Edexcel Economics (A) A-level

Theme 3: Business Behaviour and the Labour Market

3.4 Market Structures

Summary Notes

3.4.1 Efficiency

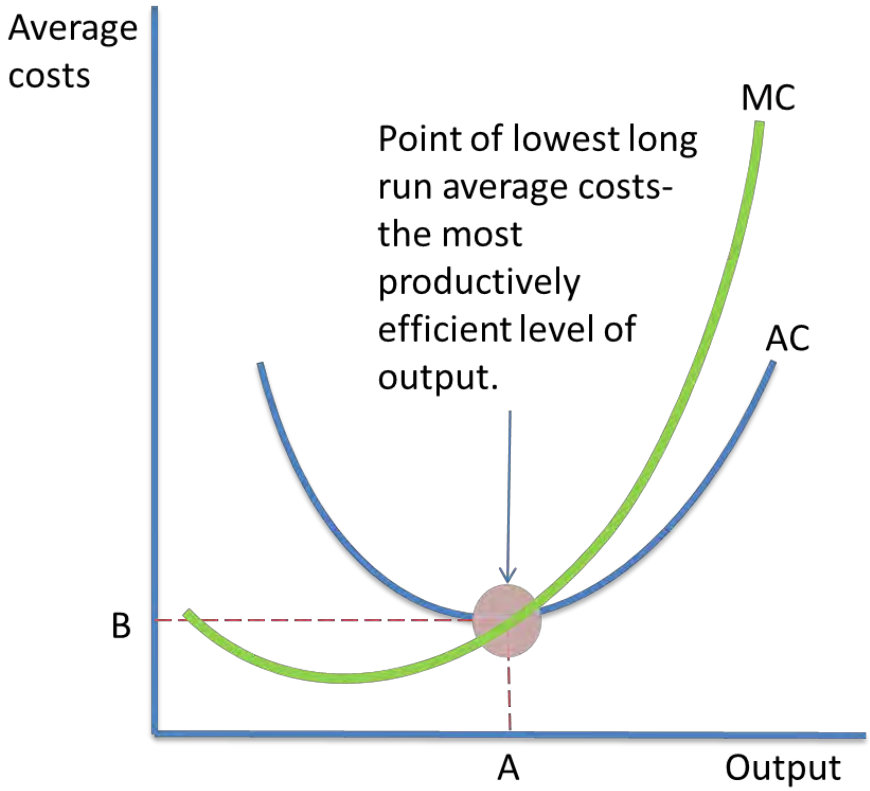
Allocative efficiency:

- Allocative efficiency occurs when resources are distributed to the goods and services that consumers want. This maximises utility. It exists at P = MC, which means that consumers pay for the value of the marginal utility they derive from consuming the good or service. Free markets are considered to be allocatively efficient.

Productive efficiency:

- This is when firms produce at the lowest point on the short run or long run average cost curve. Since the MC curve cuts the AC curve at the lowest point, MC = AC is a point of productive efficiency. All points on the PPF curve are productively efficient.

- Allocative and productive efficiency are forms of **static efficiency.**



Dynamic efficiency:

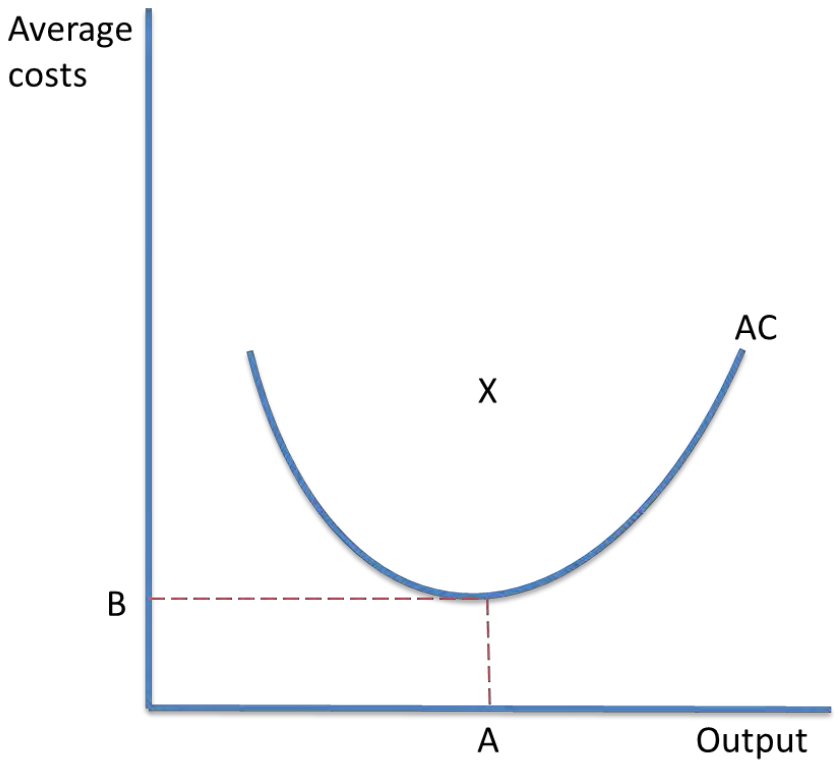
- This is when all resources are allocated efficiently over time, and the rate of innovation is at the optimum level, which leads to falling long run average costs. The market is dynamically efficient if consumer needs and wants are met as time goes on. It is related to the rate of innovation, which might lead to lower costs of production in the future, or the creation of new products.

- Dynamic efficiency is affected by short run factors such as demand, interest rates and past profitability.

- Short run costs might be increased in order to cause long run costs to fall. Dynamic efficiency can be evaluated by considering the long time lag between making an investment and having falling average costs and by considering how factors change in the long run. Moreover, some firms will face a trade-off between giving their shareholders dividends and making an investment.

- **X-inefficiency:**

- A firm is x-inefficient when it is producing within the AC boundary. Costs are higher than they would be with competition in the market. The point 'X' on the diagram shows x-inefficiency.



- This could be due to organisational slack, a waste in the production process, poor management, or simply laziness. Monopolies tend to be x-inefficient, since they have little incentive to lower their average costs because of the lack of competition they face.

3.4.2 Perfect competition

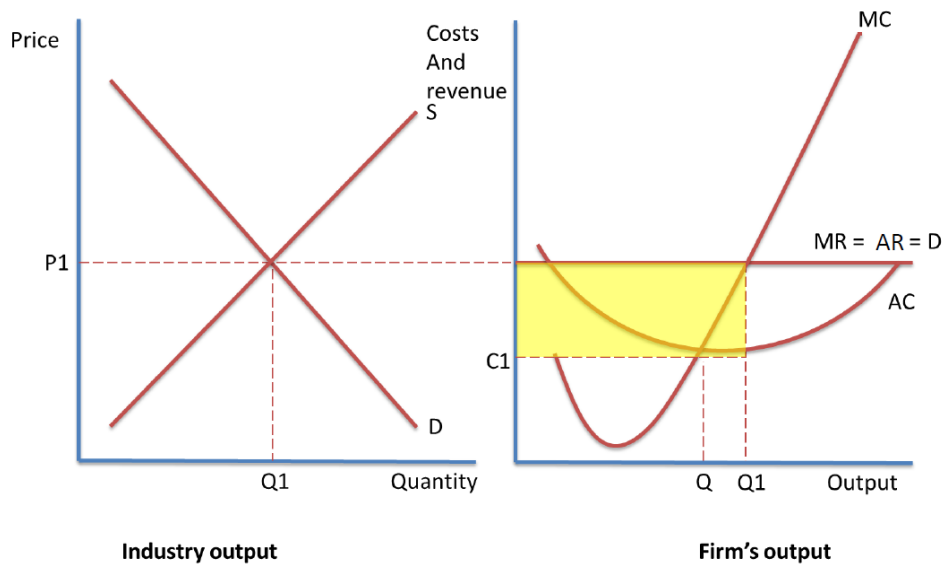
Characteristics of perfect competition:

- A **perfectly competitive market** has the following characteristics:
  - Many buyers and sellers
  - Sellers are **price takers**
  - Free entry to and exit from the market
  - Perfect knowledge
  - Homogeneous goods
  - Firms are short run profit maximisers
  - Factors of production are perfectly mobile

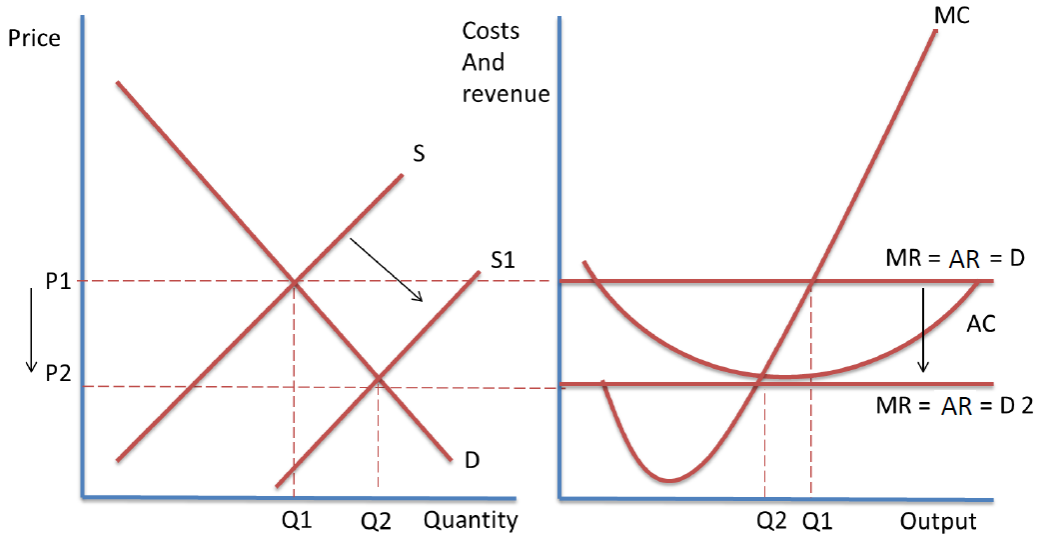
- In this market, price is determined by the interaction of demand and supply.
- In a competitive market, profits are likely to be lower than a market with only a few large firms. This is because each firm in a competitive market has a very small market share. Therefore, their market power is very small. If the firms make a profit, new firms will enter the market, due to low barriers to entry, because the market seems profitable. The new firms will increase supply in the market, which lowers the average price. This means that the existing firms' profits will be competed away.

Profit maximising equilibrium in the short run and long run:

- In the short run, firms can make supernormal profits. In the long run where profits are competed away, only normal profits are made.
- The diagram below shows the **short run equilibrium** for a perfectly competitive market. The firm is a price taker, and it accepts the industry price of P1. In the short run, the firm produces an output of Q1. The yellow shaded rectangle shows the area of supernormal profits earned in the short run. It is assumed that firms are short run profit maximisers.



- The diagram below shows the **long run equilibrium** for a perfectly competitive market. The supernormal profits made by existing firms means that new firms have an incentive to enter the industry. Since there are no barriers to entry in a perfectly competitive market, new firms are able to enter the industry.
- This causes the supply in the market to increase, as shown by the shift in the supply curve from S to S1. The price level in the market falls as a consequence. Since firms are price takers, they must accept this new, lower price.
- In the long run, competitive pressure ensures equilibrium is established. The supernormal profits have been competed away, so firms only make normal profits in the long run.
- The new equilibrium at P=MC means firms produce at the new output of Q2 in the long run.



Industry output **Firm's output**

Advantages and disadvantages of a perfectly competitive market:

Advantages	Disadvantages
In the long run, there is a lower price. P =MC, so there is **allocative efficiency.**	In the long run, dynamic efficiency might be limited due to the lack of supernormal profits.
Since firms produce at the bottom of the AC curve, there is **productive efficiency.**	Since firms are small, there are few or no economies of scale.
The supernormal profits produced in the short run might increase dynamic efficiency through investment.	The assumptions of the model rarely apply in real life. In reality, branding, product differentiation, adverts and positive and negative externalities, mean that competition is imperfect.

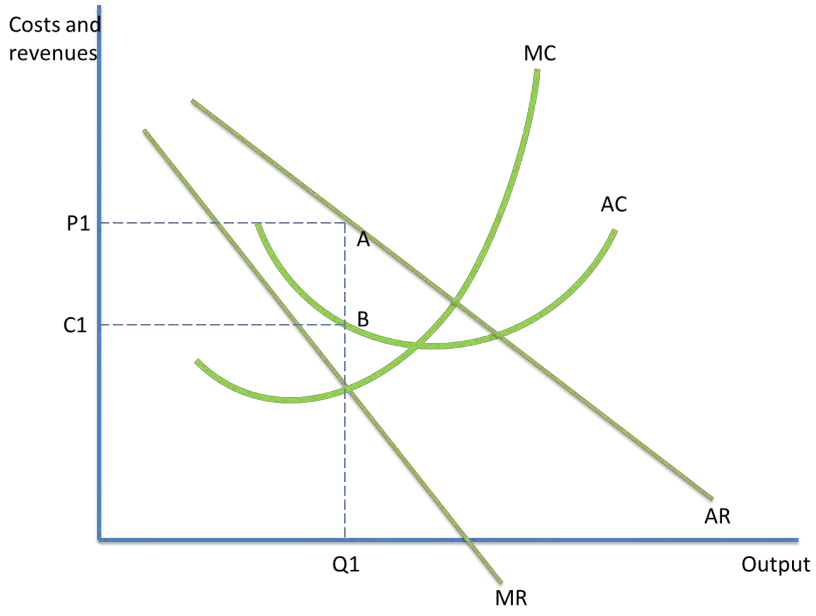
3.4.3 Monopolistic competition

Characteristics of monopolistically competitive markets:

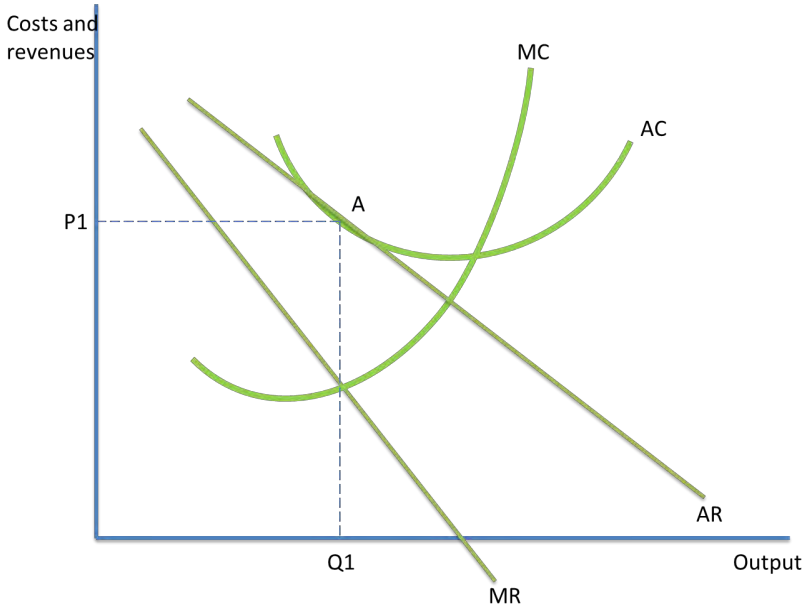
- A monopolistically competitive market has imperfect competition. Firms are short run profit maximisers.
- Firms sell non-homogeneous products due to branding (there is **product differentiation)**. However, there are a lot of relatively close substitutes. This makes the XED of the goods and services sold high.
- The model is based on the assumption that there are a large number of buyers and sellers, which are relatively small and act independently. Each seller has the same degree of market power as other sellers, but their market power is relatively weak.
- There are no barriers to entry to and exit from the market.
- Since firms have a downward sloping demand curve, they can raise their price without losing all of their customers. This is because firms have some degree of price setting power.
- Buyers and sellers in a monopolistically competitive market have imperfect information.
- Examples of monopolistic competition include hairdressers and regional plumbers.

Profit maximising equilibrium in the short and long run:

- In the short run, firms profit maximise at the point MC = MR. The area P1C1AB represents the supernormal profits that firms in a monopolistically competitive market earn in the short run.



- In the long run, new firms enter the market since they are attracted by the profits that existing firms are making. This makes the demand for the existing firms' products more price elastic which shifts the AR curve (the demand curve) to the left. Consequently, only normal profits can be made in the long run. The long run equilibrium point is P1Q1.
- Firms can try and stay in the short run by differentiating their products and innovating.



- **Advantages and disadvantages of monopolistically competitive markets:**

Advantages	Disadvantages
Firms are allocatively inefficient in the short and long run (P > MC)	In the long run, dynamic efficiency might be limited due to the lack of supernormal profits.
Since firms do not fully exploit their factors, there is excess capacity in the market. This makes firms productively inefficient (also note: the firm does not operate at the bottom of the AC curve). This is in both the short run and long run.	Firms are not as efficient as those in a perfectly competitive market. In a monopolistically competitive market, firms have x-inefficiency, since they have little incentive to minimise their costs.
Consumers get a wide variety of choice.	
The model of monopolistic competition is more realistic than perfect competition.	
The supernormal profits produced in the short run might increase dynamic efficiency through investment.	

3.4.4 Oligopoly

Characteristics of an oligopoly:

High barriers to entry and exit

- There are high barriers of entry to and exit from an oligopoly. This makes the market less competitive.

High concentration ratio

- In an oligopoly, only a few firms supply the majority of the market. For example, in the UK the supermarket industry is an oligopoly. The high concentration ratio makes the market less competitive.

Interdependence of firms

- Firms are interdependent in an oligopoly. This means that the actions of one firm affect another firm's behaviour.

Product differentiation

- Firms differentiate their products from other firms using branding.

Calculation of n-firm concentration ratios and their significance:

- The concentration ratio of a market is the combined market share of the top few firms in a market.
- For example, the market share for each of the top supermarkets in the UK is shown in the table below:

Supermarket	Market share (12 weeks to 29 March 2015)
Tesco	28.4%
Asda	17.1%
Sainsbury's	16.4%
Morrisons	10.9%
The Co-operative	6.0%
Aldi	5.3%
Waitrose	5.1%
Lidl	3.7%
Iceland	2.1%
	Data adapted from BBC News http://www.bbc.co.uk/news/business-32218170

- If the 4 firm concentration ratio was calculated, the market share of the 4 largest firms would be added together: 28.4% + 17.1% + 16.4% + 10.9% = 72.8%.
- The 2 firm concentration ratio is the market share of the 2 largest firms added together: 28.4% + 17.1% = 45.5%.
- The higher the concentration ratio, the less competitive the market, since fewer firms are supplying the bulk of the market.

Reasons for collusive and non-collusive behaviour:

- Collusive behaviour occurs if firms agree to work together on something. For example, they might choose to set a price or fix the quantity of output they produce, which minimises the competitive pressure they face.

- Collusion leads to a lower consumer surplus, higher prices and greater profits for the firms colluding.

- Firms in an oligopoly have a strong incentive to collude. By making agreements, they can maximise their own benefits and restrict their output, to cause the market price to increase. This deters new entrants and is anti-competitive.

- Collusion is more likely to happen where there are only a few firms, they face similar costs, there are high entry barriers, it is not easy to be caught and there is an ineffective competition policy. Moreover, there should be consumer inertia. All of these factors make the market stable.

- Non-collusive behaviour occurs when the firms are competing. This establishes a competitive oligopoly. This is more likely to occur where there are several firms, one firm has a significant cost advantage, products are homogeneous and the market is saturated. Firms grow by taking market share from rivals.

Overt and tacit collusion; cartels and price leadership:

- Collusion can be overt or tacit.

- Overt collusion is when a formal agreement is made between firms. It works best when there are only a few dominant firms, so one does not refuse. It is illegal in the EU, US and several other countries. For example, it is often suspected that fuel companies partake in overt collusion. This could be in the form of price fixing, which maximises their joint profits, cuts the cost of competition, such as by preventing firms using wasteful advertising, and reduces uncertainty.

Grocery price war pushes Waitrose profits down 24%

Supermarket price war blamed for food producers folding

Supermarket price war hits Asda sales

Costs of collusion	Benefits of collusion
There is a loss of consumer welfare, since prices are raised and output is reduced.	Industry standards could improve. This is especially true in the pharmaceutical industry and for car safety technology. This is because firms can collaborate on technology and improve it.
The absence of competition means efficiency falls. This increases the average cost of production.	Excess profits could be used for investment, which might improve efficiency in the long run. Alternatively, they might be used on dividends.
It reinforces the monopoly power of existing firms and makes it hard for new firms to enter.	It saves on duplicate research and development.
A lower quantity supplied leads to a loss of allocative efficiency.	By increasing their size, firms can exploit economies of scale, which will lead to lower prices.

- 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

Game theory and the prisoner's dilemma:

- 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

Types of price competition :

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).

Predatory pricing

- Predatory pricing is illegal. It 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.

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- **Limit pricing**
- This is not necessarily illegal. Low prices discourage the entry of other firms, so there are low profits. 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. This can be evaluated by considering how the low profits of existing firms might dissatisfy shareholders, since they receive lower dividends

Types of non-price competition:

- These aim 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.

3.4.5 Monopoly

Characteristics of monopoly:

Monopolies can be characterised by:

- **Profit maximisation**. A monopolist earns supernormal profits in both the short run and the long run.
- **Sole seller** in a market (a **pure monopoly**)
- High **barriers to entry**
- Price maker
- Price discrimination

In the UK, when one firm dominates the market with more than 25% market share, the firm has **monopoly power**. For example, Google dominates the search engine market, with 90% share. Monopoly power can be gained when there are multiple suppliers. If two large firms in an oligopoly (several large sellers) have greater than 25% market share, they are said to have monopoly power. For example, Sainsbury's and Asda have more than 25% market share combined, so they are said to have monopoly power.

There are very few examples of pure monopolies, but several firms have monopoly power.

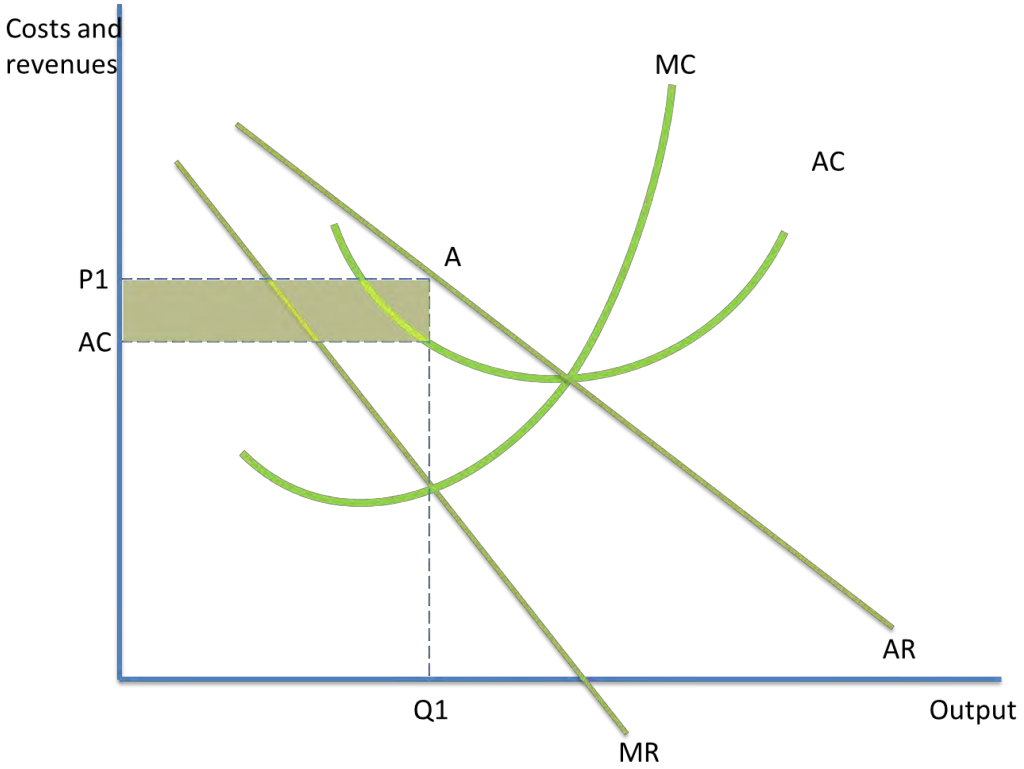
Monopoly power is influenced by factors such as:

- **Barriers to entry:** The higher the barriers to entry, the easier it is for firms to maintain monopoly power. Examples of barriers to entry which can maintain monopoly power are:
  - **Economies of scale:** As firms grow larger, the average cost of production falls because of economies of scale. This means existing large firms have a cost advantage over new entrants to the market, which maintains their monopoly power. It deters new firms from entering the market, because they are not able to compete with existing firms.
  - **Limit pricing:** This involves the existing firm setting the price of their good below the production costs of new entrants, to make sure new firms cannot enter profitably.
  - **Owning a resource:** Early entrants to a market can establish their monopoly power by gaining control of a resource. For example, BT owns the network of cables so new firms would find it very difficult to enter the market.
  - **Sunk costs:** If unrecoverable costs, such as advertising, are high in an industry, then new firms will be deterred from entering the market, because if they are unable to compete, they do not get the value of the costs back.
  - **Brand loyalty:** If consumers are very loyal to a brand, which can be increased with **advertising**, it is difficult for new firms to gain market share.
  - **Set-up costs:** If it is expensive to establish the firm, then new firms will be unlikely to enter the market.

- **The number of competitors:** The fewer the number of firms, the lower the barriers to entry, and the harder it is to gain a large market share.
- **Advertising:** Advertising can increase consumer loyalty, making demand price inelastic, and creating a barrier to entry.
- **The degree of product differentiation:** The more the product can be differentiated, through quality, pricing and branding, the easier it is to gain market share. This is because the more unique the product seems, the fewer competitors the firm faces.

Profit maximising equilibrium:

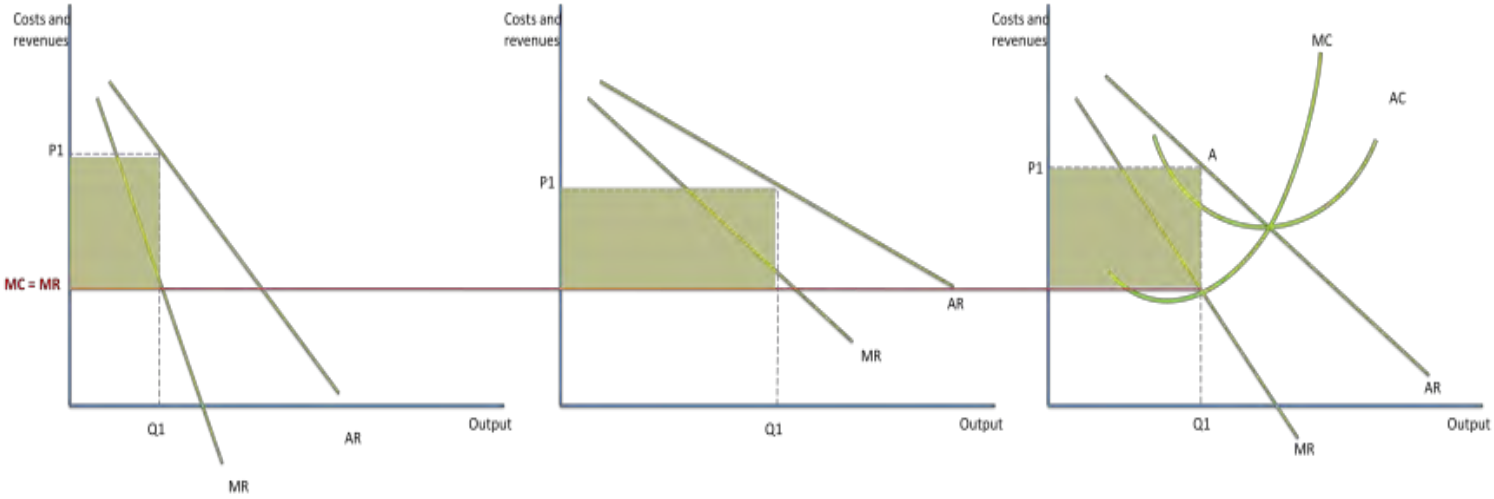
- A monopolist earns supernormal profits in both the short run and the long run. This is at the point MC = MR, so the monopolist produces an output of Q1 at a price of P1.
- The shaded rectangle shows the area of supernormal profits.



- Since the firm is the sole supplier in the market, the firm's cost and revenue curve is the same as the industry's cost and revenue curve. Firms are price makers in a monopoly.
- P>MC in the diagram, due to profit maximisation which occurs at MC = MR, so there is allocative inefficiency in a monopoly.
- AR > AC, so there are supernormal profits.

Third degree 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.

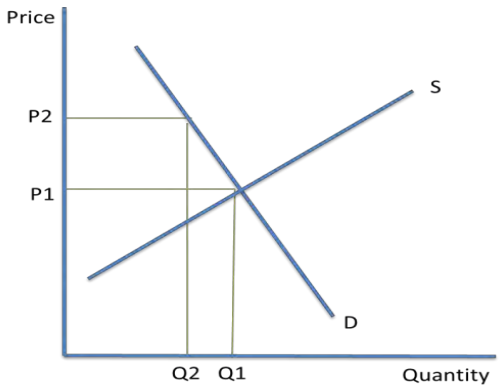
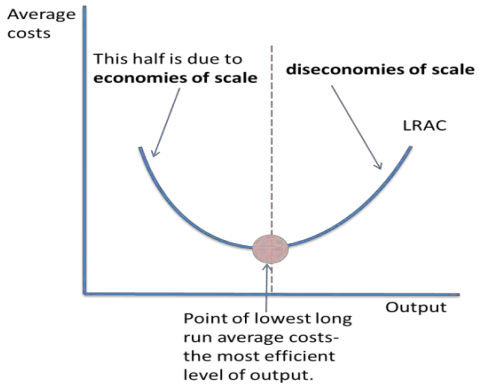


- By charging different prices, the monopolist can maximise their overall profits.
- There are three degrees of price discrimination, but only the third degree is required for the Edexcel specification:
  - Third degree price discrimination is when different groups of consumers are charged a different 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 and benefits of a monopoly:

	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. It might cost the firm to divide the market, which limits the benefits they could gain.	Producers make better use of spare capacity. The higher supernormal profits, which result from 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.

Costs and benefits of monopoly to firms, consumers, employees and suppliers:

Costs	Benefits
The basic model of monopoly suggests that higher prices and profits and inefficiency may result in a misallocation of resources compared to the outcome in a competitive market.	Monopolies can earn significant supernormal profits, so they might invest more in research and development. This can yield positive externalities, and make the monopoly more dynamically efficient in the long run. There could be more invention and innovation as a result. Moreover, firms are more likely to innovate if they can protect their ideas. This is more likely to happen in a market where there are high barriers to entry, such as in a monopoly.
Monopolies could exploit the consumer by charging them higher prices. This means the good is under-consumed, so consumer needs and wants are not fully met. This loss of allocative efficiency is a form of market failure.	If there is a natural monopoly, it might be more efficient for only one firm to provide the good or service, since having duplicates of the same infrastructure might be wasteful. For example, it might be considered inefficient and wasteful to have two lots of water suppliers.
Monopolies have no incentive to become more efficient, because they have few or no competitors, so production costs are high.	Monopolies could generate export revenue. For example, Microsoft generates a lot of export revenue for America.
There is a loss of consumer surplus and a gain of producer surplus. If a monopolist raises the market price above the competitive equilibrium level, output will fall from Q1 to Q2. This leads to gains in producer surplus.  	Since monopolies are large, they can exploit economies of scale, so they have lower average costs of production. The long run average cost curve can be used to show this: 
Consumers do not get as much choice in a monopoly as they do in a competitive market.	High profits could be a source of government revenue through taxation.

- **Natural monopoly:**

- A natural monopoly arises when there are high fixed costs, usually in the form of infrastructure. For example, water and gas pipes, electricity cables and rail networks are expensive forms of infrastructure. In these industries, natural monopolies supply the services. The costs of infrastructure are a form of sunk costs, since the costs are not recoverable if the firm decided to leave the market. This makes barriers of entry to and exit from the market high.

- It is considered inefficient to duplicate this infrastructure by trying to make the market more competitive. This is because resources would be wasted.

3.4.6 Monopsony

Characteristics and conditions for a monopsony to operate:

- A monopsony is a single buyer in a market. For example, Network Rail for track maintenance and the government for teachers are examples of a monopsony. Moreover, supermarkets have monopsony power when buying produce from farmers, which means they are able to negotiate low prices.
- It is assumed that monopsonists are profit maximisers.
- A firm with monopsony power is able to negotiate lower prices, because their suppliers have nowhere else to sell to (there is only one buyer).
- Firms with monopsony power are able to set the market price.

Costs and benefits of a monopsony to firms, consumers, employees and suppliers:

Costs	Benefits
It is the monopsony power of supermarkets that has led to many farmers losing profits. Farmers lose out to supermarket price wars, because supermarkets keep negotiating lower prices from farmers, in order to lower their own prices and compete with other supermarkets. Supplying firms are unlikely to make more than normal profit.	The NHS has monopsony power when buying drugs from pharmaceutical companies. They are able to negotiate lower prices for the drugs. This saves money which can be invested elsewhere, such as in R&D. Moreover, the NHS can then cover more treatments within their budget.
Employees are likely to lose out with lower wages. For example, those trained to be coal miners had little choice of who to work for. This meant their labour could be exploited by the employer. However, now this has been offset with the power of trade unions, which are able to negotiate higher wages and good working conditions.	By lowering the price paid to suppliers, consumers might receive lower prices.
Workers might become unproductive if wages are low.	

3.4.7 Contestability

Characteristics of contestable markets:

- Contestable markets face actual and potential competition.
- Entrants to contestable markets have free access to production techniques and technology.
- There are no significant entry or exit barriers to the industry. For example, there will be no sunk costs in a contestable market.
- There is low consumer loyalty.
- The number of firms in the market varies.

Implications of contestable markets for the behaviour of firms:

- If markets are contestable, firms are more likely to be allocatively efficient. In the long run, firms operate at the bottom of the average cost curve. This makes them productively efficient.
- The threat of new entrants affects firms just as much as existing competitors. Due to the low barriers to entry which provide easy access to the market, firms are wary of new entrants entering the market, taking supernormal profits, and then leaving. This is known as hit and run.
- Markets which are highly contestable are akin to a perfectly competitive market. This is because existing firms act as though there is a lot of competition.
- There could be supernormal profits in the short run and only normal profits in the long run. In the short run, new firms can enter and take advantage of the supernormal profits. However, in practice, firms can only earn normal profits in the short run. This is because it is the only way to prevent potential competition. Without supernormal profits, there is no incentive for new firms to enter, even if barriers to entry and exit are low.

Types of barrier to entry and exit:

- Barriers to entry aim to block new entrants to the market. it increases producer surplus and reduces contestability.
- The greater the **economies of scale** that a firm exploits, the less likely it is that a new firm will enter the market. This is because they would produce comparatively expensively, so they cannot compete.

- **Legal barriers** can act as a barrier to entry. 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. Since new firms have to gain a licence, there is a barrier to entry.
- Consumer loyalty and **branding** can make a market less contestable. This is since 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.
- **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.
- Some firms might employ **anti-competitive practices,** such as refusing to supply retailers which stock competitors.
- **Vertical integration** means one firm gains control of more of the market, which creates a barrier to entry. It could result in one firm gaining **control of important technologies**, and they might prevent other firms gaining access to them.
- Firms might saturate the market with their goods using **brand proliferation.** This disguises consumers from the actual market concentration. For example, the many brands of the laundry soap market are provided by only a few large conglomerates.

Barriers to exit prevent firms from leaving a market quickly and cheaply.

- They include the cost to **write off assets and pay leases.** Firms have to continue paying leases and contracts, even after closure. It could make it cheaper to stay in the industry than to leave. This makes the market less contestable.
- **Losing a brand** and consumer loyalty is hard to put a monetary value on, but is still considered a cost of leaving the market.
- **The cost of making workers redundant** might discourage firms from leaving an industry. For example, Amazon created barriers to entry by exploiting their workers and having exclusivity with the Kindle. They gained a large market share and a strong buying power. By lowering the price of the Kindle when it was launched, they made a loss in the short run, to increase their long run revenue.

Sunk costs and the degree of contestability:

- There are different degrees of contestability across markets. All markets have the potential to be contestable, but it depends on what kind of costs firms face, and how loyal consumers are. No markets are perfectly contestable, markets generally have some degree of contestability.
- It is hard to judge the degree of contestability, since in reality there will be some costs to entry and exit.
- An application point of contestability could be the bus industry, which the government helps to make more contestable. Also, the budget airline industry could be seen as having some degree of contestability, if firms rent planes for a few years and then sell them. Ryanair entered the market cheaply by choosing less popular landing slots. In recessions, however, the market is less profitable.
- Sunk costs are a barrier to contestability.
- They are costs which cannot be recovered one they have been spent. For example, advertising incurs a sunk cost. A market with high sunk costs is less favourable to enter, because the risks associated with entering the market are high.
- High sunk costs are likely to push a market towards a price and output that is similar to a monopoly.

Synoptic point:

- The process of globalisation has arguably contributed to an increase in the contestability of domestic markets. The improvement in transport and containerisation seen in the last 50 years has increased the ease in which foreign firms can sell to domestic consumers at a competitive price. This has made it easier for foreign firms to successfully enter domestic markets.