Edexcel Economics (A) A-level

Theme 3: Business Behaviour and the Labour Market

3.4 Market Structures

Detailed Notes

3.4.1 Efficiency

Efficiency can be used to judge how well the market allocates resources, and the relationship between scarce inputs and outputs. There are a range of different types of efficiency.

- **Allocative efficiency:** This is achieved when resources are used to produce goods and services which consumers want and value most highly and social welfare is maximised. It will occur when the value to society from consumption is equal to the marginal cost of production, where **P=MC**.

- **Productive efficiency:** A firm has productive efficiency when its products are produced at the lowest average cost so the fewest resources are used to produce each product. The minimum resources are used to produce the maximum output. This can only exist if firms produce at the bottom of the AC curve, in the short run this is where **MC=AC**. It is only possible if there is technical efficiency, where a given output is produced with minimum inputs- but not all technically efficient firms are productively efficient.

- **Dynamic efficiency:** This is achieved when resources are allocated efficiently over time. It is concerned with investment, which brings new products and new production techniques. The alternative is static efficiency: efficiency at a set point in time. Allocative and productive efficiency are examples of static efficiency. Dynamic efficiency will be achieved in markets where competition encourages innovation but where there are differences in products and copyright/patent laws. Supernormal profit is required to provide firms with the incentive to invest and the ability to do so.

- **X-inefficiency:** If a firm fails to minimise its average costs at a given level of output, it is X-inefficient and there is organisational slack. This is a specific type of productive inefficiency as it occurs when they fail to minimise their cost for that specific output. For example, the minimum point on the AC curve may be at 100 goods at a cost of £5 each. The firm is producing 125 goods and so is not productively efficient. It costs them £8 to produce each good, but they could produce 125 goods at £7. Therefore, they are X-inefficient since they are not producing on the lowest AC curve. It often occurs where there is a lack of competition so firms have little incentive to cut costs.

3.4.2 Perfect competition

Perfect competition is a market where there is a high degree of competition, but the word 'perfect' does not mean it maximises welfare or produces ideal results. There are few industries which fit this type of market structure, one example may be agriculture but government interferences may prevent it from being so. In reality, the assumptions made rarely hold and no market is completely perfectly competitive.

Characteristics of perfect competition:

For a market to be perfectly competitive, there must be four key characteristics. These mean that demand for the firm's goods is perfectly elastic, and prices are solely determined by interaction of demand and supply; the firms are **price takers**.

- There must be **many buyers and sellers.** This means that no one firm or customer will be able to influence the market. For example, the decision of one firm to double their output or the decision of one buyer to double their consumption will have no effect. If the firm did manage to have an effect, this would mean the market was no longer perfectly competitive as there would be one large firm and other smaller firms, or one large buyer and other smaller buyers.

- There must be **freedom of entry and exit from the industry**. This is important as it means that when a business is making profits anyone can enter that market and start producing that product for themselves. As a result, business are unable to make huge profits in the long run and if they are making losses they are able to leave. In the long run, they make normal profits.

- There must be **perfect knowledge**. This enables firms to know when other firms are making profits which will attract them to join the market. Moreover, all firms have the same costs as they can use the same production techniques. It also means that any attempt to raise prices above the level determined by the market will lead to no sales, as customers will be aware they can buy the same good for a lower price and firms know there is no point lowering the price as they will sell all their goods at the higher price determined by the market.

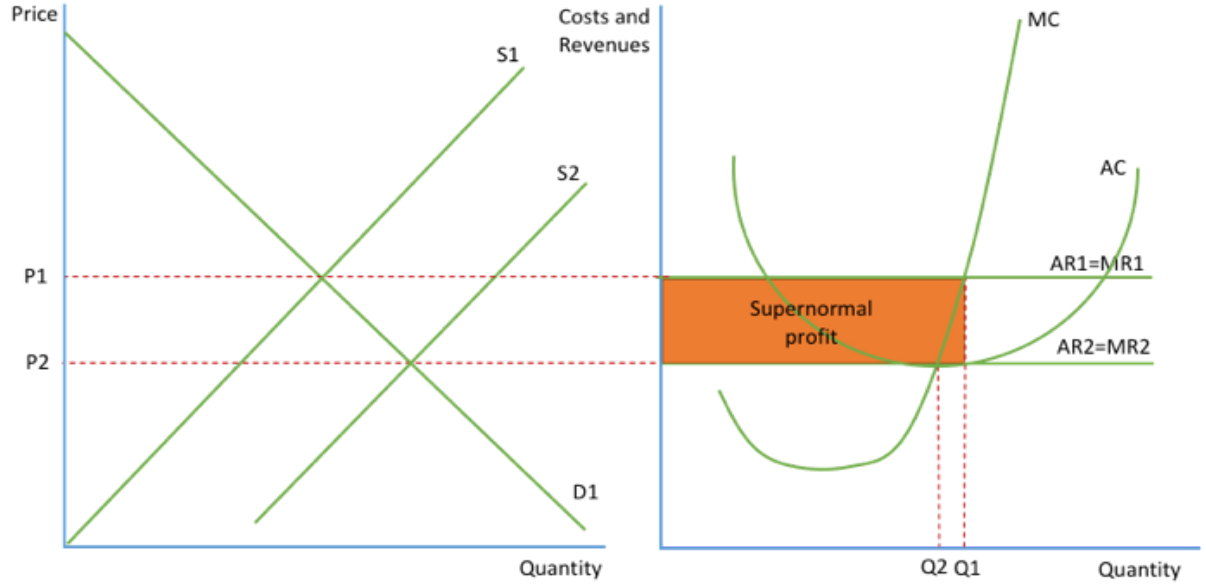
- The product must be **homogenous**, where they are identical so it is impossible to tell the difference between one make and another e.g. semi-skimmed milk. This is important because it means if a firm raises it price above the competitors' no one will buy it and they will not gain from lowering their price because they can sell all of your product at the same price as everyone else.

Profit maximising equilibrium:

Firms are assumed to short run profit maximise and so the firm will produce at MC=MR. In the short run, it is possible for the firm to make a normal profit, a supernormal profit or a loss. However, firms in perfect competition can only make **normal profit in the long run**. This can be seen on the diagram.

In the short run, firms are making the supernormal profit of the shaded area. Prices are set by the market at P1, where S1=D1. As a result, the firm faces the demand curve of AR1=MR1 and produce where MC=MR1 at Q1 goods. However, since there is perfect information and ease of entry, the fact they are making supernormal profits will encourage new entrants to the market. This will increase supply from S1 to S2 and lead to a fall in price from P1 to P2. The firm now has the demand curve AR2=MR2 and produces where MC=MR2 at Q2. This is also where AR2=AC and so they are making normal profits. If the

firm was making a loss, firms would leave the industry and this would decrease supply, pushing prices up and reverting to the long run equilibrium.



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Efficiency:

- Perfect competition is **productively efficient**, since they produce where MC=AC. They are also **allocative efficient** since they produce where P=MC. Thus, they are **static efficient**.

- However, they are **not dynamic efficient**. No single firm will have enough for research and development and small firms struggle to receive finance. The existence of perfect information also means one firms' invention will be adopted by another firm and so the investment will give the firm no competitive benefit. Governments tend to have to do all the research.

- **Competition** should keep costs, and therefore prices, low. However, firms will be **unable to benefit from economies of scale** and this may mean costs are higher than they otherwise could be.

3.4.3 Monopolistic competition

Monopolistic competition is a form of imperfect competition, with a downward sloping demand curve. It lies in between the two extremes of perfect competition and monopoly, both of which rarely exist in a pure form in real life. Some examples of firms in monopolistic competition are hairdressers, estate agents and restaurants.

Characteristics:

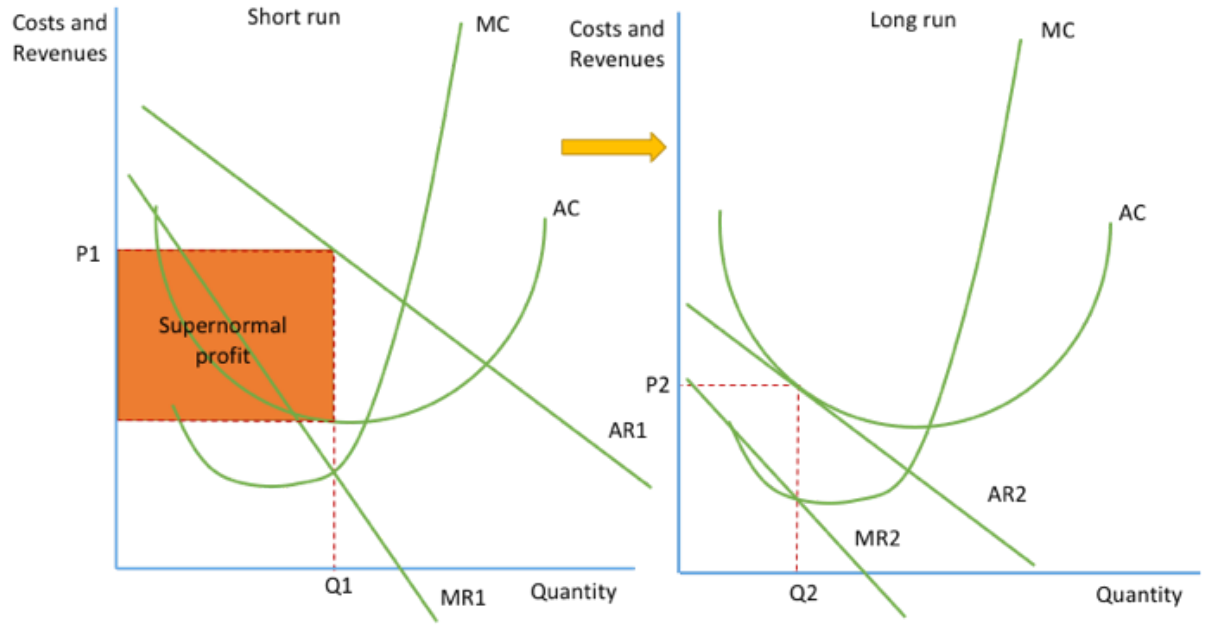
- There must be a **large number of buyers and sellers** in the market, each of whom are relatively small and act independently. This means that no one buyer or seller has a large price setting power.

- There are **no barriers to entry or exit**, allowing new firms to enter when supernormal profits are being made and some to leave in the case of losses. As a result, only normal profits can be made in the long run.

- The difference between monopolistic competition and perfect competition is that in monopolistic competition firms produce **differentiated, non-homogenous goods** or services. This means that individual firms do have some price setting power, and so the curve is downward sloping.

Profit maximising equilibrium:

In the short run, firms can make supernormal profits, losses or normal profits. However, due to the lack of barriers to entry/exit, firms can only make normal profits in the long run. This is shown by the diagram.



Firms are assumed to be short run profit maximisers, producing at MC=MR1 in the short run. As a result, they produce Q1 at price P1 and make a supernormal profit of the shaded area. However, in the long run, new firms will enter the industry as they know that supernormal profits are being earnt. This will cause demand for the individual firm to decrease and therefore the AR and MR curves will shift to the lift. The firm will produce where MC=MR2 at P2Q2. At this point, AC=AR2 and so the firm is making normal profits. If the firm was making

a loss, firms would leave the industry and thus demand for the individual firm would increase as they had less competition. This would lead to normal profits in the long run.

The limitation of this model is that information may be imperfect and so firms will not enter the market as predicted as they are unaware of the existence of abnormal profits. Also, firms are likely to be different in their size and cost structure as well as in their products, which may allow some firms to maintain supernormal profits because firms cannot compete on equal terms.

Efficiency:

- Since they can only make normal profit in the long run, AC=AR and since they profit maximise, MR=MC. Therefore, the firm will **not be allocatively or productively efficient,** as MR does not equal AR so AC cannot equal MC and AC cannot equal MR.

- They are likely to be **dynamically efficient** since there are differentiated products and so know that innovative products will give them an edge over their competitors and enable them to make supernormal profits in the short run. However, since the firms are small they may struggle to receive finance or have the retained profits necessary to invest.

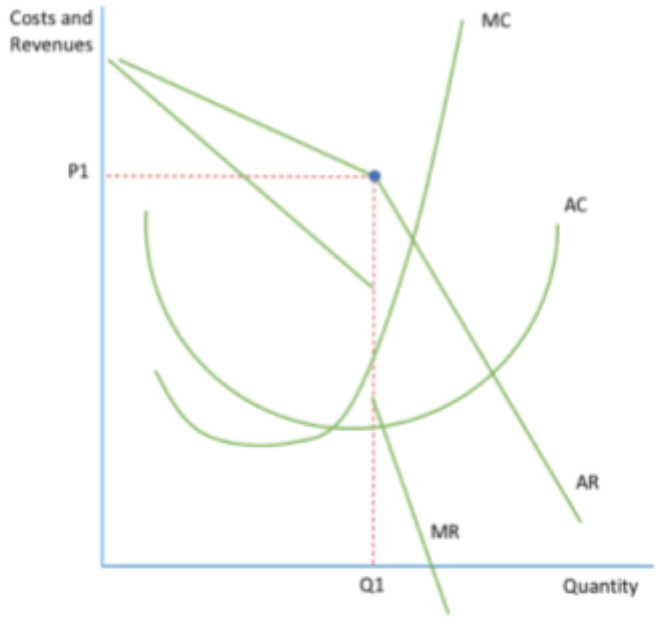
- In monopolistic competition compared to perfect competition, **less is sold at a higher price** and firms may not necessarily be producing at the lowest cost. However, the market will offer **greater variety** and may be able to enjoy some degree of **economies of scale**.

3.4.4 Oligopoly

Characteristics of oligopoly:

Oligopoly is where there are a few firms that dominate the market and have the majority of market share, although this does not mean there won't be other firms in the market. There are four key characteristics of oligopoly: products are generally **differentiated;** supply in the industry must be concentrated in the hands of a relatively small number of firms, meaning there is a **high concentration ratio**; firms must be **interdependent** (so the actions of one firm will directly affect another); and there are **barriers to entry.**

Kinked demand theory:



In oligopoly, there is a kinked demand curve. If a firm raises its price, other firms will not follow since they know their comparatively lower price means they are more competitive. On the other hand, if a firm lowers its price, other firms will follow since they want to remain competitive. Therefore, we assume price starts at P1: above P1 the curve is elastic (since competitors are offering lower prices) and below P1 the curve is inelastic (since other firms lower their prices too so there is a little difference in sales for the original firm). The result is a kink in demand. This kink in demand means that there is a gap in the MR curve and so a rise or fall in costs or demand is likely to have no impact on price or output. Because of this, prices in oligopolistic markets tend to be stable. The problem with the kinked demand curve theory is that it assumes that there is an initial price set within the market and does not explain why this price was set. However, it does explain why prices tend to be stable.

N-firm concentration ratios:

- The concentration of supply in the industry can be indicated by the concentration ratio which measures the **percentage of the total market that a particular number of firms have**. The 3 firm concentration ratio shows the percentage of the total

market held by the three biggest firms, whilst the 4 firm ratio shows the percentage by the four biggest firms and so on.

- It is worked out by adding the percentages of market share for the firms or using the formula: $\frac{\text{total sales of n firms}}{\text{total size of market}} \times 100$
  The method used will depend on the information in the question.

Collusive and non-collusive behaviour:

Collusion is when firms make **collective agreements that reduce competition**. When firms don't collude, this is a competitive oligopoly. The UK energy market is an oligopoly that is suspected of collusion.

- If firms compete, they know lowering prices to gain new customers is likely to cause other firms to lower their prices;. However, if they work together, they could **maximise industry profits**.

- Collusion **reduces the uncertainty** firms face and reduces the fear of engaging in competitive price cutting or advertising, which will reduce industry profits.

- Despite this, firms may decide to be a non-collusive oligopoly since collusion is **illegal** and due to the **risks of collusion**, such as other firms breaking the cartel or prices being set where they don't want it.

- A firm with a **strong business model** and something that **sets it apart** from other firms will not want to collude if they feel they can increase market share and/or charge higher prices than competitors.

- **Collusion between firms works best when:** there are a few firms which are all well known to each other; the firms are not secretive about costs and production methods and the costs and production methods are similar; they produce similar products; there is a dominant firm which the others are happy to follow; the market is relatively stable; and there are high barriers to entry.

Collusive oligopoly:

- When firms engage in collusion, they may agree on prices, market share or advertising expenditure. There are two main types of collusion: **overt and tacit collusion**. Overt collusion is when firms come to a formal agreement whilst tacit collusion means there is no formal agreement.

- A formal collusive agreement is called a **cartel,** which is a group of firms who enter into agreement to mutually set prices. The rules will be laid out in a **formal document** which may be legally enforced and fines will be charged for firms who break these rules.

- There are two ways a cartel could operate: **agree on a price** for the goods and then compete freely using non-price competition to maximise their market share; or **agree to divide up the market** according to the present market share of each business.

- The problem with any cartel is that no firm is likely to set their prices/output at the level they would not ideally choose and there is **constant temptation to break the cartel**. The more successful the cartel, the greater the incentive to break it; it is important for firms to be the first to break it and not the firm who is left to deal with the after effects.

- Since collusion is illegal, firms may be involved in tacit collusion such as price leadership and barometric firm.

- **Price leadership** is where one firm has advantages due to its size or costs and becomes the dominant firm. Other firms will tend to follow this firm because they would be fearful of taking on the firm on in any form of price war. As a result, the dominant firm will decide the price and allow the other firms to supply as much as they wish at this price.

- **Barometric firm price leadership** is where a firm develops a reputation for being good at predicting the next move in the industry and other firms decide to follow their leader.

- Other examples could be **unwritten rules** about keeping advertising low or not trying to take each other's customers.

Non-collusive oligopoly:

- The behaviour of a firm under non-collusive oligopoly will depend on how it thinks other firms will react to its policies. **Game theory** can be used to examine the best strategy a firm can adopt for each assumption about its rivals.

Game theory:

Game theory explores the **reactions of one player to changes in strategy by another player.** The aim is to examine the best strategy a firm can adopt for each assumption about its rival's behaviour and it provides insight into **interdependent decision making** that occurs in competitive markets. The easiest way of demonstrating this is where **duopoly** exists in the market, so there are two identical firms.

- There are two strategies the firm could take: a maximin policy or a maximax. The **maximin policy** involves firms working out the strategy where the worst possible outcome is the least bad. Alternatively, the **maximax** policy involves firms working out the policy with the best possible outcome.

- If the maximin and maximax strategies end up with the same solution, this is called the **dominant** strategy. However, **dominant strategies aren't that common in real life** and the best strategy for a firm tends to depend on what the other firm does.

- In some cases, there is a **Nash Equilibrium** where neither player is able to improve their position and has optimised their outcome based on the other players expected decision. They have no incentive to change behaviour, unless someone else changes theirs.

		FIRM Y	
		Raise price	Keep price the same
FIRM X	Raise price	Y lose £5m X gains £5m	Y gains £2m X loses £2m
	Keep price the same	Y loses £1m X gains £1m	No change

Game theory is used as an explanation for why firms in oligopoly tend to have **stable prices**:

- In this case, there is no dominant strategy for X. The maximin strategy will be to keep prices unchanged, as profits will not change, whilst the maximax policy is to raise prices, as they could gain £5m. Most firms will want to reduce risk and so adopt the maximin strategy; they will keep prices unchanged.
- Firm Y will also choose to leave its prices unchanged if it pursues a maximin strategy: if they raise price they could lose £5m whilst the worst that could happen if they don't change is for profits to remain the same.
- Therefore, both firms will leave their price unchanged and there is a Nash equilibrium since neither firm is able to improve their position given the position of the other player.

Similar matrices can be drawn to show how firms are likely to undertake large amounts of advertising and research and development.

Prisoner's dilemma:

		A	
		Don't confess	Confess
B	Don't confess	A year each	10 years for B, 3 months for A
	Confess	3 months for B, 10 years for A	3 years each

One common example of game theory is the prisoner's dilemma. In the situation, two people are questioned over their involvement in a crime and are kept apart so they can't

communicate. The dominant strategy in this situation is to confess: it's the greatest reward (3 months rather than a year) and the least bad (3 years rather than 10 years). However, if the prisoners could collude or had confidence in one another, the best option would be to deny the crime; this is the Nash equilibrium.

Types of price competition:

Prices wars:

- These occur in markets where **non-price competition is weak**; where goods have weak brands and consumers are price conscious. They also occur when it is **difficult to collude.**
- A price war will drive prices down to **levels where firms are frequently making losses.** In the short term, firms will continue to produce if their AVC is below AR but in the long run, they will **leave the market** and prices will have to rise since supply falls.
- It **lowers industry profits**.
- Supermarkets are one example of an industry using heavy price wars, with firms desperately trying to offer lower prices than their rivals.

Predatory pricing:

- This occurs when an **established firm is threatened by a new entrant** or if one firm feels that another is gaining too much market share.
- The established firm will set such a **low price** that other firms are unable to make a profit and so will be **driven out the market.** The existing firm is then able to **put their price back up.**
- This is **illegal** and only works when one firm is large enough to be able to have low prices and **sustain losses**.

Limit pricing:

- In order to **prevent new entrants**, firms will set prices low (the limit price). The price needs to be high enough for them to make **at least normal profit** but low enough to discourage any other firm from entering the market.
- The greater the barriers to entry, the higher the limit price. It is mainly used in **contestable markets.**
- The drawback of this is that it means firms cannot make profits as high as they would be otherwise be able to.

Other pricing strategies:

- **Cost plus pricing:** This is where firms simply work out their average costs and add a percentage increase, which determines the level of profit they make. The size of this increase will depend on the level of competition and barriers to entry. The problem is that it does not consider the market.
- **Psychological pricing:** This is where firms use the non-rounded prices to give an impression that the price is cheaper than it is e.g. 99p or £99. The aim is for consumers to feel they can afford the good and so be encouraged to buy it.

- **Market-led pricing:** Firms can set prices simply by looking at prices charged by competition. They price their good close to other firms, since if it was higher people would not buy it and if it was lower then they could be losing profit. The problem is that there is no consideration of costs.
- **Price skimming:** When a product is initially launched, firms can set very high prices to cover research and development costs and keep demand at manageable levels. Once the product is no longer the newest or best, the price will be lowered. This is mainly used by technology firms.
- **Penetration pricing:** When a product is first introduced, the firm will set prices low to encourage people to use it for the first time. Hopefully, people will like the product after they've tried it and will continue to buy it even at the higher price. It is the opposite to price skimming.

Types of non-price competition:

An oligopolistic market tends to have a **lot of non-price competition** due to the fact that prices are relatively stable. They spend a long time and a lot of money on **advertising and promotions**, for example the Tesco club-card or the computers for schools scheme. The soft drink market is one good example of a market with high levels of non-price competition.

- **Advertising:** This creates an awareness of the company/product and can persuade a customer to purchase the product. If advertising is successful, it can increase sales and market share for a business which in the long run can increase profits. Advertising can also make the demand for a product/service more inelastic.
- **Loyalty cards:** These encourage repeat purchases by rewarding customers for their loyalty. They also provide firms with lots of data on consumers' buying habits, which the firm can use to increase sales.
- **Branding:** A successful brand can help increase loyalty and repeat purchases for a business. People will trust the brand and the quality it represents so will more likely keep buying from them. An established brand should find it easier to release new

products.

- **Quality:** A firm that is known for good quality may be able to charge higher prices, and is likely to have strong brand loyalty. They are likely to have good reputation and benefit from positive recommendations,

- **Customer service:** This will encourage loyalty amongst customers and give the business a more positive reputation.

- **Product development:** A business that invests in product development will have a competitive advantage over rivals. If they're the first firm to release a new product, they would see an increase in sales and this is likely to help with branding.

The problem with these methods is that they are often **expensive** and so firms need the money before they are able to undertake the competition. Similarly, only large firms will be able to do large scale advertising, research and development etc.. There is **no guarantee that it will be successful.**

Efficiency:

- Firms will be **statically inefficient**, since they are not productively or allocative efficient.

- They are likely to be **dynamically efficient.** They make supernormal profits, so have the funds to invest, and they have an incentive to invest, due to competition. However, some may just share its profits with its shareholders or decide not to invest. It will depend on the market.

- They will be able to exploit **economies of scale**, lowering costs.

3.4.5 Monopoly

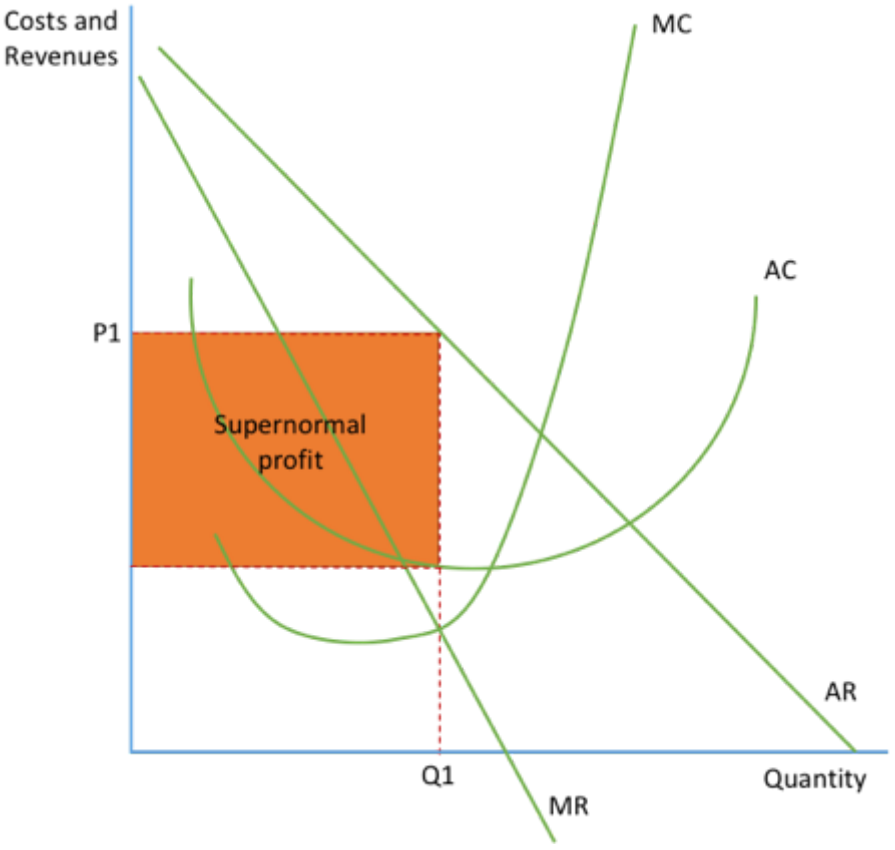
Characteristics of monopoly:

- **Pure monopoly** exists where one firm is the **sole seller of a product in a market**. One of the closest examples to a pure monopoly is Google, who have 88% of the market.

- However, in the real world, pure monopoly rarely exists but a firm can be legally considered as having monopoly power if it has **more than 25% of the market.** The model assumes there is only one firm in the industry, they short run profit maximise and there are **high barriers to entry.** Tesco is a legal monopoly as it has 28% of the market. Some local monopolies exist, such as Stagecoach in Cambridge.

Profit maximising equilibrium:

The demand curve for a monopolist will be the demand curve for the product (since the monopoly firm is the industry itself). It will be downward sloping, since even though the firm is a monopolist, people can still choose whether to buy the good or not. Profit maximising is at MC=MR, so this is the output they will produce at. They produce Q1 at price P1 and make supernormal profits of the shaded area. Since there is a monopoly, the firm may be able to earn supernormal profits or a loss in the long run as there is no freedom of entry and exit to the market.



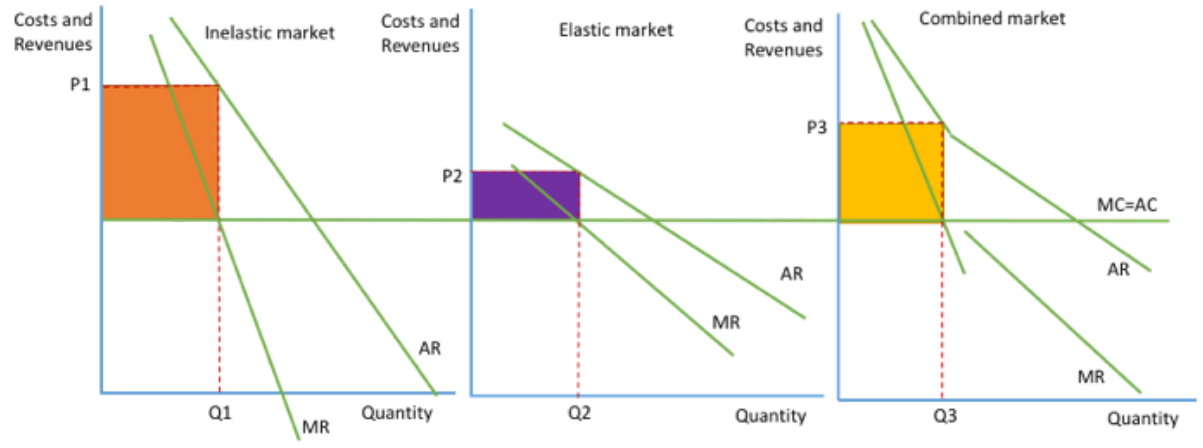
Third degree price discrimination:

- This is when monopolists **charge different prices to different people for the same good or service**. There are different examples of where this can occur: different times of the day, for example peak and off-peak train times; different prices in different places, such as between London and smaller towns; and between different incomes, for example discounts for elderly people.

- In order for price discrimination to occur: the firm must be able to clearly **separate the market** into groups of buyers; the customers must have **different elasticities of demand**; and they must be able to **control supply** and prevent buyers from the expensive market from buying in the cheaper market.

- The diagram shows the seperate markets for separate groups: those with inelastic demand and those with elastic demand. If the example was about travelling up to London, the workers would be the inelastic market since they have little choice other than to pay the increased price as they have to go to London to work, whilst shoppers are the elastic market since they can decide to shop elsewhere.

The diagram assumes the industry is a constant cost industry, in order to make it clearer. The firm produces where MC=MR in each market. Therefore, in the inelastic market they produce at Q1P1 and make supernormal profit of the orange area; in the elastic market they produce at Q2P2 and make supernormal profit of the purple area; and in the combined market they produce at Q3P3 and make supernormal profit of the yellow area. This shows that by price discriminating and having two separate markets, the inelastic market and the elastic market, rather than a combined market, the firm can make higher profits. The orange area plus the purple area is larger than the yellow area.



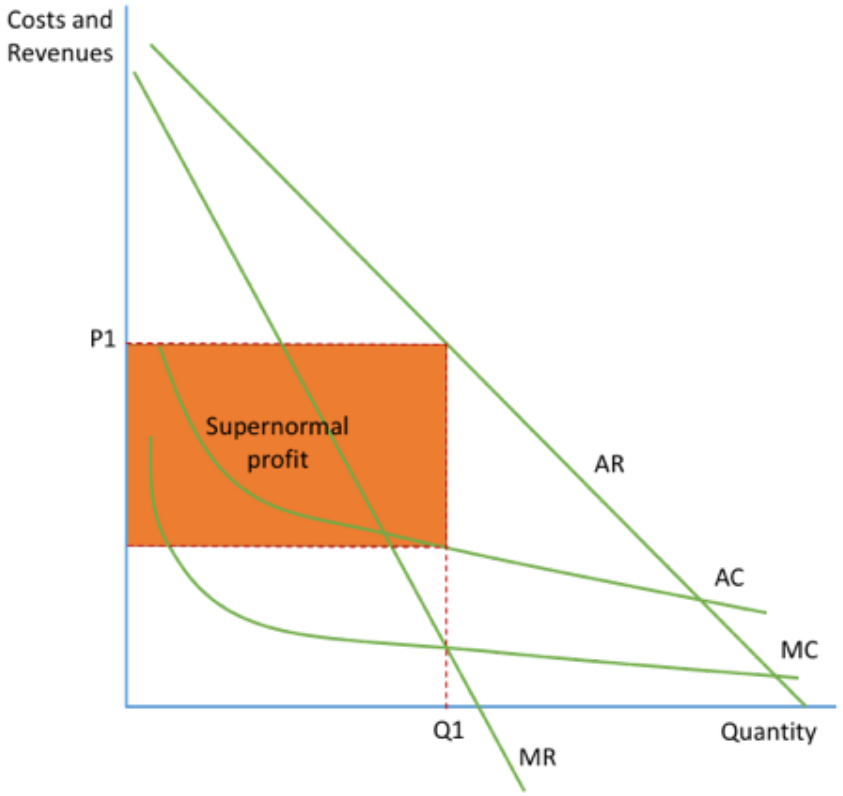
Costs and benefits:

- Firms benefit since they are able to **increase their profits**. This can go into research and development, improving dynamic efficiency.
- Those in the elastic market gain as they are able to pay a **lower price** than they otherwise would; they benefit from cross subsidisation. These consumers may have been unable to access the good if it were not for the price discrimination and so this may **increase equality.** .
- Consumers lose some of their consumer surplus to the producers and some consumers have to pay a **higher price.**

There are other types of price discrimination: first-degree price discrimination is where the firm can charge different prices for every unit of the good and so can eliminate all consumer surplus; and second-degree price discrimination is charging a different price for different quantities such as discounts for bulk purchases.

Natural monopoly:

- Some companies are said to be natural monopolies. In these industries, the **economies of scale are so large that even a single producer is not able to fully exploit all of them**. These are decreasing cost industries. There are no pure natural monopolies in real life, but some examples include the National Grid, Royal Mail and National Rail.



The diagram shows a natural monopoly: AC and MC continue to fall. The firm will profit maximise and produce where MC=MR at Q1P1, making supernormal profit of the shaded area.

- It would be **pointless to encourage competition** since it would raise average costs for the industry. If any new firm enters the market, they will be easily priced out as their costs will be so much higher. This raises questions for competition policy and nationalisation.
- Natural monopolies tend to be found in industries with **very high fixed costs**, such as railways. In order to run one train you would need to invest billions in track, tunnels, bridges and stations whilst running extra trains represents a much smaller relative increase in costs, meaning average costs will decrease drastically.

- These firms are neither allocative nor productively efficient as there is no minimum on the AC curve and at allocative efficiency there would be a loss.

Costs and benefits:

Firms:

- Monopolists have the potential to make **huge profits** for their shareholders through profit maximisation.
- The existence of supernormal profits means firms will have finance for **investments** and will be able to build up **reserves to overcome short term difficulties**.
- Firms with monopoly power will be able to **compete against large overseas organisations**.
- Large firms will be able to maximise economies of scale, reducing costs and increasing profit further.
- However, firms may **not always choose to profit maximise** because of X-inefficiencies, sales or revenue maximising, profit satisficing or contestability leading to limit pricing. In the long run, the **lack of competition** may mean that firms become complacent and so they may not make maximum profits.

Employees:

- Monopolists produce at lower outputs, so will **employ fewer workers**.
- However, the **inefficiency** of the monopoly may mean employees receive higher wages, particularly directors and senior managers. Profit satisficing or sales/revenue maximising may mean output is higher and so more employees are employed.

Suppliers:

- For suppliers, the impact of a monopolist will depend on the extent to which the **monopolist is also a monopsonist**. If the monopolist buys all or most of the suppliers' goods (so is a monopsonist), it will reduce the suppliers' profits as the monopolist will decrease prices.

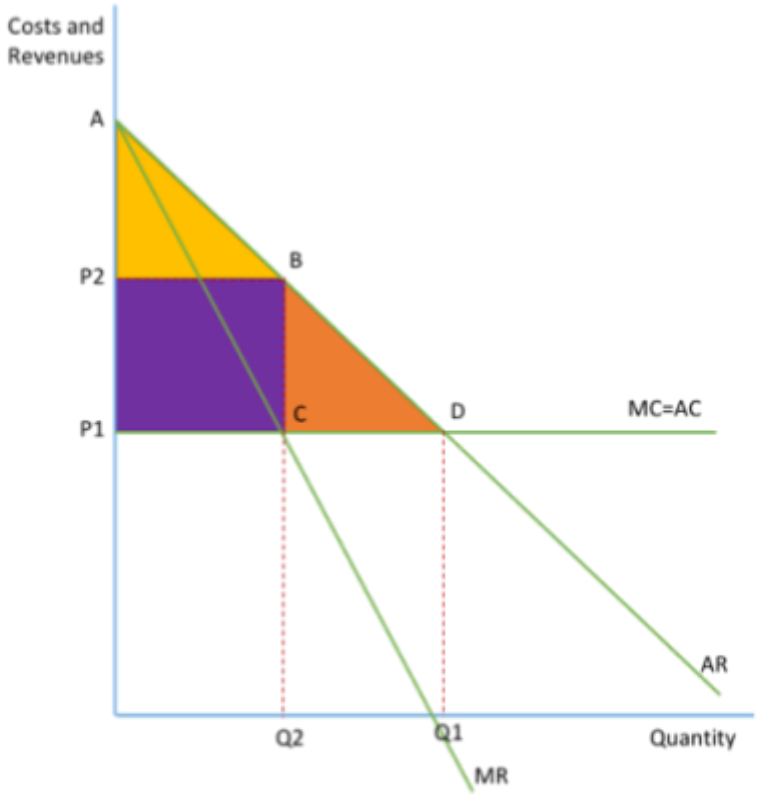
Consumers:

- With a **natural monopoly**, consumers tend to be better off than if there was competition.
- When firms enjoy **economies of scale**, they will be more efficient and customers will enjoy a higher consumer surplus.
- Monopolists may produce an **increased range of goods** or services due to cross subsidisation.
- The use of price discrimination will allow for **survival of a product or service**, and benefits some customers (those in the cheap market) whilst is negative for others. For example, it is said that economy class flights are funded by business class flights
- Consumers may pay **higher prices** and see a **poorer quality service**, due to a lack of competition.
- There is **less choice** for consumers, since there is only one firm producing the good.

Efficiency:

- A monopoly is **productively inefficient,** since they don't produce at MC=AC. They are also **not allocative efficient** as P>MC.
- Since a monopolist is likely to make supernormal profits, they will be **dynamically efficient.** However, if there is no competition, they may have no incentive to invest.

The diagram shows the effects of a monopolist compared to perfect competition; it is known as the **Williamson trade off**. In order to make the diagram easier to follow, it is assumed that the industry is a constant cost industry where AC=MC. If the market was perfectly competitive it would produce where price=AR=MC at Q1P1. If the industry was to become a monopoly it would produce MR=MC at Q2P2.



- The shift from perfect competition to monopoly has meant **less production** of the good and therefore less resources used, which causes **deadweight loss** of BCD, the orange area.
- There is a **fall in consumer surplus** from ADP1, the total shaded area, to ABP2, the yellow area. P2BCP1, the purple area, has been turned into producer surplus whilst BCD has been lost as deadweight loss.
- Monopolists may suffer from **X-inefficiency** because of the lack of competition. MC=AC may rise and this will cause an even further fall in consumer surplus.
- Alternatively, a large monopolist may enjoy **large economies of scale** which allow AC to fall. If these fall by a large enough amount, then consumer surplus will grow larger than would exist in perfect competition.

- Schumpeter argued that monopolies will have large retained profits and will be able to exploit new products or production techniques without worrying about competitors. This would make them **more productively efficient**, as costs are lower, **more allocative efficient,** as there are new products in the market, and **dynamically efficient.**
- Also, monopolists **avoid undesirable duplication of services** and prevent a misallocation of resources.
- **Cross subsidisation** may waste resources since profits from one sector finance losses in another, whilst instead they should just stop production of this good.

There are **few permanent monopolies** since supernormal profits give an incentive for other firms to break down the monopoly through a process of **creative destruction**. Some suggest a monopoly, or the possibility of having a monopoly, is **good in the short run** as it provides incentive to invest and innovate which is good for both the company and the economy. The bad aspects of monopoly are more likely to become true in the long run as firms can simply enjoy the benefits and become complacent. The effects of a monopoly will **depend on the industry**: in industries with high fixed costs, the gains from economies of scale will be higher.

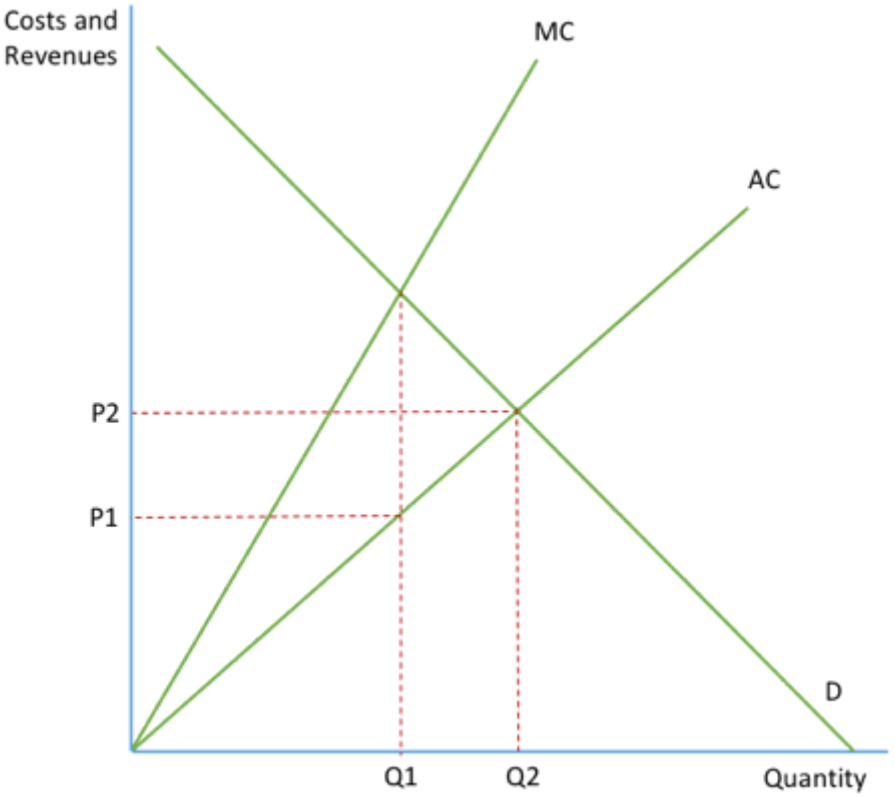
3.4.6 Monopsony

Characteristics and conditions of monopsony:

- This is where there is **only one buyer in the market,** and other than this it has the same basic characteristics as monopoly. They can prevent new firms entering the market and aim to profit maximise.

- In real life, pure monopsonies rarely exist but many firms experience monopsony power, when they buy a large percentage of the market. One example could be the NHS, who pay less for cancer drugs than a number of other high-income countries. Moreover, food retailers have power when purchasing supplies from farmers; farmers can either sell them all their goods at a low price or risk not selling them at all.

- They will pay their suppliers the **lowest price possible** to minimise their costs and make the most of their position as the only buyer. This will enable them to maximise their profit. The value of the goods they buy will depend on how much money they can make with these goods, and this is determined by the demand curve of the goods they make and sell.



They will produce where the cost to them (MC) is equal to the value they get (AR). Hence, they will produce where MC=D. The supply curve for the firm is the supply curve for the market so will be upward sloping. This means the MC curve is above the supply curve, since it costs more to pay for the last good than the average cost of all the goods (as cost rises with output). If the market was competitive, they would produce where supply is equal to demand, at Q2P2. However, in a monopsony, the firm will decide to produce where MC=AR at Q1P1.

Costs and benefits:

Firms:

- The monopsony gains **higher profits** by being able to buy at lower prices. This increases the funding for research and development and leads to more return for shareholders.
- They achieve **purchasing economies of scale,** which will lower costs and increase profits.
- The NHS is a monopsonist buyer of pharmaceuticals, and this leads to significantly lower prices. As a result, they can invest more and pay for more treatments.

Consumers:

- Customers may gain from **lower prices** as reduced costs are passed on.
- It could lead to a **fall in supply,** since the business buys fewer inputs. The extent to which supply to customers will fall will depend on the price elasticity of supply in the

market of which the monopsonist is a buyer: if it is inelastic, there will be little fall in supply.
- They may act as a **counter-weight to monopolists.**
- There may be a **fall in quality** as prices are driven down.

Employees:

- The supplier will sell less goods and so employ less people, whilst the monopsonist may employ fewer, more or the same amount of people since they have less inputs to use for production but their costs are also lower.
- Monopsonists may pay **higher wages** as they are making higher profits.

Suppliers:

- Suppliers will lose out as they will **receive lower prices**; less will be supplied leading to some firms leaving the market.

3.4.7 Contestability

This model is concerned with the possibility of other firms entering the market if they see the opportunity to make money, rather than the number of firms in the industry at a point in time. A contestable market is one with a high threat of new entrants, which keeps firms producing at a competitive level. Even in a monopoly, a firm may be forced to be efficient due to the potential of new entrants to the market. Any attempt to make a huge profit will mean other businesses will be attracted to the industry.

Characteristics of contestable markets:

- Within a contestable market there is **perfect knowledge** so if one firm is making abnormal profits, other firms will enter the market.

- There is **freedom of entry and exit** meaning any firms can enter/leave the market. There will be a **relative absence of sunk costs.** Firms will be able to and have the legal right to use the **best available technology**, meaning their average cost curve will be the same as the original firms'.

- There will be **low product loyalty**, meaning people don't consistently use one brand and are happy to switch if a new one enters the market.

- We assume firms are short run profit maximisers and do not collude with each other.

- Some examples of contestable markets are: the taxi industry, with the introduction of Uber; the hotel market, with AirBnB; and fast food, due to Five Guys. Another example of contestability is Ocado, who are set to replace M&S in the FTSE 100 (2018), showing the new replacing the old.

Implications:

- In a contestable market, firms will enter the market if they see other firms are making huge profits. They will remain in the market until competition prevents them from making a profit. This will take away profit from the original firms, and could even force them out of business. The only way to prevent this is by using **limit pricing**, which reduces the incentive for firms to enter the market.

- In a perfectly contestable market, firms will only be able to make **normal profits** and produce where AC=AR because new firms will enter the market if price was any higher and they were making monopoly profits.

- Firms are likely to be **productive and allocative efficient.** If they are not producing at the lowest point on their AC curve (i.e. not productively efficient), new firms can enter the market and undercut them by offering lower prices. Due to this, and the fact they can only make normal profits in the long run, they must also be allocative efficient. Since they can only make normal profits AC=AR, and since they produce at the lowest point on their AC curve AC=MC. Therefore, AC=MC=AR, so the value to society is equal to the cost.

Types of barrier to entry and exit:

Some barriers are natural barriers, sometimes called **innocent entry barriers.** These include natural monopolies and high entry/sunk costs. However, others are put in place by existing firms in the industry. They include patents and copyrights as well as high levels of advertising and branding. Both the costs to entry and exit must be high for the market to have low contestability, since if entry costs are high but the firm is able to make profit once in business and not lose much of this profit if they leave, then the market is still contestable.

- **Legal barriers** can prevent new firms from entering an industry. Laws are put in place which make it more difficult for firms to enter the market, or explicitly mean they cannot enter. For example, patents and exclusive rights to production (such as with television) mean other firms cannot enter the market. Some industries, such as the taxi industry, gain market licences to operate.

- Other firms can put up **marketing barriers.** High levels of advertising build up consumer loyalty, so demand becomes more price inelastic, and consumers are less likely to try other brands. Sometimes a brand can become associated with a product, such as 'Hoover' with vacuum cleaners. New firms entering the industry are unlikely to have the funds to undertake large scale advertising so struggle to compete with the incumbent firms. This may also be a barrier to exit, since losing a brand and consumer loyalty will be a cost of leaving the market.

- The **pricing decisions of incumbent firms** can be a barrier to entry. Predatory pricing means prices are so low that firms are driven out of the market, and so it would be extremely difficult for new firms to enter. Limit pricing discourages the entry of other firms as prices are set at a level to prevent new entrants. Some firms might

employ anti-competitive practices, such as refusing to supply retailers which stock competitors.

- Some industries have high **capital start up costs**, for example buying the machinery necessary to begin production. **Sunk costs** may also be high.

- **Economies of scale** mean that new firms are unable to produce on the same AC curve as large, incumbent firms. If they were to enter the industry, their costs would be higher and so prices would be higher and they would be unable to compete.

- Barriers to exit prevent firms from leaving a market quickly and cheaply. They include the **cost to write off assets, pay leases and make workers redundant**.

Sunk costs and the degree of contestability:

- A **sunk cost** is a **fixed cost that a business cannot recover if it leaves the industry.** It includes property (if the lease is longer than it is actually used for), machinery and equipment that cannot be resold, and advertising.

- All businesses will face sunk costs because even if things are resold it is **generally for a lower price.**

- The degree of contestability is measured by the **extent to which the gains from market entry for a firm exceed the costs of entering the market**. A market with no sunk costs and no barriers to entry and exit is a perfectly contestable market. The more contestable a market, the more unstable it will be as there can be regular hit and run competition.

- In reality, **no market is likely to be perfectly contestable** as there is always likely to be some sunk cost.

Reasons for increasing contestability:

- The recession has meant that entrepreneurs do not accept the existing market structure is fixed. For example, Aldi/Lidl changed the structure of supermarkets by offering much lower prices and increasing market share.
- The deregulation of markets has allowed a reduction of some barriers to entry in some industries, such as telecommunications and postal services. Moreover, competition policy has meant firms can no longer use predatory pricing and cartels so markets are more contestable.
- The European single market has opened up new markets for firms and so these firms can enter into the market, making them contestable. Globalisation in general has increased contestability, since foreign firms can enter domestic markets. This is a **synoptic point.**
- Changes in technology has reduced entry costs as capital is more mobile. The rise of internet shopping means that firms no longer have to find retailers for their products and so can easily enter the market and sell their goods online.

In order to test the theory, we would need a lot of information about the cost structure of the business. Since the theory centres on the threat of entry and not necessarily entry itself, it is difficult to test. Even if there has not been new competition over time, this does not necessarily mean the firm isn't contestable. New firms entering the industry and low profits being made suggests that an industry is contestable.