

Main idea 1

- Monopoly:
 - Only one firm producing the product (Firm = industry)
 - Barriers to entry or exit exists, to maintain monopoly
 - Monopolists may be able to make abnormal profits in the long-run
- Monopoly power: The power, or ability to influence a market, influence the survival of others, and establish the price. It enables it to increase profits. The ability to prevent entry of other firms.

IB Question

- Describe, using examples, the assumed characteristics of a monopoly: a single or dominant firm in the market; no close substitutes; significant barriers to entry.

Assumptions of the
model
(Monopoly)

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graph TD; A([Assumptions of the model (Monopoly)]) --> B[Main idea 1]; A --> C[IB Question];
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Main idea 1

1) Economies of scale:

→ Lack of economies of scale acts as a deterrent to firms that might want to enter a monopoly industry

2) Natural monopoly:

→ Industry which have only enough economies of scale available to the market to support one firm

→ ex) Industries that supply utilities such as water, electricity and gas

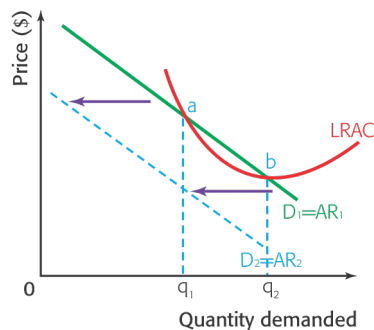


Figure 8.1 A natural monopoly

- Position and shape of LRAC determined by economies of scale
 - Abnormal profits made by producing an output between q_1 and q_2 as $AR > AC$ for that range of output
 - Shift to the left if another firm were to entry
- Two firms would be in a position where it is impossible for them to make even normal profits

3) Legal barriers:

→ Legal right to be a monopoly. Ex) patents

→ Government of a country grants the right to produce a product to a single firm

4) Brand loyalty:

→ Producing product that has gained brand loyalty

→ ex) Hoover (vacuum cleaner)

5) Anti-competitive behavior:

→ May attempt to stop competition by adopting restrictive practices which may be legal or illegal

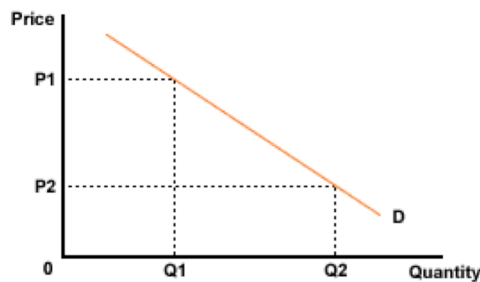
IB Question

- Describe, using examples, barriers to entry, including economies of scale, branding and legal barriers.

Barriers to entry/
(Sources of
monopoly power)

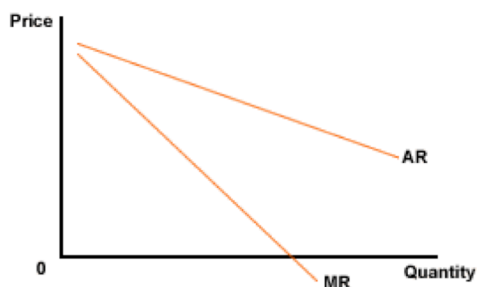
Main idea 1

• As the only firm in the market, monopoly is a price maker and has extensive market control, facing a negatively-sloped demand curve. If a monopoly wants to sell a larger quantity, then it must lower the price. The average revenue curve reflects the degree of market control held by a firm. For firms with market control, especially monopoly, the average revenue curve is negatively-sloped.



• a) As price has to be lowered to increase sales, **marginal revenue is not equal to price as in perfect competition**: the additional revenue gained from each extra sale is always less than price or average revenue, and thus the **MR curve will always be below the AR curve in monopoly**.

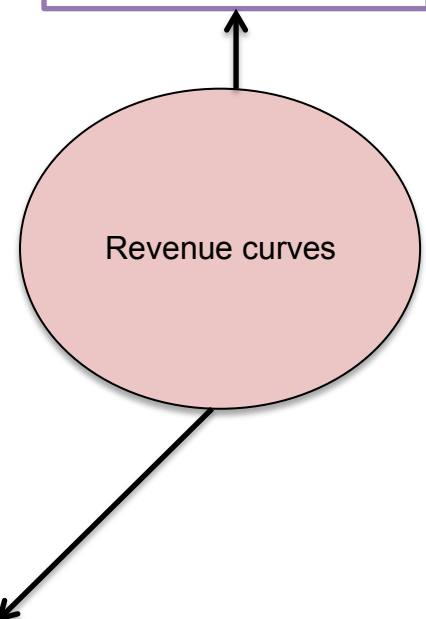
b) As price is identical to average revenue, the demand curve is also the curve relating average revenue to the quantity produced.



• **The monopolist's demand curve is likely to be relatively inelastic as close substitutes may not be available if price is raised**. Indeed, the availability or non-availability of close substitutes is one of the key factors determining the monopolist's power in the market.

IB Question

- Explain that the average revenue curve for a monopolist is the market demand curve, which will be downward sloping.
- Explain, using a diagram, the relationship between demand, average revenue and marginal revenue in a monopoly.
- **Explain why a monopolist will never choose to operate on the inelastic portion of its average revenue curve.**



Main idea 1

The demand curve and the profit-maximizing level of output in monopoly

- Monopolist's demand curve = industry demand curve
- They can **either** control the level of output or the price of the product.

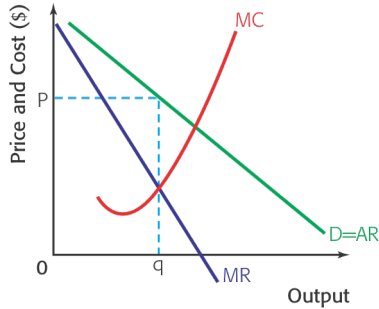


Figure 8.2 The demand curve facing a monopolist

(Maximizes profit by producing at the level of output where $MC = MR$)

Possible profit situations in monopoly

- If abnormal profit in short-run + barriers to entry:

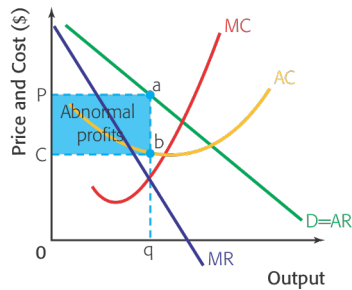


Figure 8.3 Abnormal profits in the long run in monopoly

(Maximizing profits and is making abnormal profits shown by $Pabc$)

- Not able to cover costs in the long run, since $AC > AR$ at all levels of output → **No industry** as nothing can be done to rectify the situation:

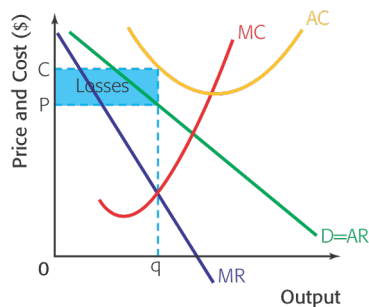
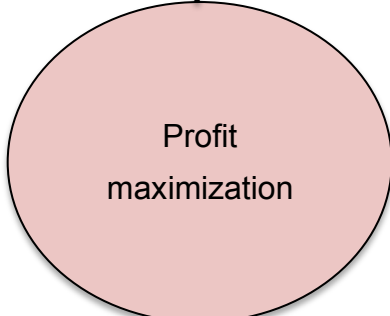


Figure 8.4 A monopolist making losses

IB Question

- Explain, using a diagram, the short- and long-run equilibrium output and pricing decision of a profit maximizing (loss minimizing) monopolist, identifying the firm's economic profit (abnormal profit), or losses.
- Explain the role of barriers to entry in permitting the firm to earn economic profit (abnormal profit).



Main idea 1

- It is possible that a monopolist may decide to maximize revenue rather than profits
- Monopolist will produce where $MC = 0$. (meaning that reducing price from P_{PM} to P_{RM} and at the same time increase output from q_{PM} to q_{RM})

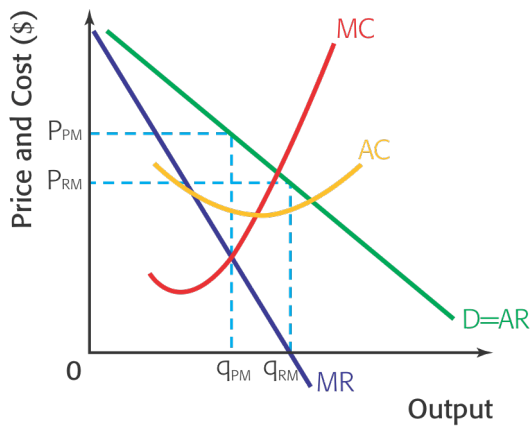
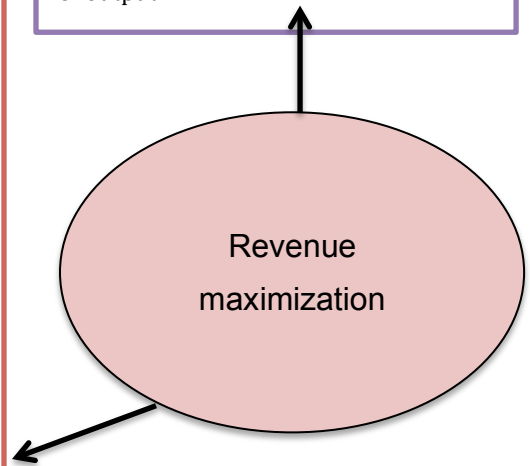


Figure 8.5 Revenue maximizing as opposed to profit maximizing in monopoly

IB Question

- Explain, using a diagram, the output and pricing decision of a revenue maximizing monopoly firm.
- Compare and contrast, using a diagram, the equilibrium positions of a profit maximizing monopoly firm and a revenue maximizing monopoly firm.
- Calculate from a set of data and/or diagrams the revenue maximizing level of output.



Main idea 1

- [Natural monopoly](#):

→ Industry which have only enough economies of scale available to the market to support one firm

→ ex) Industries that supply utilities such as water, electricity and gas

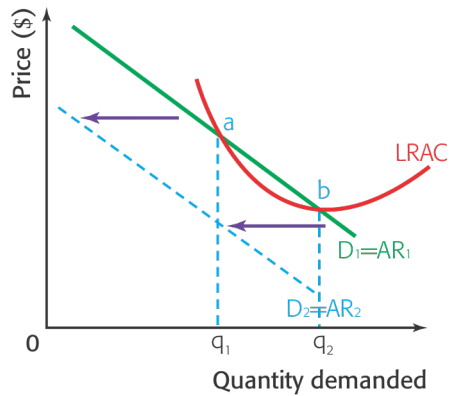
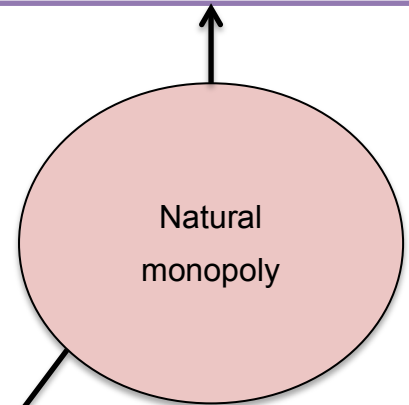


Figure 8.1 A natural monopoly

- Position and shape of LRAC determined by economies of scale
 - Abnormal profits made by producing an output between q_1 and q_2 as $AR > AC$ for that range of output
 - Shift to the left if another firm were to entry
- Two firms would be in a position where it is impossible for them to make even normal profits

IB Question

- With reference to economies of scale, and using examples, explain the meaning of the term “natural monopoly”.
- Draw a diagram illustrating a natural monopoly.



Main idea 1

- Unlike perfect competition, the monopolist produces at the level of output where there is neither productive efficiency nor allocative efficiency.

(allocatively efficiency: Price = MC. Productive efficiency: where firm is producing at the lowest point of its total average cost curve)

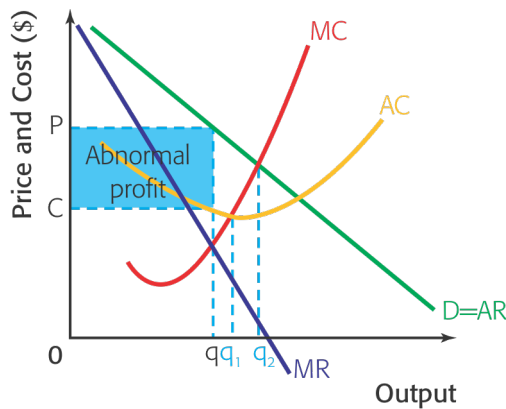
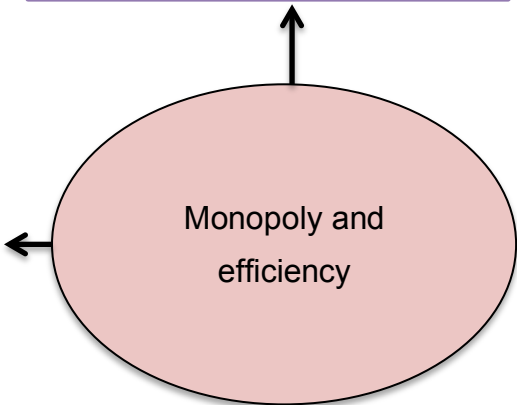


Figure 8.6 Productive and allocative efficiency in monopoly

- Producing at the profit-maximizing level of output, q.
- However, the most efficient level of output, q1, and the allocatively efficient level of output, q2, are not being achieved

IB Question

- Explain, using diagrams, why the profit maximizing choices of a monopoly firm lead to allocative inefficiency (welfare loss) and productive inefficiency.
- Explain why, despite inefficiencies, a monopoly may be considered desirable for a variety of reasons, including the ability to finance research and development (R&D) from economic profits, the need to innovate to maintain economic profit (abnormal profit), and the possibility of economies of scale.



Main idea 1

• The government may wish to regulate monopolies to protect the interests of consumers because:

- 1) **Preventing excess price** → price above = allocative inefficiency and a decline in consumer welfare
- 2) **Quality of service** → if a firm has a monopoly over the provision of a particular service, it may have little incentive to offer a good quality service.
- 3) **Monopsony power**
- 4) **Promote competition**
- 5) **Natural monopolies** → due to high economies of scale, the most efficient number of firms is one. Therefore, we cannot encourage competition and it is essential to regulate the firm to prevent the abuse of monopoly power.

IB Question

- Evaluate the role of legislation and regulation in reducing monopoly power.

Policies to regulate monopoly power

Main idea 2

• The government may regulate monopoly by:

1. Price capping by regulators RPI -X
2. Regulation of quality of service
3. Merger policy
4. Breaking up a monopoly
5. Yardstick or 'Rate of Return' regulation
6. Investigation of abuse of monopoly power

Main idea 1: Advantages of monopoly in competition with perfect competition

1. Monopolies' big size of industry

→ Can achieve economies of scale which will push the MC curve down, producing at a higher output and at a lower price than perfect competition:

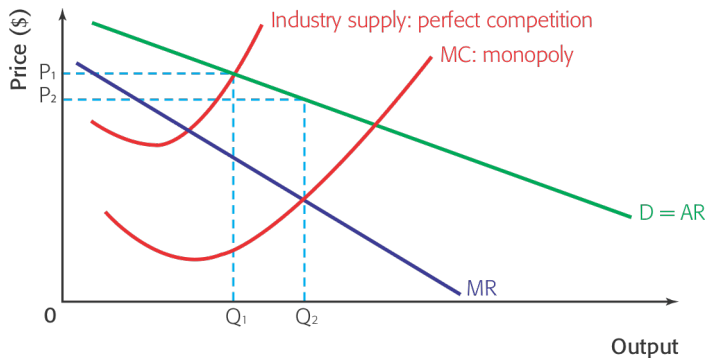


Figure 8.7 Economies of scale in monopoly

→ In perfect competition, $P_1 \times Q_1$ will be produced. However, if the industry is a monopoly, with significant economies of scale, then MC curve will be substantially below the industry supply curve. In this case, the monopolist will produce where $MC = MR$, maximizing profit and producing a greater quantity than perfect competition, Q_2 , at a lower price, P_2 .

2. Higher levels of investment in research and development (R&D) in monopolies

→ Perfect competition are relatively small and so may find difficult to invest in R&D.

→ Monopolist making abnormal profit will use it for fund research and development

→ In the long-run, it will benefit consumers, who would have better products and even more choices.

IB Question

- Draw diagrams and use them to compare and contrast a monopoly market with a perfectly competitive market, with reference to factors including efficiency, price and output, research and development (R&D) and economies of scale

The advantages and disadvantages of monopoly compared with perfect competition

Main idea 2: Disadvantages of monopoly in competition with perfect competition

1. [Monopolies are productively and allocatively inefficient](#)
2. [Monopolies can charge a higher price for a low level of output.](#)

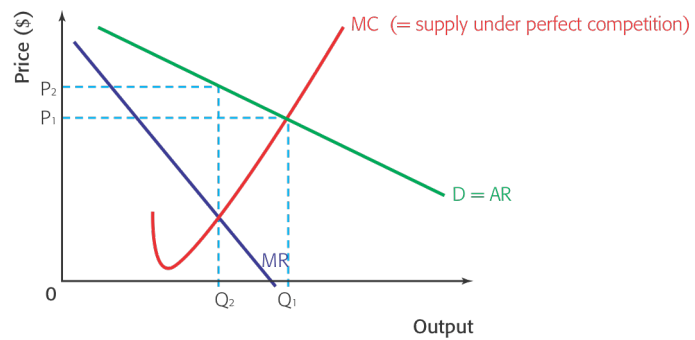


Figure 8.8 Monopoly versus perfect competition without economies of scale

3. [Monopolies can exercise anti-competitive behavior to keep their monopoly power](#)

1.5 Theory of the firm and its market structures - Monopolistic competition

Syllabus item: 66 Weight: 3

Main idea

The assumptions of monopolistic competition

1. Industry is made up of a **fairly large number of firms**
2. **Small firms** (meaning that it is unlikely that it will have a great effect on other competitors.)
3. All firms **produce slightly differentiated products** (→ **brand loyalty**)
4. Free to enter or leave the industry (= **No barriers to entry nor exit**)

(*Only difference from perfect competition: there is price differentiation)

• Example of monopolistic competition: nail (manicure) salons, car mechanics, plumber and jewelers

• Brand loyalty means that producers are to some extent price-makers, as they have some element of independence when they are deciding on price.

• It will face a **downward sloping demand curve** but demand will be **relatively elastic** since there are many, only slightly different, substitutes.

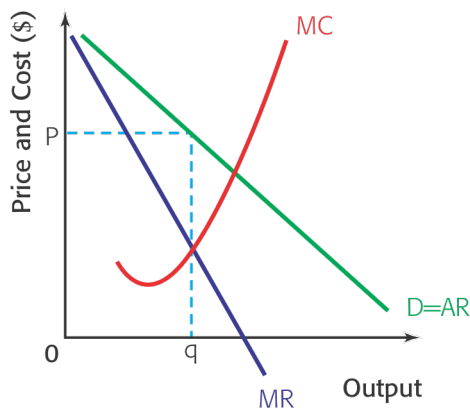


Figure 9.1 The demand curve for a firm in monopolistic competition

→ Maximizing profit at $MC = MR$

→ Output of q at price P

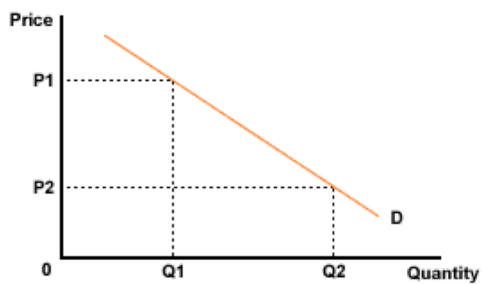
IB Question

- Describe, using examples, the assumed characteristics of a monopolistic competition: a large number of firms; differentiated products; absence of barriers to entry and exit.

Assumptions of the model
(Monopolistic competition)

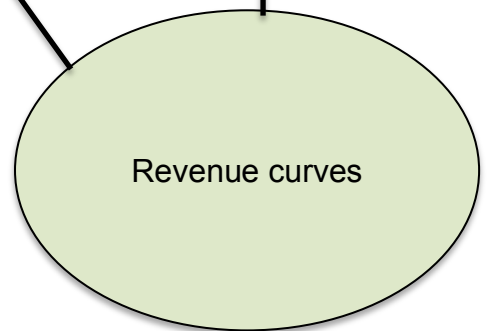
Main idea

- Under monopoly there is only one firm in the industry; thus there is **no difference between the demand curve for the industry and the demand curve for the firm**. As the monopolist is subject to the normal law of demand, the monopolist's demand curve will be downward sloping so that to sell more, price would have to be lowered (see figure 1).



IB Question

- Explain that product differentiation leads to a small degree of monopoly power and therefore to a negatively sloping demand curve for the product.



Main idea

Possible short-run profit situation in monopolistic competition

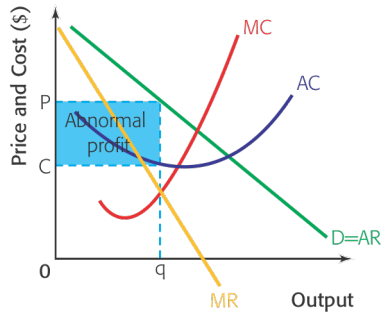


Figure 9.2 Short-run abnormal profits in monopolistic competition

- Maximizing profits at $MC = MR$ and the cost per unit (AC) of $C > P$
- Abnormal profits

Possible short-run loss situation in monopolistic competition

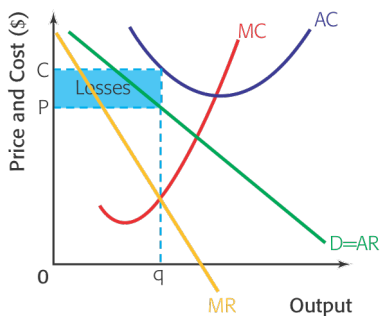


Figure 9.3 Short-run losses in monopolistic competition

- Firm producing at $MC = MR$ the cost per unit, $C > P$
- Loss

IB Question

- Explain, using a diagram, the short-run equilibrium output and pricing decisions of a profit maximizing (loss minimizing) firm in monopolistic competition, identifying the firm's economic profit (or loss).

Profit maximization
in the short run
(Monopolistic
competition)



Main idea

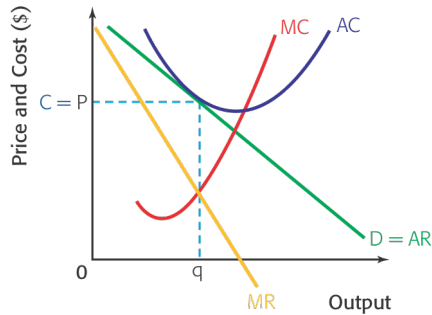
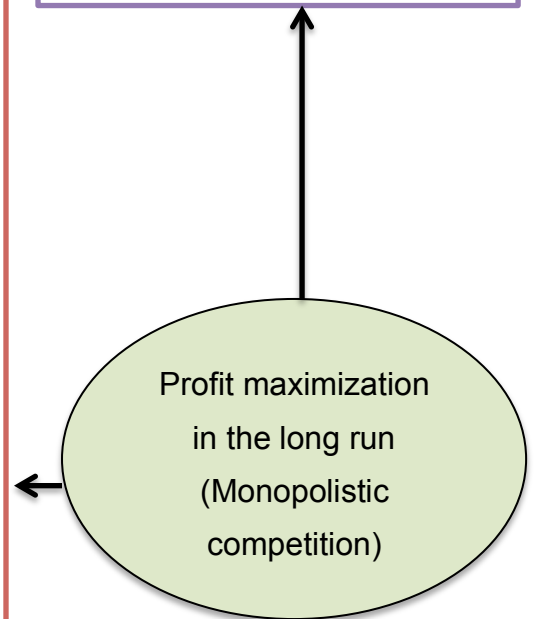


Figure 9.4 Long-run equilibrium in monopolistic competition

- Normal profit → Why??
- Maximizing profits by producing at the level of output $MC = MR$
- $C = P$

IB Question

- Explain, using diagrams, why in the long run a firm in monopolistic competition will make normal profit.



Main idea

- [Price competition](#)

→ Rivalry between suppliers based solely on price, usually for commodious or identical items.

→ The main aim of the business is to maximize profits

→ Firms may try to increase sales by cutting price

ex)

Discounts, buy one get one free, sale prices, interest free terms

- [Non-price competition](#)

→ Market situation in which competitors would not lower prices for fear of a price war. Instead they focus on extensive promotions to highlight the distinctive benefits or features of their products.

ex)

Advertising → Media. Usually used to attract attention to the business by other means (sex appeal etc.)

Packaging → Firms compete by making their packaging more attractive. Includes logo's and trademarks that helps to identify the product

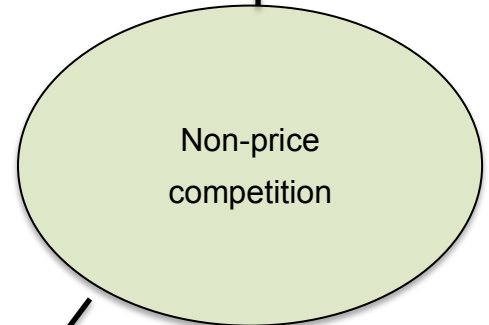
Product development → To produce a product that will sell well and that is different from rivals' products

Quality of service → Offering good quality of products will lead to differentiation from other products

IB Question

- Distinguish between price competition and non-price competition.

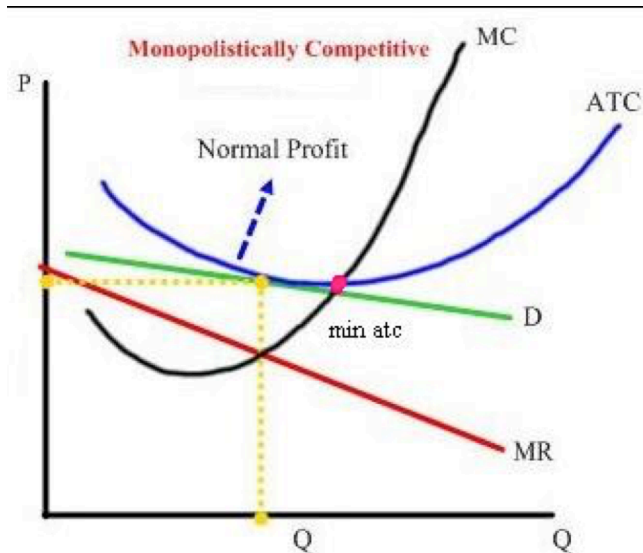
- Describe examples of non-price competition, including advertising, packaging, product development and quality of service.



Main idea

Recall that:

- Productive efficiency is $P = \min ATC$
- Allocative efficiency is $P = MC$



I. A monopolistic competition industry has **neither productive nor allocative efficiency**

A. Marginal revenue curve will never coincide with $D=AR=P$

- In monopolistically competitive market, Demand is relatively elastic. Products are somewhat substitutable.

B. Firms produce at a point where $P > MC$, meaning that resources are underallocated; not allocatively efficient

C. Firms do not produce where $P = \min ATC$; therefore, no productively efficient

D. In the long run, MC industries will only earn a **normal profit**. $P = ATC$ (but not minimum ATC!)

E. This is also caused by **relative ease of entry and exit**

- When profits are earned, more firms will enter (easy to enter/ exit) and demand for an individual firm **decreases** (shifts to the left). This causes an individual firm's profits to decrease. Demand curve becomes more elastic.
- When there are losses, firms will leave (easy to enter/ exit) and demand for an individual firm **increases** (shifts to the right). This causes an individual firm's profits to increase. Demand curve becomes less elastic.

IB Question

- Explain, using a diagram, why neither allocative efficiency nor productive efficiency are achieved by monopolistically competitive firms.

Monopolistic competition and efficiency

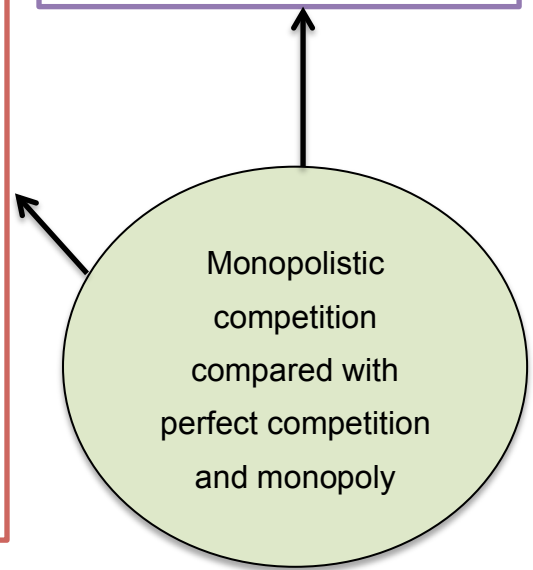
Main idea

Monopolistic competition in comparison with perfect competition

Monopolistic competition	Perfect competition
Few barriers of entry and exit	No barriers of entry nor exit
High degree of price differentiation	All goods are substitutes
Not effective	Perfectly efficient
Large number of small firms	Large number of small firms
Little price power	Producer is price taker
Both consumer and producer sovereignty	Consumer's sovereignty
Demand curve: downward sloping	Demand curve: horizontal
To some extent, price makers	Price takers (A single firm cannot affect the price)
In short-run, producer earn normal profit, abnormal profit and negative profit	In short-run, producer earn normal profit, abnormal profit and negative profit
In long run, they make normal profit	In long run, they make normal profit

IB Question

- Compare and contrast, using diagrams, monopolistic competition with perfect competition, and monopolistic competition with monopoly, with reference to factors including short run, long run, market power, allocative and productive efficiency, number of producers, economies of scale, ease of entry and exit, size of firms and product differentiation.



Main idea

Monopolistic competition in comparison with monopoly

Monopolistic competition	Monopoly
Few barriers of entry and exit	Barriers of entry and exit
High degree of price differentiation	Only one firm producing the product
Not effective	Not effective
Large number of small firms	Demand curve: downward sloping
Little price power	Use monopoly power
Both consumer and producer sovereignty	A single firm represents the industry
Demand curve: downward sloping	Demand curve: downward sloping
To some extent, price makers	Producer is price maker
In short-run, producer earn normal profit, abnormal profit and negative profit	In short run, firm earn abnormal profit
In long run, they make normal profit	In long run, they may be able to make abnormal profit

1.5 Theory of the firm and its market structures - Oligopoly

Syllabus item: 73 Weight: 3

Main idea

The assumed characteristics of an oligopoly

- Few firms dominate industry
- Large proportion of the industry's output is shared by just a small number of firms
- Interdependence

→ Decisions taken by one firm affect other firms in the industry, so they depend on each other. Therefore, firms are keenly aware of the actions of their rivals. ("Price-maker")

- Distinct barriers to entry

(In some oligopolies, though, there may be low barriers to entry)

- Characterized by price rigidity

→ Prices in oligopoly tend to change much less than in more competitive markets

Mutual interdependence has important implications for the behavior of oligopolistic firms:

Strategic behavior

Conflicting incentives

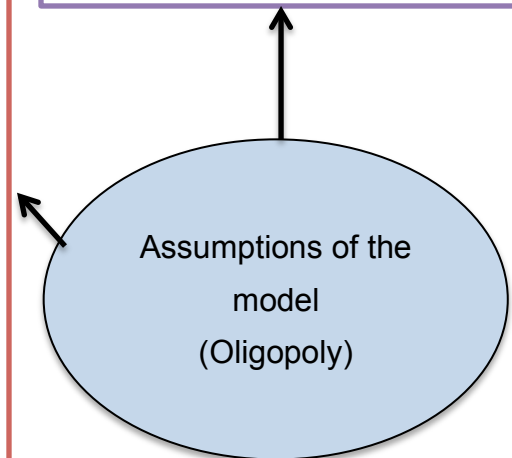
Firms in oligopoly face incentives that conflict, or clash with each other:

- **Incentive to collude:** By colluding to limit competition, they reduce uncertainties resulting from not knowing how rivals will behave, and maximize profits for the industry as a whole.
- **Incentives to compete:** at the same time, each firm faces an incentive to compete with its rivals in the hope that it will capture a portion of its rivals' market shares and profits, thereby increasing profits at the expense of other firms.

Clearly, firms in an industry cannot both collude and compete; they must do one or the other

IB Question

- Describe, using examples, the assumed characteristics of an oligopoly: the dominance of the industry by a small number of firms; the importance of interdependence; differentiated or homogeneous products; high barriers to entry.
- Explain why interdependence is responsible for the dilemma faced by oligopolistic firms— whether to compete or to collude.



Main idea

Concentration ratio:

Measures the total market share of the four largest firms as a percentage of total sales in the industry.

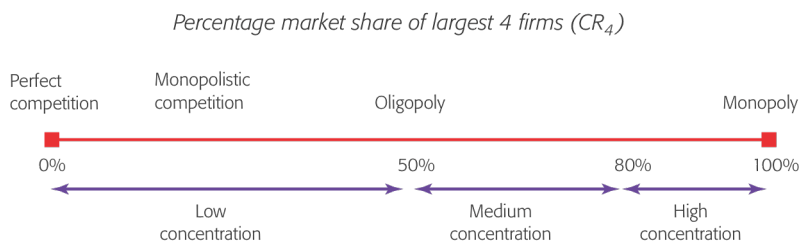


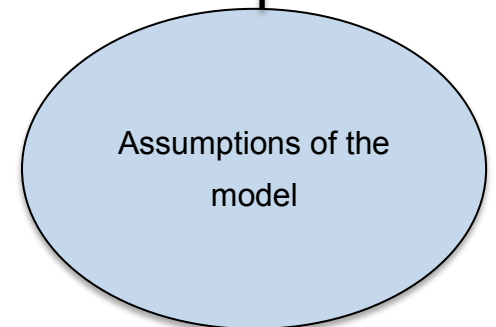
Figure 10.1 CR_4 ratios in different market structures

*The higher the percentage, the more concentrated is the market power of the 4 large firms

*A four-firm concentration ratio over 90 (that is, 90 percent of industry output is produced by the four largest firms) is a good indication of oligopoly and that these four firms have significant market control.

IB Question

- Explain how a concentration ratio may be used to identify an oligopoly.



Definition

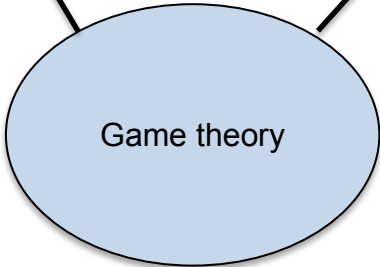
- [Game theory](#)

→ Considers the optimum strategy that a firm could undertake in the light of different possible decisions by rival firms

→ Two firms making up a market: duopoly (equal costs, identical products share the market evenly)

IB Question

- Explain how game theory (the simple prisoner’s dilemma) can illustrate strategic interdependence and the options available to oligopolies.



Main idea

		Firm A's price choices	
		\$5.50	\$5.00
Firm B's price choices	\$5.50	A: \$6 B: \$6	A: \$8 B: \$2
	\$5.00	A: \$2 B: \$8	A: \$4 B: \$4

“Maximin” strategy (Best “worst option”)

→ Adopt the policy that has the least worst outcome

→ Considers the worst possible scenarios following its choices, where firm B responds in the way that is most damaging to firm A

		Firm A's price choices	
		\$5.50	\$5.00
Firm B's price choices	\$5.50	A: \$6 B: \$6	A: \$8 B: \$2
	\$5.00	A: \$8 B: \$2	A: \$4 B: \$4

“Maximax” strategy (Best “best option”)

→ Strategy of trying to make the maximum profit available

→ Considers the best possible scenarios following its choices, where firm B responds in the way that is best for firm A

→ Firm A's “maximin” and “maximax” strategies are both to lower price if they both charged a higher price

→ Without the ability to collude with one another, both firms will always end up charging lower prices for their product and earn lower level of economic profit that they would be available if they both charged a high price

→ **The behavior of oligopolistic firms is highly interdependent on the behavior of competitors**

Main idea

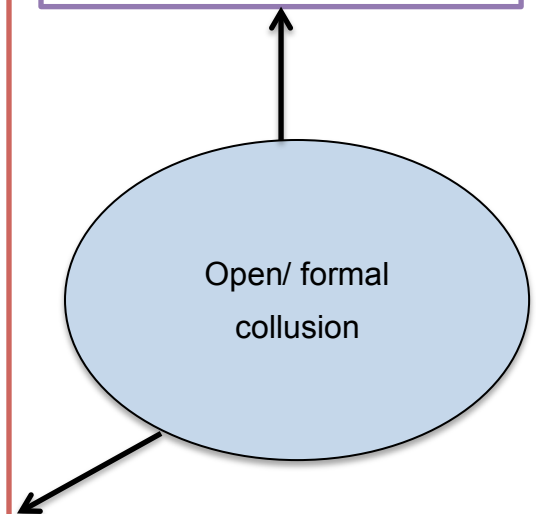
- **Collusion:** in oligopoly, it refers to **an agreement between firms to limit competition**, increase monopoly power and increase profits. The most common form of collusion involves: price-fixing agreements such as y holding prices constant at some level, raising prices by some fixed amount etc.
- **Collusion is illegal** in most countries, because it works to limit competition. Collusion may be formal, usually taking the form of a cartel, or it may be informal, such as price leadership.
- **A cartel is a formal agreement between firms in an industry** to take actions to limit competition in order to increase profits but therefore involves formal collusion (open collusion).
Best-known example of a cartel is OPEC, composed of a group of 13 oil-producing countries. OPEC periodically tries to raise the world price of oil by cutting back on its total output.

The following factors make it difficult for a cartel to be established and maintained:

- The incentive to cheat
- Cost differences between firms
- Firms face different demand curves
- Number of firms
- The possibility of a price war
- Recessions
- Potential entry into the industry
- The industry lacks a dominant firm

IB Question

- Explain the term “collusion”, give examples, and state that it is usually (in most countries) illegal.
- Explain the term “cartel”.
- Explain that the primary goal of a cartel is to limit competition between member firms and to maximize joint profits as if the firms were collectively a monopoly.
- Explain the incentive of cartel members to cheat.
- Analyse the conditions that make cartel structures difficult to maintain.



Main idea

Collusive oligopoly: 1) Formal collusion 2) Tacit collusion

1) Formal collusion/ Cartel

→ Takes place **when firms openly agree on the price** that they will all charge

→ Leads to higher prices and less output for consumers so generally banned by governments and is against the law in the majority of countries

→ Primary goal for a cartel is to limit competition between the member firms and attempt to maximize joint profits. Cartel members collectively behave like a monopoly.

→ Formal collusion between governments may be permitted. Ex) OPEC → sets production quotas and prices for the world oil markets

2) Tacit collusion/ Informal collusion

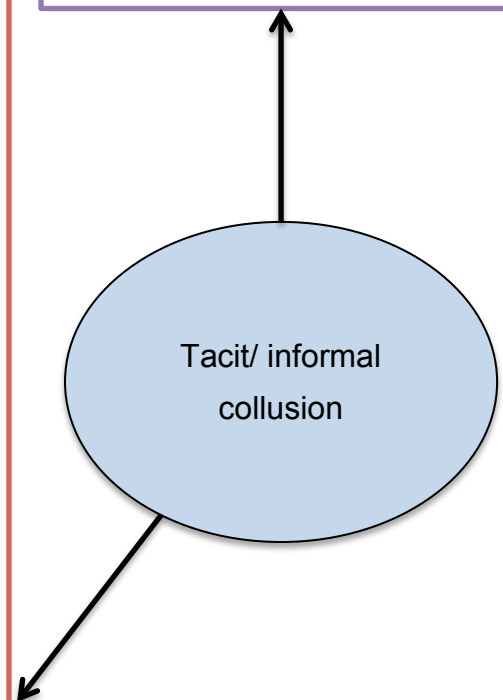
→ When firms in an oligopoly charge the same prices **without any formal collusion**

→ Can charge the same price as another by looking at the prices of a dominant firm in the industry, for example

→ **Price leadership:** where a dominant firm in the industry sets a price and also initiates any price changes. The remaining firms in the industry become price-takers, accepting the price that has been established by the leader. Ex) US Steel, Kellogg's and E.J. Reynolds

IB Question

- Describe the term "tacit collusion", including reference to price leadership by a dominant firm.



Main idea

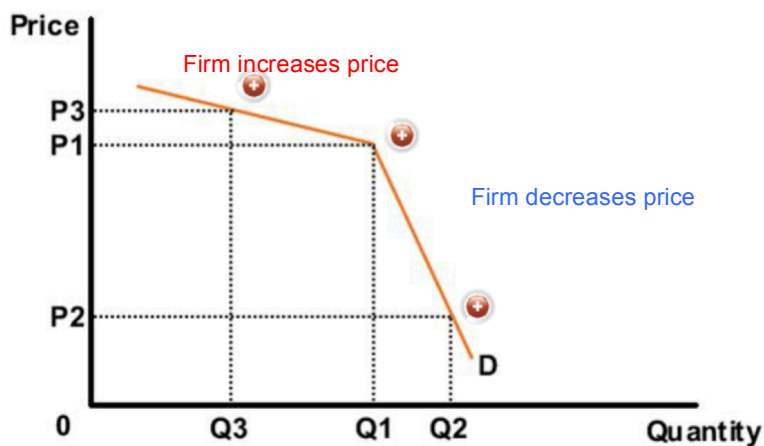
- [Non-collusive oligopoly](#)

→ Exists when the firm in an oligopoly does not collude and so have to be very aware of the reactions of other firms when making price decisions

→ Behavior of firms in a non-collusive oligopoly is strategic behavior as they must develop strategies that take into account all possible actions of rivals

- [Kinked demand curve](#)

The kinked demand curve suggests that firms have little incentive to increase or decrease prices

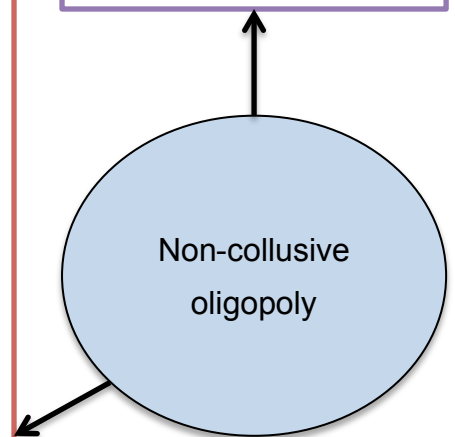


- Firm's don't want to increase prices because they will see a sharp fall in demand. ($P3 \times Q3 < P \times Q$)
- Firms don't want to cut prices because they will start a price war, where they don't gain market share, but do get lower prices and lower revenue. ($P1 \times Q1 > P2 \times Q2$)

Therefore the model of kinked curve suggests price will be stable.

IB Question

- Explain that the behavior of firms in a non-collusive oligopoly is strategic in order to take account of possible actions by rivals.
- Explain, using a diagram, the existence of price rigidities, with reference to the kinked demand curve.



Main idea

- [Firms in oligopoly tend not to compete in terms of price](#)

→ Why? Because they are careful not to trigger a price war, where one firm's price cut is matched by a retaliatory price cut by another firm.

→ As game theory suggests, a price war makes all the firms of industry collectively worse off due to lower prices and lower profits

[Non-price competition is very important in oligopoly for the following reasons:](#)

- They often have considerable financial resources (due to large profits) that they can devote to both R&D, advertising and branding
- The development of new products leads to increase in monopoly power, demand for the firm's product become less elastic
- Product differentiation can increase a firm's profit position without creating risks for immediate retaliation without creating risks for immediate retaliation by rivals

[Types of non-price competition:](#)

- Use of brand names
- Packaging
- Special features
- Advertising
- Sales promotion
- Personal selling
- Publicity
- Sponsorship deals
- Special distribution features

IB Question

- Explain why non-price competition is common in oligopolistic markets, with reference to the risk of price wars.
- Describe, using examples, types of non-price competition.

Main idea

- [Price discrimination](#)

→ When a producer sells the exact same product to different consumers at different prices

In order to price discriminate:

1. **The producer must have some price-setting ability**

(Often price discrimination is found in monopoly and oligopoly markets as they have price-setting ability. NEVER happens in perfect competition)

2. **The consumers must have different PED for the product**

(Inelastic → prepared to pay at higher prices)

3. **The producer must be able to separate markets in a number of different ways.** They can do so by:

- Time
(e.g. Commuters heading to work in the morning has an inelastic demand for train fares)
- Age
(e.g. Children have more elastic demand)
- Gender
- Income
(e.g. The wealthier, the more inelastic demand they have)
- Geographical distance
(Only possible when the cost of transferring the product > difference in prices)
- Types of consumer

IB Question

- Describe price discrimination as the practice of charging different prices to different consumer groups for the same product, where the price difference is not justified by differences in cost.
- Explain that price discrimination may only take place if all of the following conditions exist: the firm must possess some degree of market power; there must be groups of consumers with differing price elasticities of demand for the product; the firm must be able to separate groups to ensure that no resale of the product occurs.

Necessary condition
for the practice of
price discrimination

IB Question

- Draw a diagram to illustrate how a firm maximizes profit in third degree price discrimination, explaining why the higher price is set in the market with the relatively more inelastic demand.

Main idea

1. First-degree price discrimination

→ Takes place when each consumer pays exactly that price that he/she is prepared to pay. ex) Traders in a bazaar or market

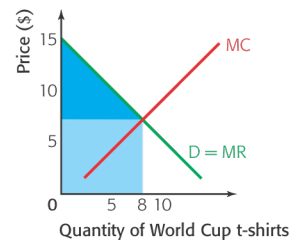


Figure 11.1 First-degree price discrimination

2. Second-degree price discrimination

→ Takes place when a firm charges different prices to consumers dependently upon how much they purchase. ex) Utility companies (electricity and gas providers etc.)

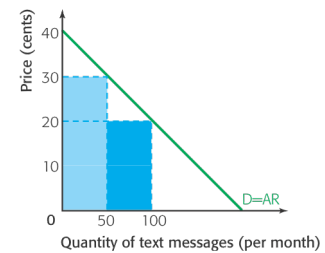


Figure 11.2 Second-degree price discrimination

3. Third-degree price discrimination

→ Takes place when consumers are identified in different market segments, and a separate price is charged in each market segment that recognizes the different price elasticities in each segment

→ Most common form of price discrimination

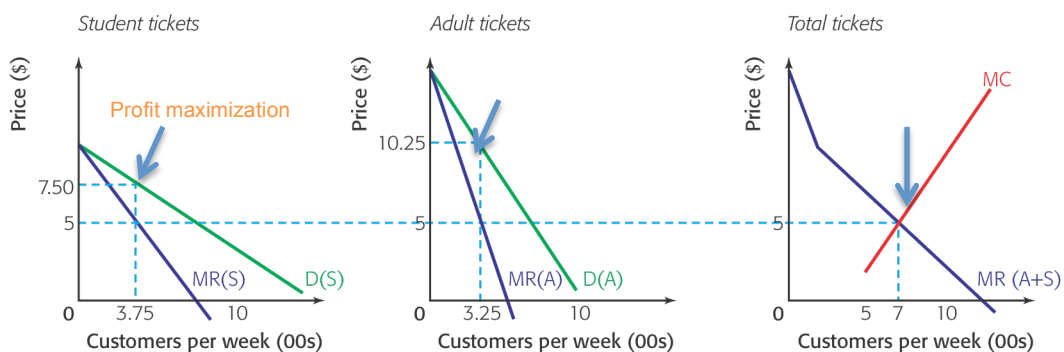


Figure 11.3 Third degree price discrimination

- Students: elastic demand, adults: inelastic demand
- Higher price is set in the market with relatively more inelastic demand because they are likely to afford higher prices
- Marginal revenue curves are twice as steeply as the demand