Monopoly

Assessment Objectives

Specific Expectations	
AO2	Explain the monopolist's market power using a diagram where P $>$ MC
AO2	Explain profit maximization by the monopolist with diagrams showing abnormal profit, normal profit, and loss.
AO2	Explain the monopolist's allocative inefficiency illustrating market failure.
AO4	Explain welfare loss compared to perfect competition with a diagram showing lower output, higher price, and welfare loss.
AO2	Explain natural monopoly and draw a diagram for natural monopoly.
AO3	Discuss the advantages and disadvantages of monopoly.

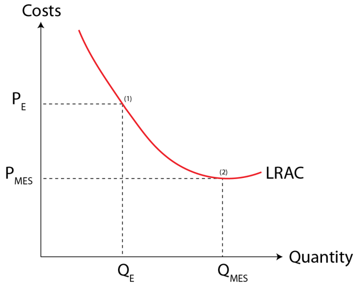
Monopoly: Assumptions

- **Monopoly** a market structure with a single supplier that comprises the entire industry. There is no competition and the product produced is unique.
  - Monopolists have significant control over the price of the good/service.
  - There is a single seller or dominant firm in the industry, so the single firm is the entire industry.
    - In the real world, a monopolistic industry may consist of one firm that dominates the market with a very large market share.
  - The firm produces and sells a unique good, with no close substitutes.
    - If substitute goods existed, then consumers could switch to buying the substitute, and there would no longer be a monopoly of the good.
  - There are high barriers to entry in the industry; the monopoly owes its dominance in the market partly to the inability of other firms to enter.
  - **Example(s):** Telephone, water and electricity companies in the areas where they operate as a single supplier (Natural monopoly).

- **Entry Barriers** – are economic or institutional obstacles to businesses entering an industry.
  - There are six main entry barriers in **imperfect competition**:

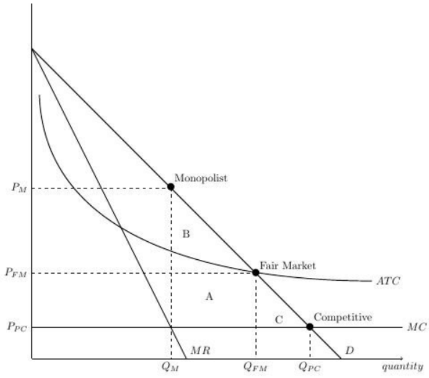
1. **Economies of Scale** – result in the downward-sloping portion of a firm's long-run average cost curve (LRAC) resulting in lower average costs as the firm increases its size.
   - Large economies of scale create a barrier to entry.
   - The large firm can charge a lower price than the smaller firm, and force the smaller firm into a situation where it will not be able to cover its costs.
   - New firms that try to enter the industry on a small scale they will be unable to compete with the larger one.
   - Firms attempting to enter the market on a very large scale would encourage huge start-up costs, and would be unlikely to take the risk.

Barriers to Entry



2. **Natural monopoly** – is a firm that has economies of scale so large that it is possible for a single firm (a monopoly) to supply for the entire market at a lower average costs than two or more smaller firms.
   - This happens when the market demand for the monopolist's product is within the range of falling long-run average cost, where there are economies of scale.
   - **Example:** Telephone, water, and electricity companies in areas where they operate as a single suppler.

Barriers to Entry



- The firm cannot produce any output greater than Q_{FM} and not make a loss.
- If the firm were split into multiple firms of equal size, the average costs would be higher and the price that would allow the firm to earn a normal profit ($P = ATC$) would also be higher.

Barriers to Entry

- Natural monopoly acts as a strong barrier to entry because potential entrants realise that it would be difficult to attain the low costs of the already existing firm.
- High average costs would mean having to charge a high price for the product, so that the new firm would be unable to compete with the existing firm.
- A natural monopoly may stop being "natural" if changing technologies create conditions that allow new competitor firms to enter the industry and begin production at a relatively low cost.

3. **Branding** – involves the creation by a firm of a unique image and name of a product.
    - It works through advertising campaigns that try to influence consumer tastes in favour of the product, attempting to establish consumer loyalty.
    - If branding is successful, many consumers will be convinced of the product's superiority, and will be unwilling to switch to substitute products, even though these may be qualitatively very similar.

- Branding may work as a barrier to entry by making it difficult for new firms to enter a market that is dominated by a successful brand.

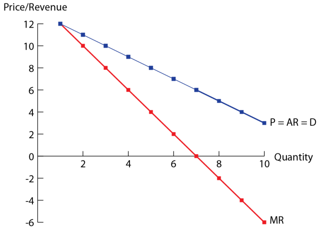
4. **Legal Barriers** – are legal restrictions that limit the level of competition within an industry.

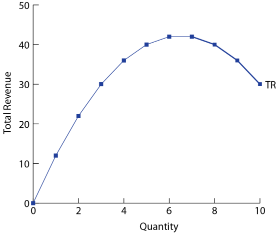
    - **Patents** – are rights given by the government to a firm that has developed a new product or invention to be its sole producer for a specified period of time. For that period, the firm producing the patented product has a monopoly on production and sale of the product.
    - **Licences** – are granted by governments for particular professions or particular industries. Such licences limit competition in the industry.
    - **Copyrights** – guarantee that an author (or an author's appointed person) has the sole rights to print, publish, and sell copyrighted works.
    - **Tariffs, quotas, and trade restrictions** – limit the quantities of a good that can be imported into a country, thus reducing competition.

Barriers to Entry

5. **Control of essential resources** – monopolies can arise from ownership or control of a strategic resources or exclusive rights to operate in a specific region.
    - A local monopoly is a single producer/supplier within a particular geographical area.
    - Local monopolies appear more commonly than national or international ones.
    - **Example:** On a local level, professional sports leagues create a local monopoly by signing long-term contracts with the best players and securing exclusive use of sports stadiums.
6. **Aggressive tactics** – if a monopolist is confronted with the possibility of a new entrant into the industry, it can create entry barriers by cutting its price, advertising aggressively, threatening a takeover of the potential entrant, or any other behaviour that can dissuade a new firm from entering the market.

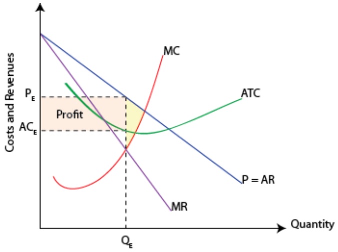
- Since the pure monopolist is the entire industry, the demand curve it faces is the industry or market demand curve, which is downward-sloping.
  - Market power arises whenever a firm faces a downward-sloping demand curve.
  - Firms in all market structure expect perfect competition face a downward-sloping demand curve, and therefore have varying degree of market power, or the ability to control the price at which they sell their output; they are therefore **price-makers**.



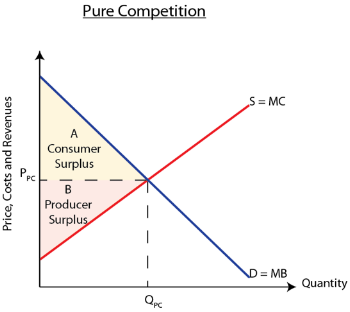


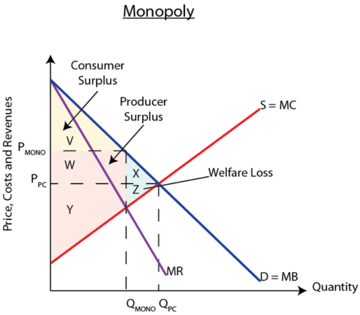
- Under monopoly, high barriers to entry prevent potential competitor firms from entering a profit-making industry, and the monopolist can therefore continue making abnormal profits indefinitely in the long-run.
- There are there possible cases when determining the profit maximizing output for a monopolist.

  1. **Abnormal (Supernormal) profit:** Profit > 0 & P $>$ ATC (TR $>$ TC)
  2. **Normal profit:** Profit $= 0$ & P $=$ ATC (TR $=$ TC)
  3. **Loss:** Profit < 0 & P $<$ ATC (TR $<$ TC)



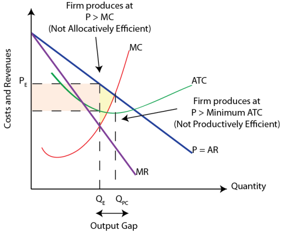
- A comparison of monopoly with perfect competition reveals that price is higher and quantity of output produced is lower in monopoly.
  - Since $Q_{Mono} < Q_{PC}$, the industry under monopoly produces a smaller quantity of output than the industry under perfect competition.
  - Since $P_{Mono} > P_{PC}$, the monopolist sells output at a higher price than the perfectly competitive industry.





Monopoly: Market outcomes and Efficiency

- The presence of welfare loss in monopoly indicates market failure: there is allocative inefficiency, shown by MB > MC at Q_E, meaning there is underallocation of resources; too little of the good is produced.
  - The monopolist gains at the expense of consumers as a portion of consumer surplus is converted into producer surplus.
  - In a monopoly the underallocation of resources to the good is indicated also by P > MC at the profit-maximizing level of output.
  - Market power refers to the ability of a firm to charge a price greater than marginal cost, or P > MC. This can only occur when a firm faces a downward sloping demand curve.



Criticisms of Monopoly

- There are numerous criticisms of monopoly including:

1. **Welfare loss, allocative inefficiency and market failure**
   - In contrast to perfect competition, the monopolist fails to achieve allocative efficiency.
   - Monopoly represents a form of market failure where the monopolist underallocates resources to the production of the good so that MB $>$ MC (P $>$ MC).
2. **Higher price and lower output in monopoly**
   - The welfare loss arises because the monopolist produces a smaller quantity of output and sells it at a higher price than a perfectly competitive industry.
3. **Loss of consumer surplus to the monopolist**
   - By charging a higher price than the perfectly competitive firm, such that P $>$ MC means that a portion of consumer surplus is taken away from consumers and gained by the monopolist.

Criticisms of Monopoly

4. **Negative impacts of the distribution of income**
   - Since monopolies charge higher prices than perfectly competitive firms, there is a redistribution of income away from consumers who must pay the higher prices towards the owners of the monopoly in the form of higher profits.
5. **Lack of competition may give rise to higher costs**
   - Whereas firms in perfect competition are under constant pressure to produce with the lowest possible costs to survive, under monopoly the absence of competitor firms may result in higher average costs ($P >$ min ATC).
   - The possibility of maintaining abnormal profits over the long-run due to high barriers to entry can make the monopolist less concerned about keeping costs low, this is known as X-inefficiency.
6. **Less innovation**
   - High barriers to entry, shielding monopolies from competition, could make them less likely to innovate than firms under constant pressure to innovate to maintain or increase their share of sales.

Benefits of Monopoly

- There are some potential benefits of monopoly including:

  1. **Economies of scale**
     - Economies of scale are a major argument in favour of large firms that can achieve lower costs as they grow larger.
     - Consumers may gain because lower average costs may potentially translate into lower prices, as well as increased quantity of output.
     - Society also gains from economies of scale because lower average costs of production mean there is less waste in the use of resources.
  2. **Natural monopoly**
     - In the event of a natural monopoly, there are added benefits due to the achievement of very low average costs by the single firm.
  3. **Research and development (R&D)**
     - Abnormal profits provide firms with the ability to finance large R&D projects.

Benefits of Monopoly

- Protection from competition due to high barriers to entry may favour innovation and product development, by offering firms the opportunity to enjoy the profits arising from their innovative activities.
- Firms may use product development and technological innovation as a means of maintaining their abnormal profits over the long-run, by creating barriers o entry for new potential rivals.
- If a firm can develop a new product that potential rivals are unable to produce, the rivals may be less likely to try to enter the industry and compete with the innovating monopolist.