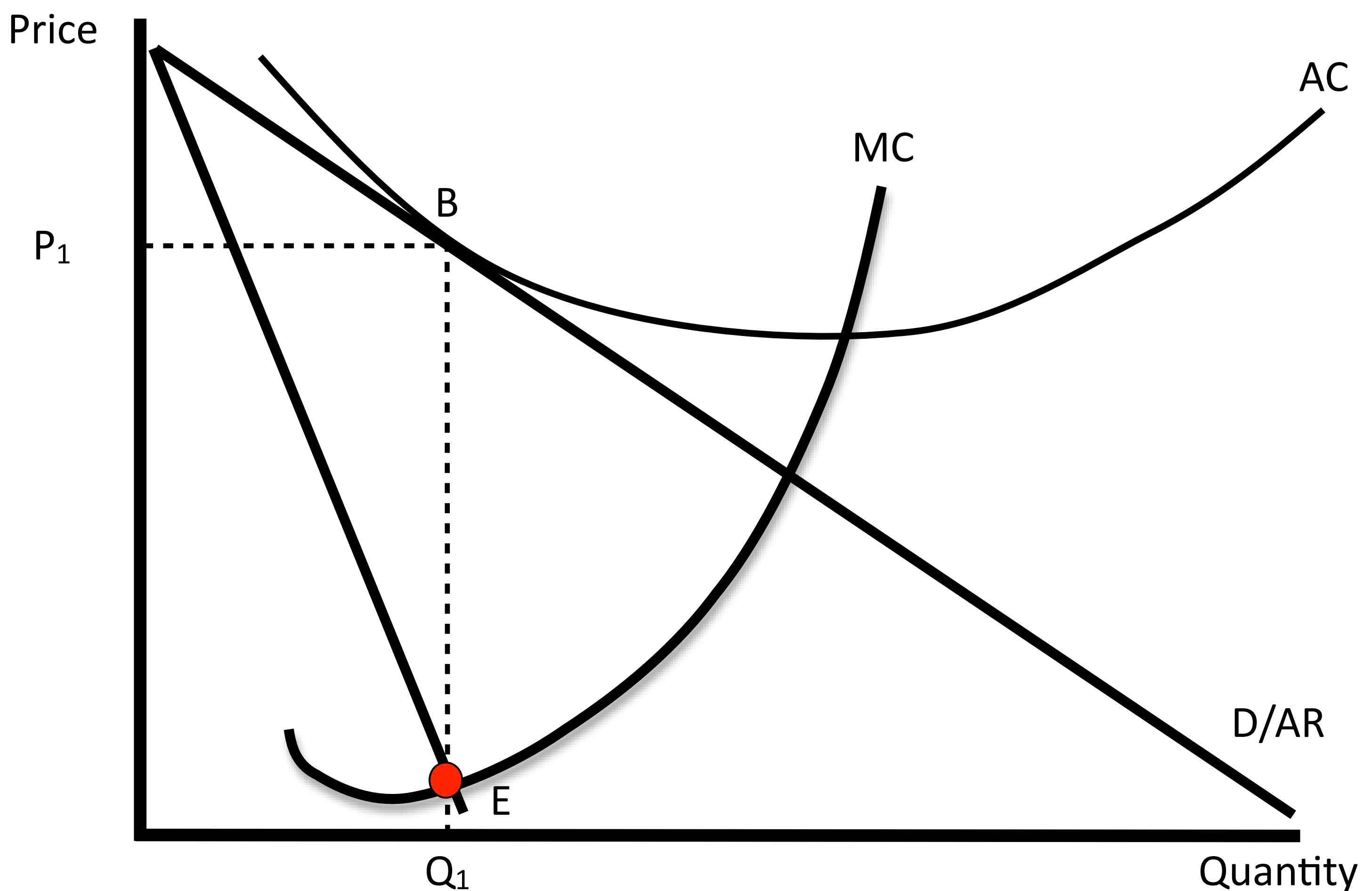
1) From the assumptions, we know that Imperfectly Competitive firms are Profits Maximisers and as such produce the quantity of output where MC = MR and MC is rising. Point E.
2) Therefore, the firm produces quantity Q_1 and charges price P_1.
3) At this quantity, the Average Revenue Curve equals the Average Cost Curve (AR = AC) and as such, the firm is earning Normal Profits. Point B.

If we look closer at where the Average Revenue Curve meets the Average Cost Curve, we see that the Average Revenue Curve is a tangent to the Average Cost Curve. When describing this situation we say that the Average Revenue Curve is tangential to the Average Cost Curve.

NOTE: A tangent is a straight line that touches a curve at one point only and never crosses that curve. At the point of touch, the tangent and the curve have the exact same slope.

Therefore, mathematically, both curves have the same slope at the point of touch. As the Average Revenue curve is a normal downward sloping demand curve and it is tangential to the Average Cost curve, the Average Cost curve must be downward sloping, which means that an Imperfectly Competitive firm cannot be producing at the minimum point of the Average Cost Curve. Due to this fact, Imperfectly Competitive firms are considered to be inefficient and wasteful of resources.

The Longrun Equilibrium of an Imperfectly Competitve Firm



Explanation of Long Run Equilibrium

1) **Equilibrium / Profit Maximisation:** occurs at point E where MC = MR (MC is rising and cuts MR from below).
2) **Price and Quantity:** The level of output produced is Q_1 and the price the firm sells this output at is P_1.
3) **Costs:** The average cost of production is shown at point B.
4) **Profit:** This firm is earning normal profits because AR = AC.
5) **Efficiency:** The firm is not producing at the lowest point of AC curve this indicates that the firm is wasting scarce resources.

Reasons why Imperfectly Competitive Firms are considered wasteful of Resources

1) **Excess Capacity:** Imperfectly Competitive firms will generally be producing at a level of output too small to completely avail of all of the advantages of Economies of Scale. The difference between the actual output that Imperfectly Competitive firms produce and the output required to completely avail of Economies of Scale is known as the "Excess Capacity" of the firm.
2) **Competitive Advertising:** Competitive Advertising tries to persuade consumers that the product of one firm is better than those of its competitors. It is known as a "Non-Production Cost", which is usually passed onto the consumer in the form of higher prices. As such, the costs faced by the firm are higher than is needed for the production of the product.

Types of Advertising

The following are the different forms of Advertising available to any firm in any industry.

1) **Generic Advertising:** This is advertising that promotes the products of an entire industry rather than the produce of an individual firm. All or most of the firms in the industry would share the cost of this advertising campaign. This type of advertising would be used in Perfect Competition.
2) **Competitive Advertising:** Attempts to convince the consumer that the product's of one firm is better than those of its competitors.
3) **Persuasive Advertising:** Is very like Competitive Advertising with subtle differences. No reference is made to the products of competitors, but you are told that you really need or desire this product. This type of advertising is usually seen in the advertising of expensive brands. E.g. L'Oreál's motto "Because you're worth it".
4) **Informative Advertising:** This type of advertising tries to educate the consumer. It either, tells the consumer about the existence of a certain type of product or explains to consumers the dangers associated with certain types of products or actions. E.g. "Say what you like, Smoking Kills".

Advantages of Imperfect Competition

1) **Greater Choice:** Goods are not homogenous, but are close substitutes, therefore consumers have a greater choice of goods/services.
2) **Normal Profit:** In the long-run consumers are not being exploited as the firm is earning normal profits.
3) **Lower Prices:** Competition between firms in the industry will help lower prices and make them more competitive for consumers. Some items such as newspapers, magazines, sporting and music events may be cheaper due to the revenues earned by the supplier from competitive advertising.
4) **Innovative Goods/Services:** Innovation is encouraged as firms will constantly strive to gain a competitive edge over their rivals, hence, consumers get the benefit of modern up-to-date goods/services.
5) **Access to Information:** Consumers may have more information available to them because of the extensive competitive advertising used within the industry.

Disadvantages of Imperfect Competition

1) **Excess Capacity:** Imperfectly Competitive firms will generally be producing at a level of output too small to completely avail of all of the advantages of Economies of Scale. The difference between the actual output that Imperfectly Competitive firms produce and the output required to completely avail of Economies of Scale is known as the "Excess Capacity" of the firm.
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Long Run Similarities between Perfect and Imperfect Competition

1) **Normal Profit:** In the Longrun, both Perfectly and Imperfectly Competitive firms earn normal profit as they produce where AC = AR.

Long Run Similarities between Imperfect Competition and Monopoly

1) **Both Wasteful of Resources:** A firm operating in either Monopoly or Imperfect Competition does not produce at the lowest point of Average Cost Curve
2) **Downward Sloping Demand Curve:** As firms in both Imperfect Competition and Monopoly face a downward sloping demand curve they must lower their price in order to increase sales.
3) **Price is Greater than Marginal Cost:** The price that they are charging for the last good is in excess of what it cost them to make it. This fact indicates that more of the good could be produced

Product Differentiation Revisited

Product Differentiation: means that the products sold by competing firms are similar but have differences. There are close (but not perfect) substitutes available.

Product Differentiation can be achieved by

1) **Branding:** Establishing different and distinctive brand names for the products. E.g. Nike, Addidas, Reebok
2) **Competitive Advertising:** Creating differences in the products in the minds of consumers e.g. through packaging which clearly distinguishes one product from another Daz v. Surf, Kellog's Cornflakes
3) **Product Innovation:** Firms develop their product further (add value) so that it is better or more advanced than that of competitors.

   Lyons pyramid tea bags;
   Avonmore – super milk.
   Fairy detergent – antibacterial agents.

Effect of Product Differentiation on the AR and MR curves

As a result of Product Differentiation:

1) A firm's AR will be downward sloping from left to right. As products are close substitutes. If a firm lowers price it can expect to attract some but not all customers from other firms; if the firm increases prices it may expect to lose some but not all customers – so the firm will sell less at higher prices and more at lower prices. Consequently the demand curve (AR curve) facing the firm is downward sloping.
2) If AR is falling then MR is also falling and lies below AR. To encourage more customers the firm must drop the price. The AR Curve is falling. The revenue from the increased sales will be reduced by the falling revenue on each unit previously sold at a higher price but now at a reduced price.