CIE Economics A-level

Topic 2: Price System and the Microeconomy

f) Differing objectives of a firm

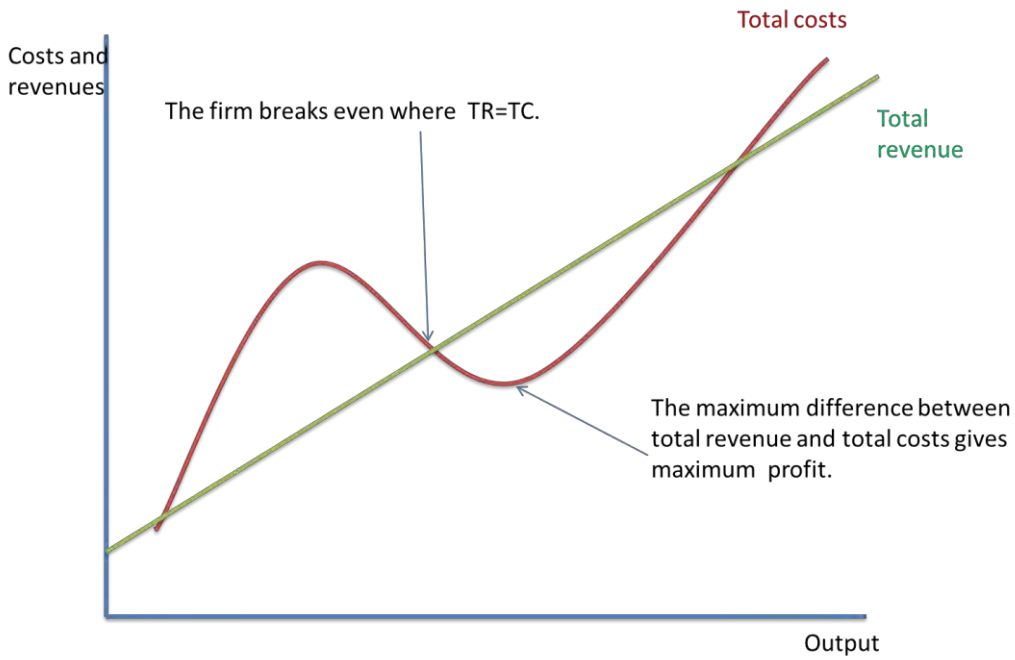
Notes

Traditional profit maximising objective of a firm

- Profit is an important objective of most firms. Models that consider the traditional theory of the firm are based upon the assumption that firms aim to maximise profits.
- However, firms can have other objectives which affect how they behave.
- Profit is the difference between total revenue and total cost. It is the reward that entrepreneurs yield when they take risks.

- Firms break even when TR = TC.

- A firm's profit is the difference between its total revenue (TR) and total costs (TC). A firm profit maximises when they are operating at the price and output which derives the greatest profit. Profit maximisation occurs where **marginal cost (MC) = marginal revenue (MR).** In other words, each extra unit produced gives no extra loss or no extra revenue.



- Profits increase when MR > MC. Profits decrease when MC > MR.
- Some firms choose to profit maximise because:
    - It provides greater wages and dividends for entrepreneurs

- Retained profits are a cheap source of finance, which saves paying high interest rates on loans
- In the short run, the interests of the owners or shareholders are most important, since they aim to maximise their gain from the company.
- Some firms might profit maximise in the long run since consumers do not like rapid price changes in the short run, so this will provide a stable price and output.

- PLCs are particularly keen to profit maximise, because they could lose their shareholders if they do not receive a high dividend. They are more likely to have **short run profit maximisation** as an objective, because they need to keep their shareholders happy.

- **Normal profit:** Normal profit is the minimum reward required to keep entrepreneurs supplying their enterprise. It covers the opportunity cost of investing funds into the firm and not elsewhere. This is when total revenue = total costs (TR = TC). Normal profit is considered to be a cost, so it is included in the costs of production.
- **Supernormal profit:** Supernormal profit (also called abnormal or economic profit) is the profit above normal profit. This exceeds the value of opportunity cost of investing funds into the firm. This is when TR > TC.

- **PED and total revenue:**

- Total revenue is equal to average price times quantity sold. TR= P x Q
- If a good has an inelastic demand, the firm can raise its price, and quantity sold will not fall significantly. This will increase total revenue.
- If a good has an elastic demand and the firm raises its price, quantity sold will fall. This will reduce total revenue.

Other objectives of a firm

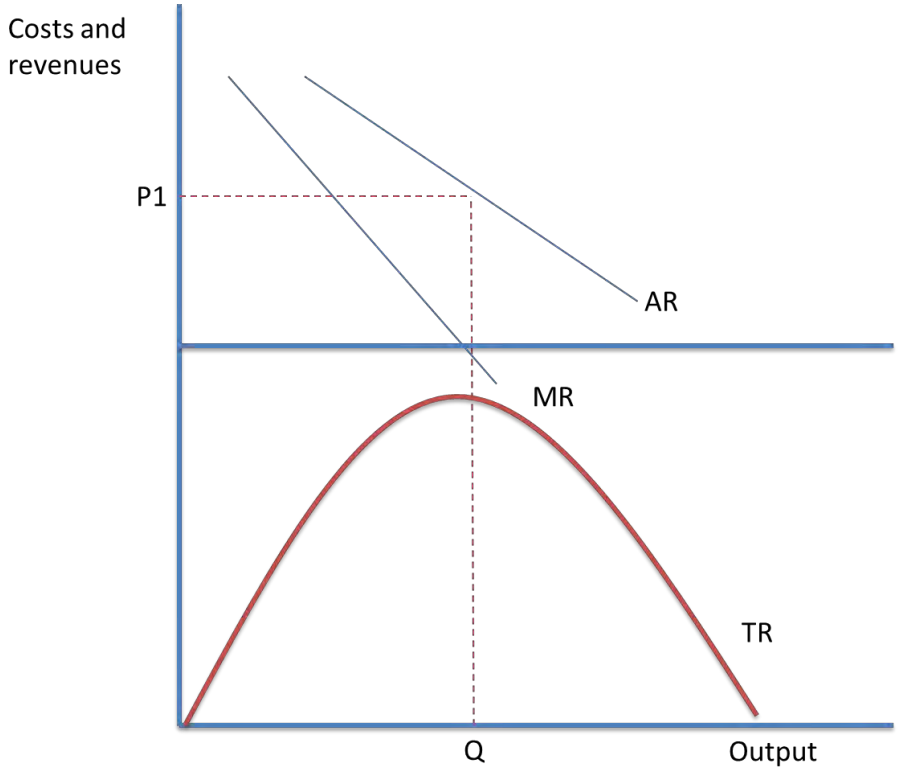
- **Survival:** Some firms, particularly new firms entering competitive markets, might aim to simply survive in the market. This is a short term view. During periods of economic decline such as the 2008 financial crisis, when consumer spending plummets, firms might have survival as their objective, until there is economic growth again. Firms might aim to sell as much as possible to keep their market position, even if it is at a loss in the short run.

- **Growth:** Some firms might aim to increase the size of their firm. This could be to take advantage of economies of scale, such as risk-bearing or technological. This would lower their average costs in the long run, and make them more profitable. Firms might grow by expanding their product range or by **merging or taking over** existing firms. Large firms are also more able to participate in research and development, which might make them more competitive and efficient in the long run.

- **Increasing their market share:** This helps increase the chance of surviving in the market, and it can be achieved by maximising sales. For example, Amazon aimed to increase their market share in the e-reader market, by trying to sell as many Kindles as possible. They did this at a loss in the short run, but they gained customer loyalty and now they are a leading e-reader producer.

- **Quality:** Firms might aim to increase their competitiveness by improving their quality. Firms might consider improving their customer service or the quality of the good they produce. This could be achieved through innovation. If firms can gain a reputation for high quality goods, they could potentially charge higher prices, since consumers might be willing to pay more for them.

- **Maximising their sales revenue:** Revenue maximisation occurs when MR = 0. In other words, each extra unit sold generates no extra revenue.

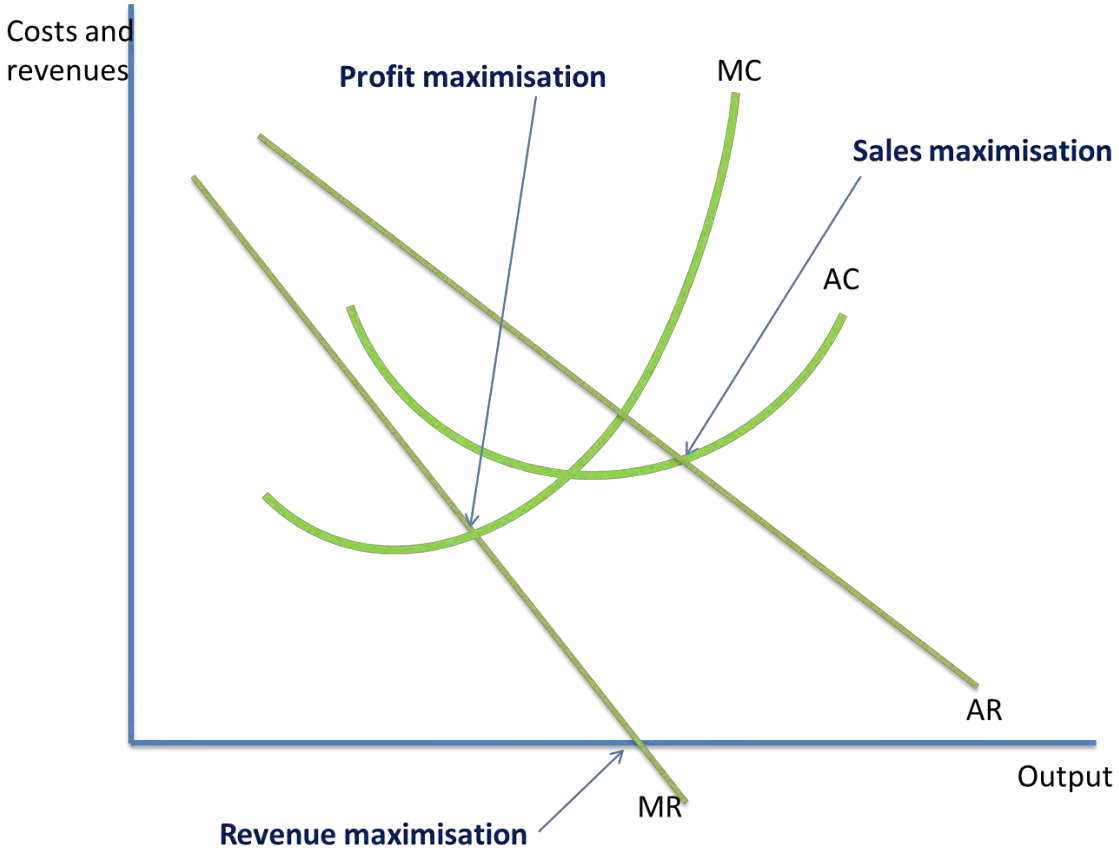


At the point Q P1, the firm is operating at MR=0, where revenue maximises. The curve shows how the point of maximum total revenue is MR =0.

- **Sales maximisation:** This is when the firm aims to sell as much of their goods and services as possible without making a loss. Not-for-profit organisations might work at this output and price. On a diagram this is where average costs (AC) = average revenue (AR).

  An example of sales maximising is Amazon's Kindle launch. They sold as many Kindles as possible to gain market share, so they can earn more profits in the long run. It helps keep out and deter competitors.

The diagram below summarises each objective.



- Other objectives of firms include:
    - Society
    - Environmental
    - Ethical where there are philanthropic owners
    - Managerial for personal gains e.g. luxury cars and holidays
    - Worker welfare

The satisficing principle:

- Another objective a firm might have is satisficing. A firm is profit satisficing when it is earning just enough profits to keep its shareholders happy.

- Shareholders want profits since they earn dividends from them. Managers might not aim for high profits, because their personal reward from them is small compared to shareholders. Therefore, managers might choose to earn enough profits to keep shareholders happy, whist still meeting their other objectives.

- This occurs where there is a divorce of ownership and control.

The reasons for and the consequences of a divorce of ownership from control

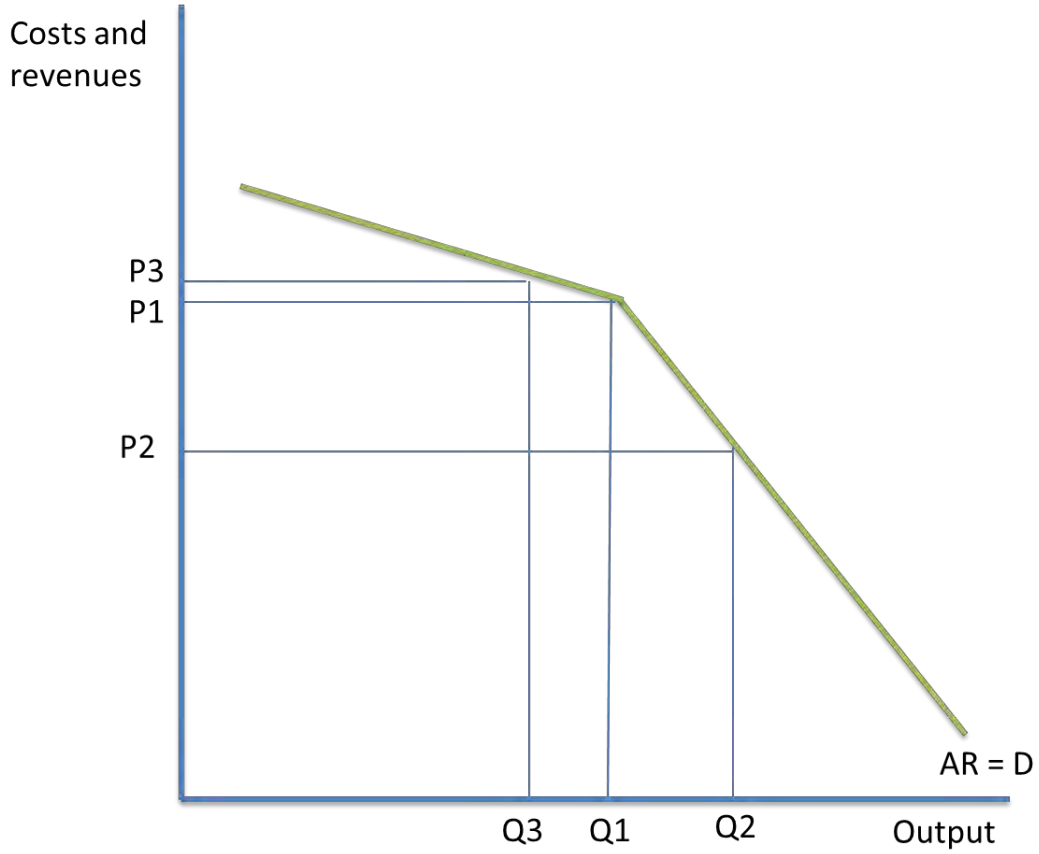
- The **principal-agent problem** can be linked to the theory of asymmetric information. This is when the agent makes decisions for the principal, but the agent is inclined to act in their own interests, rather than those of the principal. For example, shareholders and managers have different objectives which might conflict. Managers might choose to make a personal gain, such as a bonus, rather than maximise the dividends of the shareholders.

- When an owner of a firm sells shares, they lose some of the control they had over the firm. This could result in conflicting objectives between different stakeholders in the firm. If the manager is particularly good, they might require higher wages to keep them in the firm. However, they also need to keep shareholders happy, since they are an important source of investment. It is not always possible to give both the manager a high salary and the shareholders large dividends, since funds are limited.

- When a manager sells their shares, shareholders gain more control over the decisions of the firm. This could give rise to 'shareholder activism'. This could be to put pressure on the management of the firm or to try and get higher dividends. For example, Sainsbury's shareholders objected the decision to give the chairman a £2.3 billion bonus in 2004.

Behavioural analysis approach to the decision-making of a firm

The kinked demand curve model



- The kinked demand curve illustrates the feature of price stability in an oligopoly. It assumes other firms have an asymmetric reaction to a price change by another firm. It is an illustration of interdependence between firms.
- If price increases from P1 to P3, other firms do not react, so the firm which increases their price loses a significant proportion of market share (Q1 to Q3).
- If the firm decreases their price from P1 to P2, the firm only gains a relatively small increase in market share (Q1 to Q2).
- The first part of the diagram shows a relatively price elastic demand curve. The second part shows a relatively inelastic demand curve.
- When firms deviate from the rigid, equilibrium price and quantity, they enter the different demand elasticities.

- **The significance of interdependence and uncertainty in oligopoly**

- Game theory is related to the concept of interdependence between firms in an oligopoly. It is used to predict the outcome of a decision made by one firm, when it has incomplete information about the other firm.

- It can be explained using the Prisoner's Dilemma, which is a model based around two prisoners, who have the choice to either confess or deny a crime. The consequences of the choice depend on what the other prisoner chooses.

		Prisoner B	
		Confess	**Deny**
Prisoner A	**Confess**	**5 years, 5 years**	**1 year, 10 years**
	Deny	**10 years, 1 year**	**2 years, 2 years**

- The two prisoners are not allowed to communicate, but they can consider what the other prisoner is likely to choose. This relates to the characteristic of uncertainty in an oligopoly.
- The **dominant strategy** is the option which is best, regardless of what the other person chooses. This is for both prisoners to confess, since this gives the minimum number of years that they have to spend in prison. It is the most likely outcome.
- This is still higher than if both prisoners deny the crime, however. If collusion is allowed in this dilemma, then both prisoners would deny. This is the **Nash equilibrium.**
- A **Nash equilibrium** is a concept in game theory which describes the optimal strategy for all players, whilst taking into account what opponents have chosen. They cannot improve their position given the choice of the other.
- However, even if both prisoners agree to deny, each one has an incentive to cheat and therefore confess, since this could reduce their potential sentence from 2 years to 1 year. This makes the Nash equilibrium unstable.
- It essentially sums up the interdependence between firms when making decisions in an oligopoly.

Comparisons of performance of firms

Price and non-price competition

- A **cartel** is a group of two or more firms which have agreed to control prices, limit output, or prevent the entrance of new firms into the market. A famous example of a cartel is OPEC, which fixed their output of oil. This was possible since they controlled over 70% of the supply of oil in the world. This reduces uncertainty for firms, which would otherwise exist without a cartel.

  Cartels can lead to higher prices for consumers and restricted outputs. Some cartels might involve dividing the market up, so firms agree not to compete in each other's markets.

- **Price leadership** occurs when one firm changes their prices, and other firms follow. This firm is usually the dominant firm in the market. Other firms are often forced into changing their prices too, otherwise they risk losing their market share. This explains why there is price stability in an oligopoly; other firms risk losing market share if they do not follow the price change. The price leader is often the one judge to have the best knowledge of prevailing market conditions.

- **Price wars:** A price war is a type of price competition, which involves firms constantly cutting their prices below that of its competitors. Their competitors then lower their prices to match. Further price cuts by one firm will lead to more and more firms cutting their prices. An example of this is the UK supermarket industry (see notes above).

- **Non-price competition** aims to increase the loyalty to a brand, which makes demand for a good more price inelastic.

  For example, firms might improve the quality of their customer service, such as having more available delivery times. They might keep their shops open for longer, so consumers can visit when it is convenient.

  Special offers, such as buy one get one free, free gifts, or loyalty cards, might be used to attract consumers and increase demand.

Advertising and marketing might be used to make their brand more known and influence consumer preferences. However, it is difficult to know what the effect of increased advertising spending will be. For some firms, it might be ineffective. This would make them incur large **sunk costs,** which are unrecoverable.

Brands are used to differentiate between products. If firms can increase brand loyalty, demand becomes more price inelastic. Increasing brand loyalty means firms can attract and keep customers, which can increase their market share.

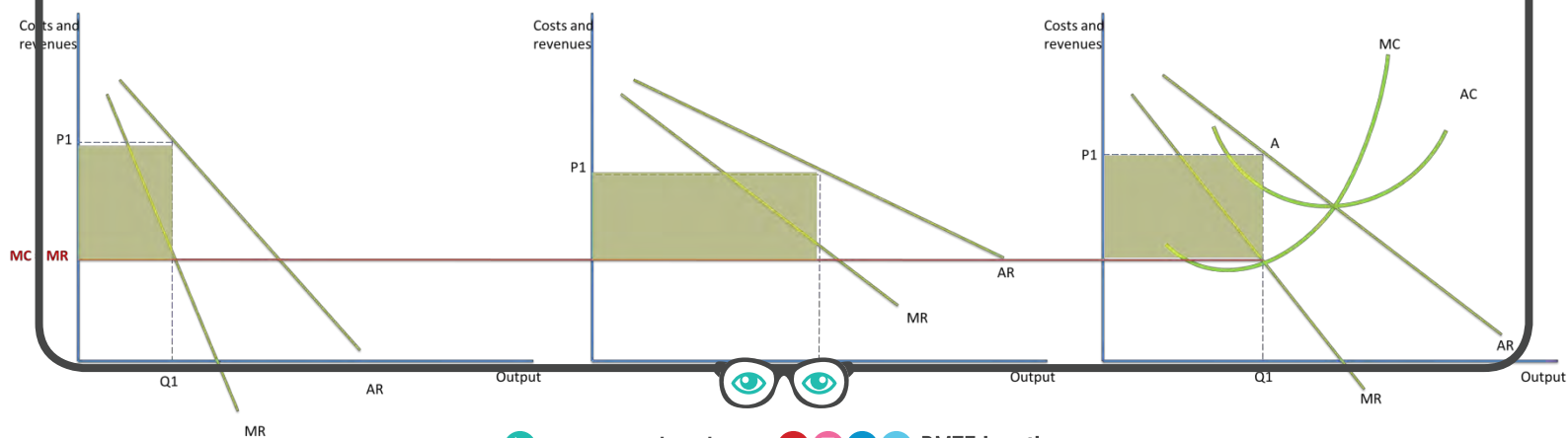
- **Barriers to entry:** Firms might try to drive competitors out of the industry in order to increase their own market share. Barriers to entry are designed to prevent new firms entering the market profitably. This increases producer surplus.

- **Price discrimination**

- Price discrimination occurs in a monopoly, when the monopolist decides to charge different groups of consumers different prices, **for the same good or service.** This is not for cost reasons.

- Usually, demand curves of different elasticities exist with each group of consumers. This allows the market to be split and different prices to be charged. It must not cost the monopolist much to split the market; otherwise, it will not be financially worthwhile.

- The diagram shows the different price elasticities in a market, which might mean the monopolist charges different prices. A market with an elastic demand curve (the second graph) will have a lower price, while a market with an inelastic demand curve will have a higher price (first graph). The third graph shows the firm's costs and revenues. The area of supernormal profit is represented by the yellow shaded rectangle.



- By charging different prices, the monopolist can maximise their overall profits.

    - First degree price discrimination is when each consumer is charged a different price. For example, a lawyer might charge a high income family more than a low income family.
    - Second degree price discrimination is when prices are different according to the volume purchased. For example, with gas.
    - Third degree price discrimination is when different groups of consumers are charged a different price for the same good or service. For example, the higher price at peak times on trains is a form of third degree price discrimination, because generally, a different group of consumers (usually commuters) use trains at peak times, than off-peak times. Similarly, adults, students and children pay different prices to see the same film at a cinema. It costs the cinema the same to show the film, but the consumers have been divided into groups based on age.

	Costs	**Benefits**
Consumers	Usually, price discrimination results in a loss of consumer surplus. Since P > MC, there is a loss of allocative efficiency. It strengthens the monopoly power of firms, which could result in higher prices in the long run for consumers.	Consumers could benefit from a net welfare gain as a result of cross subsidisation, if they receive a lower price. Some consumers, who were previously excluded by high prices, might now be able to benefit from the good or service. For example, drug companies might charge consumers with higher incomes more for the same drugs, so that the less well-off can also access the drugs at a lower price. This can yield positive externalities.
Producers	If it is used as a predatory pricing method, the firm could face investigation by the Competition and Markets Authority.	Producers make better use of spare capacity. The higher supernormal profits, which result from

	It might cost the firm to divide the market, which limits the benefits they could gain.	price discrimination, could help stimulate investment. If more profits are made in one market, a different market which makes losses could be cross subsidised, especially if it yields social benefits. This will limit or prevent job losses, which might result from the closure of the loss-making market.

- **Predatory pricing** involves firms setting low prices to drive out firms already in the industry. In the short run, it leads to them making losses. As firms leave, the remaining firms raise their prices slowly to regain their revenue. They price their goods and services below their average costs. This reduces contestability.

- **Limit pricing** discourages the entry of other firms. It ensures the price of a good is below that which a new firm entering the market would be able to sustain. Potential firms are therefore unable to compete with existing firms.