



# HL IB Economics



## 2.11 Market Failure: Market Power

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Your notes

## 2.11.1 An Introduction to Market Structures

# What are Market Structures?

- **Market structures** are the **characteristics of the market** in which a firm or industry operates
  - These characteristics typically include
    - The number of buyers
    - The number and size of firms
    - The type of product in the market (**homogenous** or **differentiated**)
    - The types of **barriers to entry** and exit
    - The degree of competition between the firms in the market
- Market structures can be separated into **perfect competition** & **imperfect competition**
- **Imperfect competition** includes the following market structures
  - **Monopolistic**  
A market structure is one in which there are **many firms offering a similar product** but with some product differentiation e.g nail salons
  - **Oligopoly**  
A market structure in which a few large firms dominate the industry with each firm having significant market power
  - **Monopoly**  
A market structure in which there is a single supplier of a particular product & has the power to influence the market supply & price

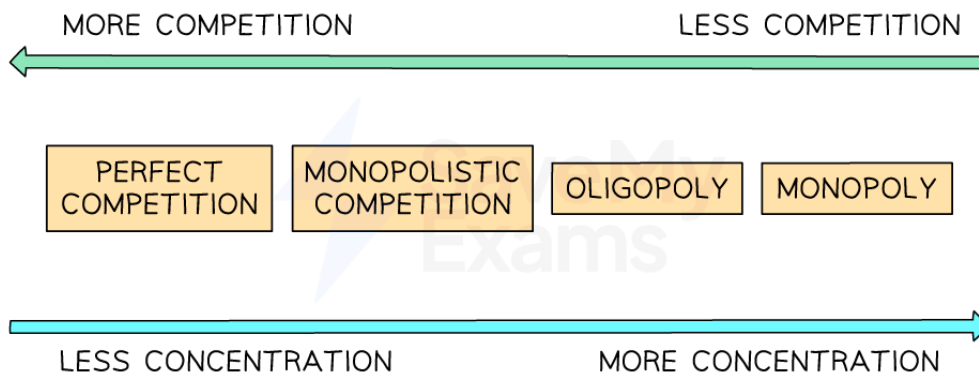
# The Meaning of Market Power

- **Market failure** can be caused **through the abuse of market power**
- **Signs of market failure include**
  - The ability of suppliers to have control of prices
  - The ability of suppliers to restrict output in a market, so as to raise prices
  - A lack of **allocative efficiency**
  - A lack of **productive efficiency**



Your notes

- **Governments often regulate markets** and intervene to prevent or reduce the **abuse of market power** through antitrust laws (anti monopoly) or competition policy
- **Market power** refers to the ability of a firm to influence and control the conditions in a specific market, allowing them to have a significant impact on **price, output**, and other market variables
- Market power allows a firm to set prices **above the competitive level** or **restrict output**
- Market power can be measured using indicators like **market share, concentration ratios**, or **barriers to entry**
  - A higher market share or concentration ratio suggests a **greater degree of market power**



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***The level of market power changes for each market structure***

- The closer a firm is to **being a monopoly**, the **higher** the concentration ratio, market share and market power
  - **Competition is greatly diminished** and the benefits of competition are likely to be lost
- The closer a firm is to **being perfectly competitive**, the **lower** the concentration ratio, market share and market power
  - **Competition is enhanced** and the significant benefits of competition are likely to be gained
- It is important to distinguish between **market power and market competition**
  - In **competitive markets**, no single firm has substantial market power, and prices and outputs are determined by the **forces of supply and demand**

- In markets with **limited competition** or where firms have significant market power, **market outcomes can deviate** from the ideal of perfect competition

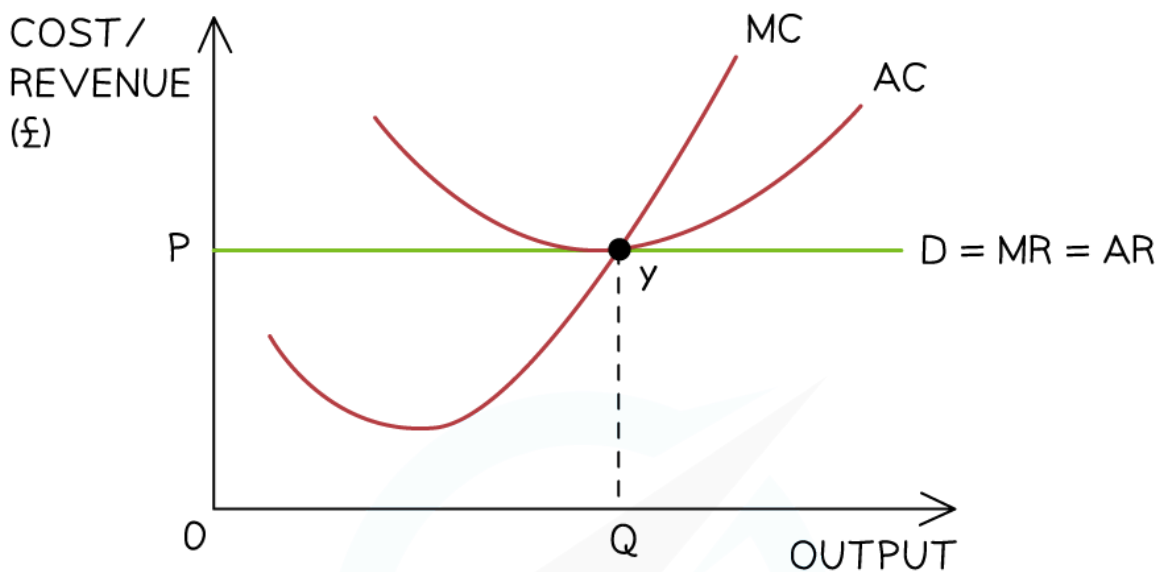


Your notes

## Characteristics of Perfectly Competitive Markets

- The characteristics of **perfect competition** are as follows
  1. **There are many buyers and sellers:** due to the number of market participants sellers are **price takers**
  2. **There are no barriers to entry and exit** from the industry: firms can start-up or leave the industry with relative ease which increases the level of competition
  3. **Buyers & sellers possess perfect knowledge of prices:** this assumption presupposes perfect information e.g if one seller lowers their price then all buyers will know about it
  4. **The products are homogenous:** this means firms are unable to build brand loyalty as perfect substitutes exist and any price changes will result in losing customers

### PERFECT COMPETITION



*A perfectly competitive market on the top which experiences allocative & productive efficiency*

### Diagram Analysis



Your notes

- The firm does not have any **market power** so it is unable to influence the price & quantity
  - The firm is a **price taker** due to the large number of sellers
  - The firm's **selling price** is the same as the market price,  $P = MR = AR = Demand$
- The firm produces at the **profit maximisation level** of output where  $MC=MR (Y)$
- The firm is **productively efficient** as  $MC=AC$  at this level of output
- The firm is **allocatively efficient** as  $AR (P)=MC$
- The firm is unlikely to experience **dynamic efficiency** as it is unlikely to have **abnormal profits** to reinvest

## Characteristics of Imperfectly Competitive Markets

- **Imperfect competition** includes the following market structures
  - **Monopolistic**
  - **Oligopoly**
  - **Monopoly**

Characteristics of Imperfectly Competitive Market Structures

Characteristic	Monopolistic	Oligopoly	Monopoly
<b>Nature of the product</b>	Differentiated	Differentiated (KFC) or homogenous (petrol)	Unique
<b>Customer loyalty</b>	Low	High	High
<b>Price taker or maker?</b>	Low ability to make a price	Price maker	Price maker
<b>Barriers to entry</b>	Low barriers to entry (some start up costs and skills required)	High barriers to entry (finance, competition etc)	Extreme barriers including mergers and acquisitions, supplier control etc



Your notes

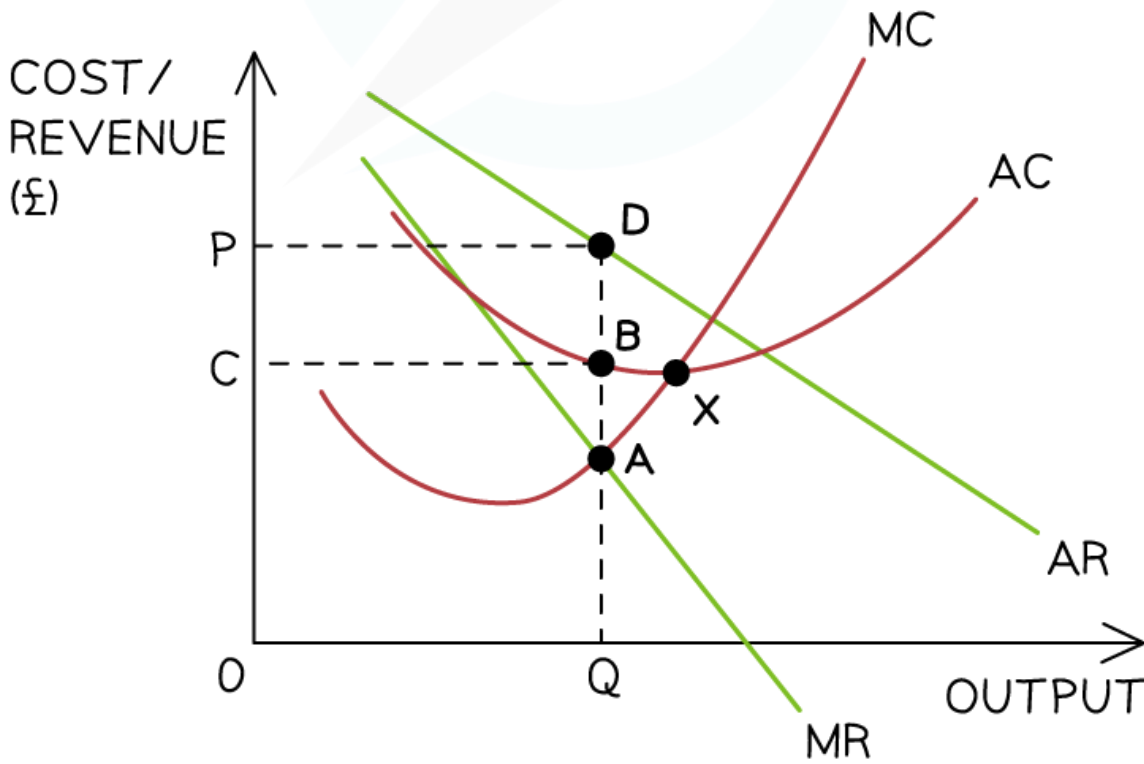
<b>Number of firms</b>	Many competitors/ substitutes	A few competitors/substitutes	No competitors/substitutes
<b>Degree of efficiency</b>	More competition pushes the firm to better efficiency	No efficiency in resource allocation	Sometimes high inefficiency
<b>Type of profit</b>	Can be abnormal in the short-run. Normal (breakeven) in the long-run	Abnormal	Abnormal
<b>Level of market power</b>	Low with power linked to consumer preferences	High	Absolute
<b>Slope of the demand curve</b>	Shallow (elastic)	Steeper (somewhat inelastic)	Steepest (inelastic)

## Diagrammatic Illustration of Imperfect Competition



Your notes

IMPERFECT COMPETITION



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An imperfect market on the bottom in which inefficiencies exist at the profit maximisation level of output

### Diagram Analysis

- The firm is a **price maker**
  - This means that its revenue curves are downward sloping
- The firm produces at the **profit maximisation level** of output where **MC=MR (A)**
- The firm is not **productively efficient** as **AC > MC** at this level of output (**B-A**)
  - **Productive efficiency** would occur at point E where MC=AC

- The firm is not **allocatively efficient** as  $AR (P) > MC$  at this level of output (D-A)
  - **Allocative efficiency** would occur where  $AR=MC$
- The firm is likely to experience **dynamic efficiency** as it will be able to reinvest its profits so as to increase innovation



Your notes





Your notes

## 2.11.2 Profit Maximisation

### Normal Profit, Abnormal Profit & Losses

- When calculating costs, Economists consider both the **explicit** and **implicit** costs of production
  - Explicit costs are the costs which **have to be paid** e.g raw materials, wages etc.
  - Implicit costs are the **opportunity costs** of production
    - This is the cost of the next best alternative to **employing the firm's resources**
    - E.g. if an investor puts £1m into producing bicycles & they could have put it in the bank to receive 5% **interest**, then the 5% represents an **implicit cost**
  - Implicit costs must be considered as entrepreneurs will rationally reallocate resources when **greater profits** can be made elsewhere
- **Profit = total revenue (TR) - total costs (TC)**
  - Total costs include explicit and implicit costs
- **Normal profit occurs when TR = TC**
  - This is also called breakeven
- **Abnormal profit occurs when TR > TC**
- **A loss occurs when TR < TC**

#### Calculations to Demonstrate Profits

Output	TR (£)	TC (£)	Profit (TR - TC)
5	150	70	80
6	180	96	84
7	220	220	0
8	250	270	-20



Your notes

## Observations

- **Abnormal profit** occurs up to the 6th unit of output
- **Normal profits** occur at the 7th unit
- From the 8th unit, the firm is making a **loss**

## The Profit Maximisation Rule

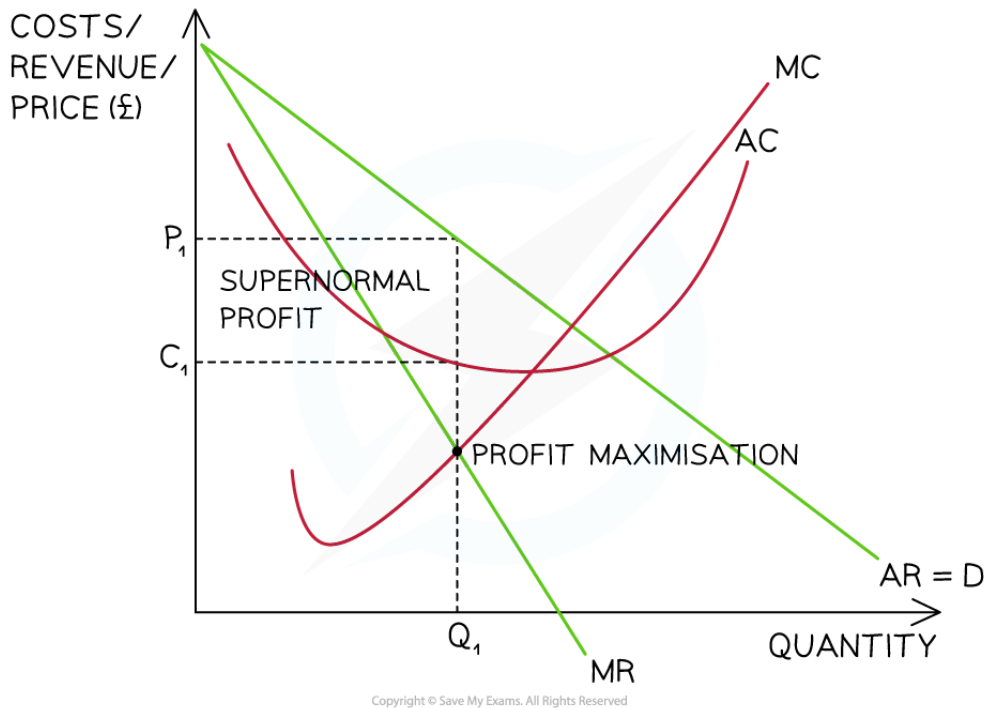
- Most firms have the **rational** business objective of **profit maximisation**
  - Profits benefit shareholders as they receive **dividends** & also increase the underlying share price
    - An increase in the underlying share price increases the **wealth** of the shareholder

## The Profit Maximisation Rule

- To achieve profit maximisation firms, follow the **profit maximisation rule**
  - When **marginal cost (MC) = marginal revenue (MR)** then no additional profit can be extracted by producing another unit of output
  - When  $MC < MR$  additional profit can still be extracted by producing an additional unit of output
  - When  $MC > MR$  the firm has gone beyond the profit maximisation level of output
    - It is making a marginal loss on each unit produced beyond the point where **MC = MR**
- In reality, firms may find it difficult to produce at the **profit maximisation level of output**
  - They may not know where this level is
  - In the **short term** they may not adjust their prices if the **marginal cost** changes
    - Marginal costs can change regularly and **regular price changes** would be disruptive to customers
  - In the **long-term** firms will seek to **adjust prices** to the profit maximisation level of output
  - Firms may be forced to change prices by the **government competition regulator**
    - The profit maximisation level of output often results in **high prices** for consumers
    - Changing prices changes the **marginal revenue**



Your notes



The profit maximisation level of output occurs at  $Q_1$  where  $MC = MR$  resulting in a market price of  $P_1$

## Diagram Analysis

- This firm has **market power** as the MR and **average revenue (AR)** curve are downward sloping
- At the profit maximisation level of output ( $MC = MR$ )
  - The selling price is  $P_1$
  - The average cost is  $C_1$
  - The **supernormal profit**  $= (P_1 - C_1) \times Q_1$

### EXAMINER TIP



Profit maximisation is all about the quantity of output.

To determine the level of profit from a diagram:

1. identify where  $MC = MR$  and then **extend the dotted line upwards** to the point where it hits the AR curve - this is your selling price

2. Where this line crosses the **average cost curve (AC)** represents the cost per unit at this level of output
3. The profit is the difference between the selling price and the average cost



Your notes

### Calculations To Demonstrate the Profit Maximisation Rule

Output	MR (£)	MC (£)	Addition to Profit
5	50	32	+18
6	50	36	+14
7	50	50	0
8	50	68	-18

### Observations

- With the 7th unit of output, **MC = MR** & no additional profit can be extracted by producing another unit
- Up to the 6th unit of output, **MC < MR** & additional profit can still be extracted by producing an **additional unit**
- From the 8th unit of output, **MC > MR** & the firm has **gone beyond** the profit maximisation level of output
  - It is making a **marginal loss** on each unit produced beyond the point where **MC = MR**

## Profit & Loss Calculations

- A range of calculations can be made using the above information
- Additionally, **average costs and revenues** can also be provided from which **the per unit cost or revenue** can be determined

$$\text{Average cost} = \frac{\text{total cost}}{\text{number of units}}$$



Your notes

- Average revenue =  $\frac{\text{total revenue}}{\text{number of units sold}}$
- Knowledge of the **characteristics of perfect and imperfect market structures** can also be built into calculations

### WORKED EXAMPLE

*Instants PLC* is producing at a level of output equal to 3000 units per month, and its costs and revenues are shown in Table 1.

Table 1

Average total cost (ATC)	\$64
Marginal cost (MC)	\$64
Average revenue (AR)	\$60
Marginal revenue (MR)	\$60
Price (P)	\$60
Average variable cost (AVC)	\$56

Answers:

**a) Using the data in Table 1, state the reason why *Instants PLC* is operating in a perfectly competitive market. [1]**

- The demand curve is perfectly elastic as  $P = AR = MR$

**b) Determine whether *Instants PLC* is producing at the profit-maximising (loss-minimising) level of output. You must give a reason for your choice. [2]**

- The firm is not producing at the profit maximisation level of output (1 mark) as  $MC \neq MR$  (1 mark)

**c) Using Table 1, calculate the total fixed costs incurred by *Instants PLC* at the current level of output,  $Q_1$ . [2]**

- Total Costs (TC) =  $3,000 \times \$64 = \$192,000$
- Total variable cost (TVC) =  $3,000 \times \$56 = \$168,000$  (1 mark for any valid working)
- Total fixed costs (TFC) =  $TC - TVC$ 
  - Total fixed costs (TFC) =  $\$192,000 - \$168,000 = \$24,000$  (1 mark)



Your notes

d) Using Table 1, calculate the monthly profit or loss *Instants PLC* is making at the current level of output [2]

- Profit = total revenue - total costs
  - Profit =  $(3,000 \times \$60) - (3,000 \times \$64)$  (1 mark for any valid working)
  - Profit =  $180,000 - 192,000$
  - Profit =  $-\$12,000$  (the firm is making a loss of  $\$12,000$ ) (1 mark)

e) Determine whether *Instants PLC* is productively efficient. You must give a reason for your choice. [2]

- The firm is productively efficient (1 mark) as the  $ATC = MC$  (1 mark)

f) Determine whether *Instants PLC* is allocatively efficient. You must give a reason for your choice. [2]

- The firm is not allocatively efficient (1 mark) as the price (AR)  $\neq$  MC (1 mark)

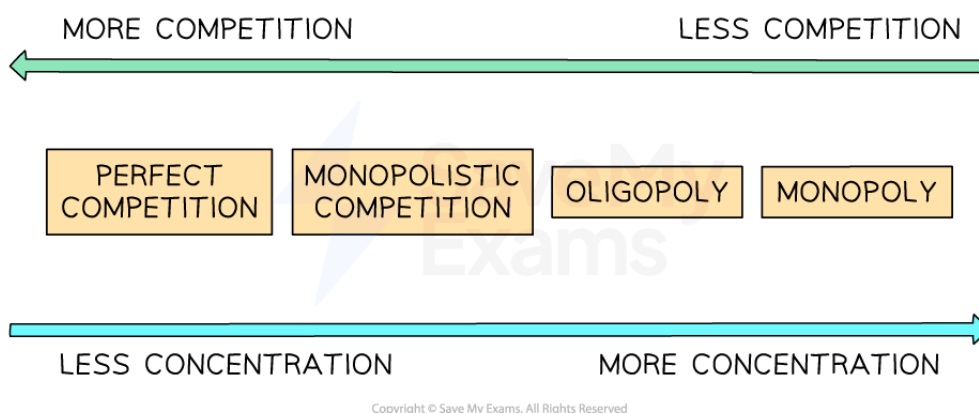


Your notes

## 2.11.3 Market Power & Perfect Competition

### Market Power in Perfect Competition

- **Market power** refers to the ability of a firm to influence and control the conditions in a specific market, allowing them to have a significant impact on **price, output**, and other market variables



*The level of market power is low in perfect competition*

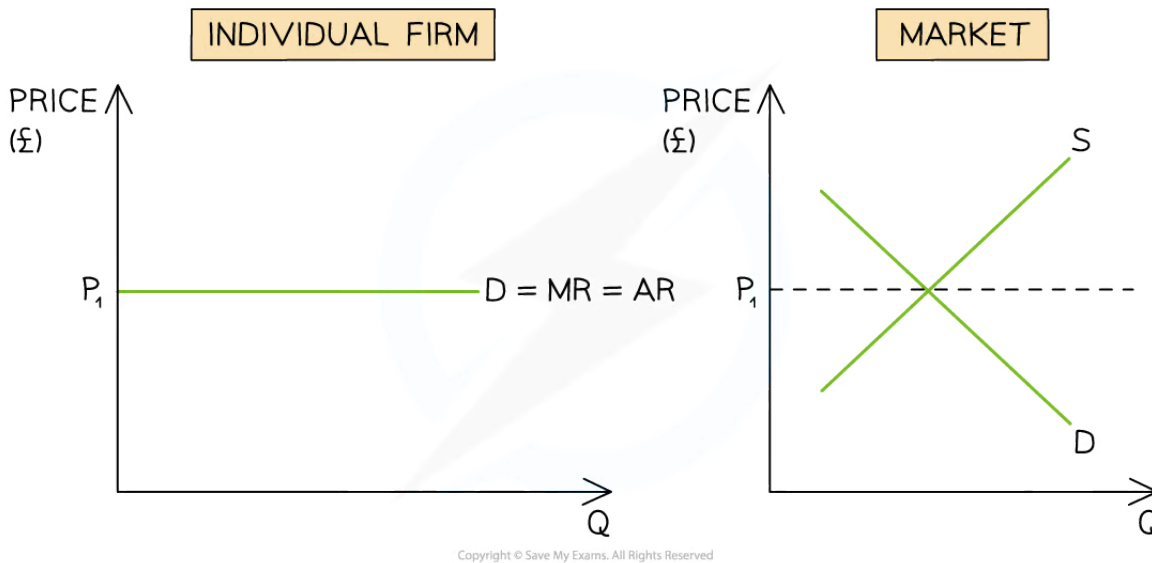
- Firms in perfect competition **have low market power, low market share** and a low industry **concentration ratio**
- There is little market failure in **perfectly competitive industries**
  - This is why governments try to encourage more competition in every sector in their economy

### Diagrammatic Representation of Perfect Competition

- In order to **maximise profit**, firms in perfect competition produce up to the level of output where **marginal cost = marginal revenue** (MC=MR)
- The firm does not have any **market power** so it is unable to influence the price & quantity
  - The firm is a **price taker** due to the large number of sellers
  - The firm's **selling price** is the same as the market price,  $P_1 = MR = AR = Demand$



Your notes



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*A diagram that illustrates how an individual firm in perfect competition has to accept the market/industry price ( $P_1$ )*

- In the **short-run**, firms can make **abnormal profit or losses** in perfect competition
- However, they will always return to the long-run equilibrium where they make **normal profit**

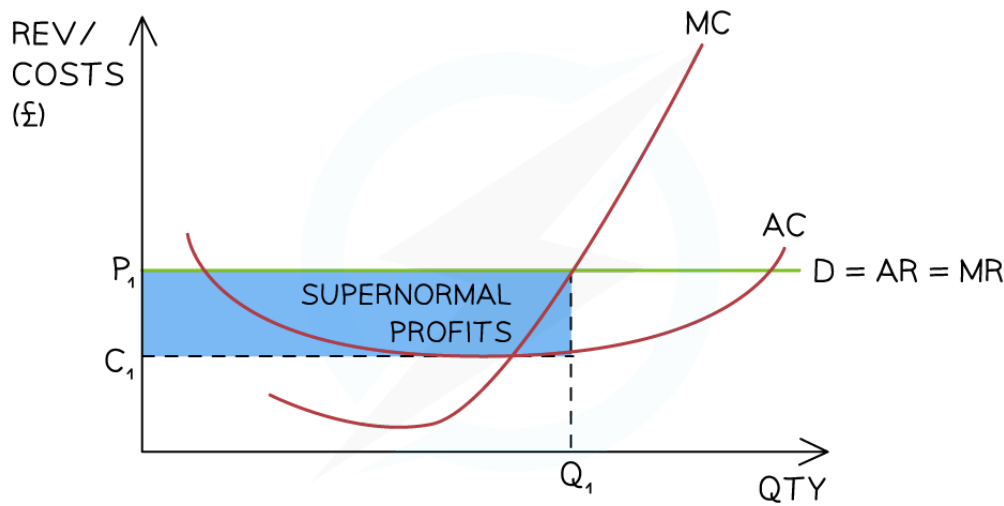
## Abnormal Profit in Perfect Competition in the Short-run

- Firms in **perfect competition** are able to make **abnormal profit** in the **short-run**
- The MC curve is the **supply curve** of the firm





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*A diagram illustrating a perfectly competitive firm making abnormal profit in the short-run as the  $AR > AC$  at the profit maximisation level of output ( $Q_1$ )*

## Diagram Analysis

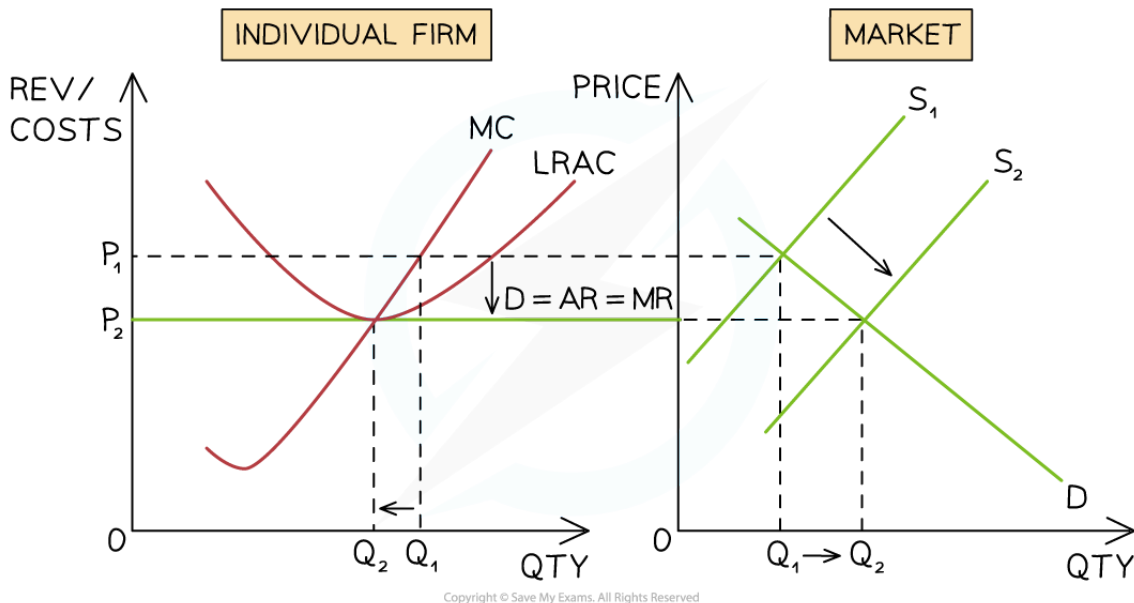
- The firm is producing at the **profit maximisation level of output** where  $MC = MR (Q_1)$ 
  - At this point the  $AR (P_1) > AC (C_1)$
  - The firm is making **abnormal profit** =  $(P_1 - C_1) \times Q_1$

## Moving from Abnormal Profit in the Short-run to Normal Profit in the Long-run

- If firms in **perfect competition** make **abnormal profit** in the **short-run**, new entrants are attracted to the industry
  - They are **incentivised** by the opportunity to make supernormal profit
  - There are no **barriers to entry**
    - It is easy to join the industry



Your notes



**A diagram illustrating how new entrants shift the industry supply curve to the right ( $S_1 \rightarrow S_2$ ) which changes the industry price from  $P_1 \rightarrow P_2$ . The firm can now only sell its products at  $P_2$  and abnormal profits are eliminated**

## Diagram Analysis

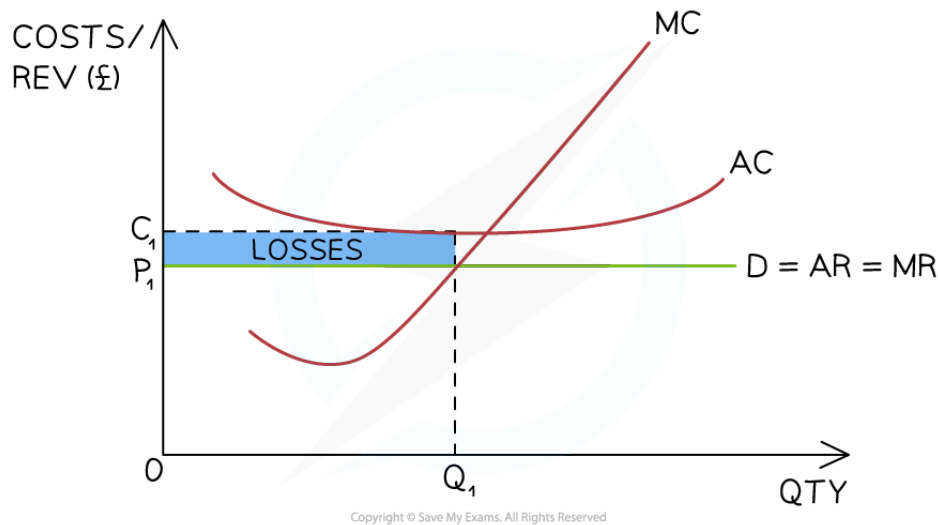
- The firm is initially producing at the **profit maximisation level of output** where  $MC=MR (Q_1)$ 
  - At this level of output, the  $AR (P_1) > AC (P_2)$  & the firm is making **abnormal profit**
- **Incentivised by profit**, new entrants join the industry & **supply increases from  $S_1 \rightarrow S_2$** 
  - Overall quantity in the industry increases from  $Q_1 \rightarrow Q_2$
  - The **industry price falls** from  $P_1 \rightarrow P_2$
- The firm now has to sell its products at the industry price of  $P_2$ 
  - The **output of the firm falls** from  $Q_1 \rightarrow Q_2$  as it now has a **smaller market share** of the larger industry
- At the profit maximisation level of output ( $MC=MR$ ) the firm is now producing at the point where  $AR=AC$ 
  - The firm is making **normal profit**
- **In the long-run**, firms in **perfect competition** always make **normal profit**
  - Firms making a **loss** leave the industry
  - Firms making **abnormal profit** see them slowly **eradicated** as new firms join the industry



Your notes

## Losses in Perfect Competition in the Short-run

- Firms in **perfect competition** are able to make **losses** in the **short-run**



*A diagram illustrating a perfectly competitive firm making losses in the short-run as the  $AR < AC$  at the profit maximisation level of output ( $Q_1$ )*

### Diagram Analysis

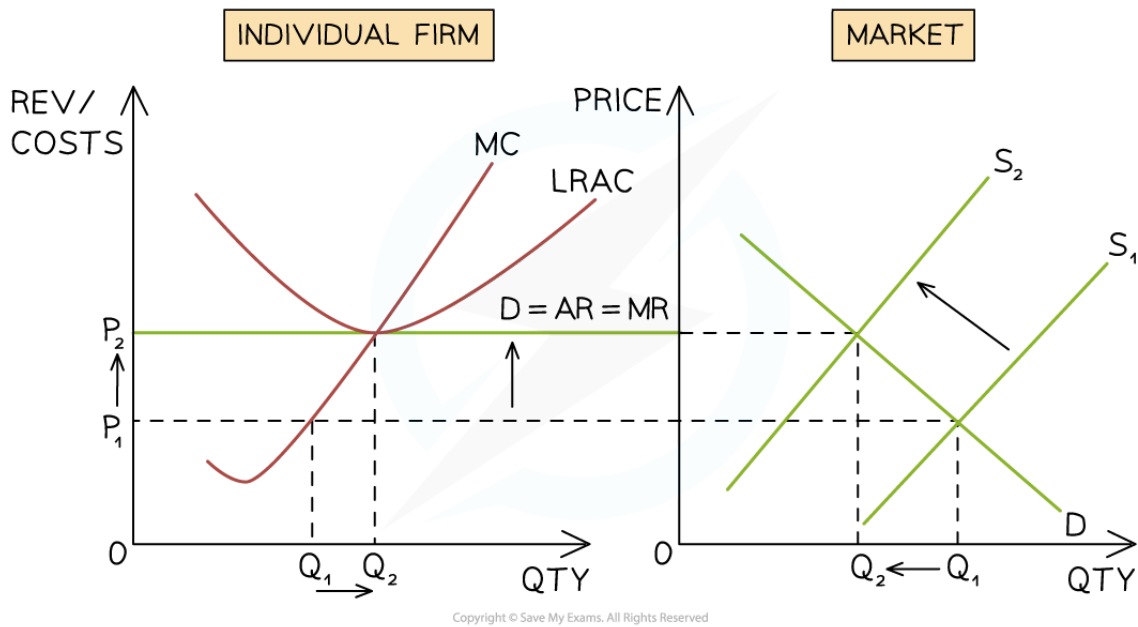
- The firms are producing at the **profit maximisation level of output** where  $MC = MR (Q_1)$ 
  - At this level of output, the  $AR (P_1) < AC (C_1)$
  - The firm's loss is equivalent to  $(P_1 - C_1) \times Q_1$

## Moving from Loss in the Short-run to Normal Profit in the Long-run

- If firms in **perfect competition** make losses in the **short-run**, some will shut down
  - The **shut down rule** will determine which firms shut down
  - There are no **barriers to exit**, so it is easy to leave the industry



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*A diagram illustrating how firms leaving the industry shift the industry supply curve to the left ( $S_1 \rightarrow S_2$ ) which changes the industry price from  $P_1 \rightarrow P_2$ . The firm can now sell its products at  $P_2$  which returns it to a position of normal profit*

## Diagram Analysis

- The firm is initially producing at the **profit maximisation level of output** where  $MC=MR (Q_1)$ 
  - At this level of output, the  $AR (P_1) < AC (C_1)$  & the firm is making a loss
- Some firms leave the industry & **supply decreases from  $S_1 \rightarrow S_2$** 
  - Overall quantity in the industry **falls from  $Q_1 \rightarrow Q_2$**
  - The **industry price increases** from  $P_1 \rightarrow P_2$
- The firm now has to sell its products at the industry price of  $P_2$ 
  - The **output of the firm increases** from  $Q_1 \rightarrow Q_2$  as it now has a **larger market share** of the smaller industry
- At the **profit maximisation level of output ( $MC=MR$ )** the firm is now producing at the point where  $AR=AC$ 
  - The firm is making **normal profit**



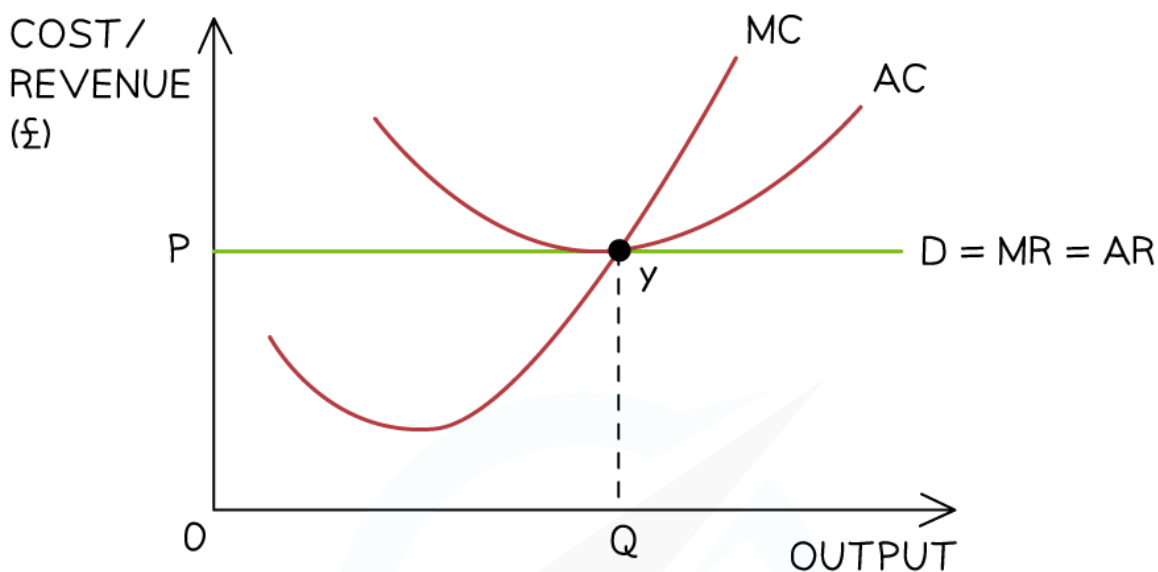
Your notes

- In the long-run, firms in **perfect competition** always make **normal profit**
  - Firms making a **loss** leave the industry
  - Firms making **supernormal profit** see them slowly **eradicated** as new firms join the industry

## Efficiency in Perfect Competition

- Allocative efficiency occurs at the level of output where average revenue = marginal cost (**AR = MC**)
  - At this point, **resources are allocated** in such a way that consumers & producers get the **maximum possible benefit**
  - **No one can be made better off** without making someone else worse off
  - There is **no excess** demand or supply
- Productive efficiency occurs at the level of output where marginal cost = average cost (**MC=AC**)
  - At this point **average costs are minimised**
  - There is **no wastage** of scarce resources & a high level of factor productivity

### PERFECT COMPETITION



*A perfectly competitive market benefits from both productive and allocative efficiency in the long-run*



Your notes

## Diagram Analysis

- The firm produces at the **profit maximisation level** of output where  $MC=MR (Y)$
- The firm is **productively efficient** as  $MC=AC$  at this level of output
- The firm is **allocatively efficient** as  $AR (P)=MC$

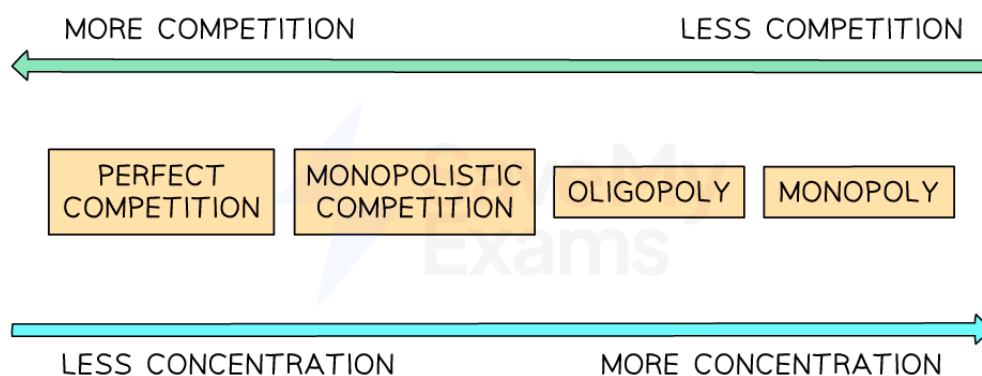


Your notes

## 2.11.4 Market Power & Monopolies

### Market Power in a Monopoly

- **Market power** refers to the ability of a firm to influence and control the conditions in a specific market, allowing them to have a significant impact on **price, output**, and other market variables



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*The level of market power is high/absolute for monopoly firms*

- Monopoly firms **have high market power, high/total market share** and a high/perfect industry **concentration ratio**
- There is significant market failure in **monopoly firms**
  - Governments regulate and intervene in mergers and acquisitions in order to ensure (in many economies) that no single firm gains more than 25% market share

### Characteristics of Monopoly Markets

- A monopoly is a market structure in which there is a **single seller**
- There are no **substitute products**
- The firm has **complete market power** & is able to set prices & control output
  - This allows the firm to **maximise supernormal profit** in the short-run



Your notes

- There is no long-run erosion of supernormal profit as competitors are unable to enter the industry
- **High barriers to entry exist**
  - One of the main barriers is the ability of the monopoly to **prevent any competition** from entering the market
    - E.g. by purchasing companies who are a potential threat

### Characteristics of Monopoly Market Structures

Characteristic	Monopoly	Characteristic	Monopoly
<b>Nature of the product</b>	Unique - no substitutes	<b>Degree of efficiency</b>	Usually high inefficiency as there is no competition
<b>Customer loyalty</b>	High - no substitutes	<b>Type of profit</b>	Abnormal
<b>Price taker or maker?</b>	Price maker	<b>Level of market power</b>	Absolute
<b>Barriers to entry</b>	Extreme barriers including mergers and acquisitions, supplier control etc	<b>Slope of the demand curve</b>	Steepest (inelastic)
<b>Number of firms</b>	No competitors/substitutes		

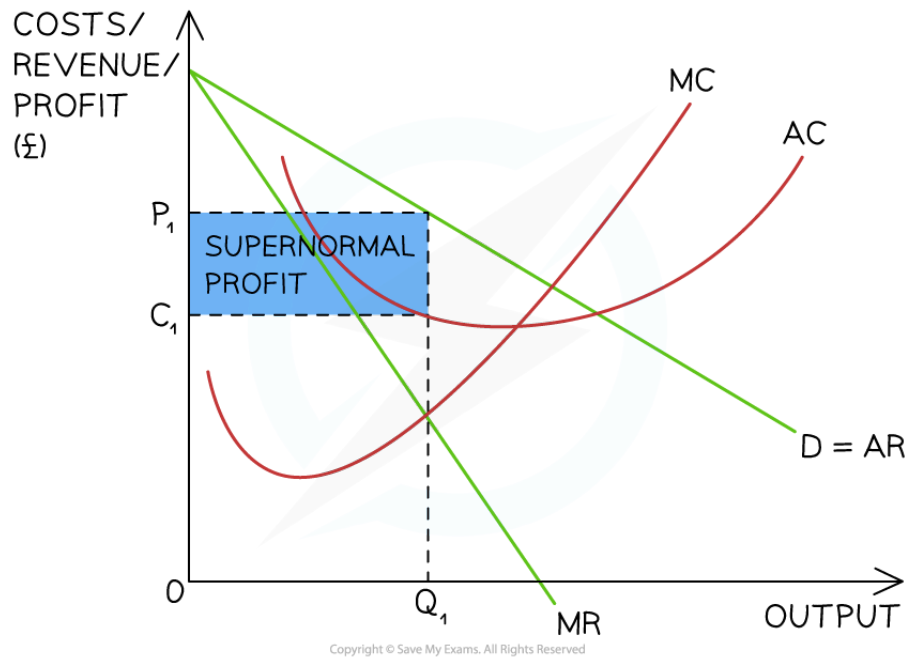
## A Monopoly Making Abnormal Profits

- As a single seller of goods/services, the firm in a monopoly market is also the **entire market**
  - There is no differentiation between the firm & the industry
- It is a **price maker**
  - This means that its revenue curves are downward sloping
- In order to **maximise profits**, it produces at the point where marginal cost (MC) = marginal revenue (MR)





Your notes



A diagram illustrating a monopoly making supernormal profit in the short-run & long-run as the  $AR > AC$  at the profit maximisation level of output ( $Q_1$ )

## Diagram Analysis

- The firm produces at the **profit maximisation level of output** where  $MC = MR (Q_1)$ 
  - At this level the  $AR (P_1) > AC (C_1)$
  - The firm is making **abnormal profit** =  $(P_1 - C_1) \times Q_1$

### EXAMINER TIP

Some exam questions require application of your knowledge. E.g. You may be asked to draw a cost and revenue diagram to show the likely impact of a reduction in sales on profits. This requires you to modify the diagram presented above by shifting the demand curve inwards. You will draw a second AR & MR curve to the left of the existing ones & then illustrate the new level of profit.

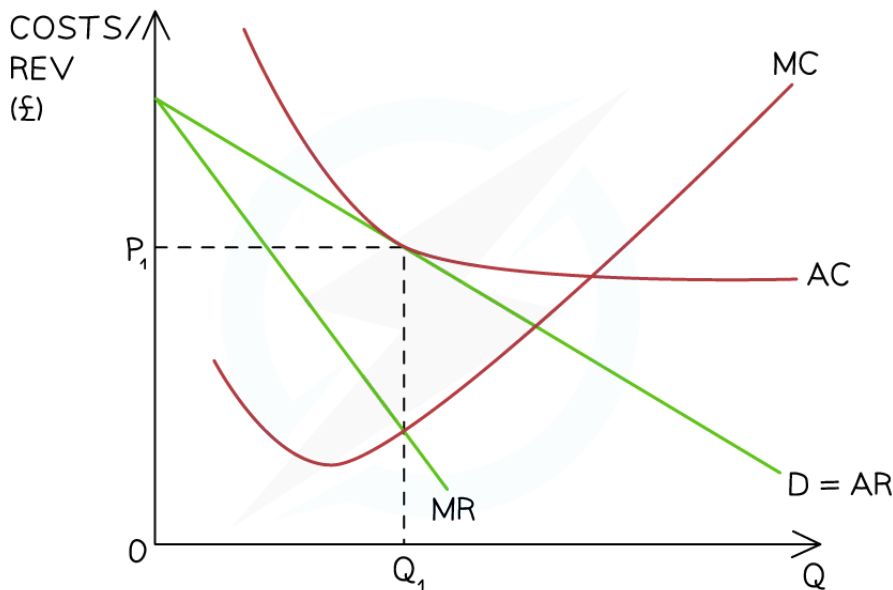
## A Monopoly Making Normal Profits

- In a monopoly market, normal profit refers to the level of profit necessary to **keep the monopolist in the market in the long run**



Your notes

- It represents the minimum amount of profit needed to cover the **opportunity cost** of the resources used by the monopolist
- At this point, total revenue (TR) equals the total cost (TC), including both **explicit and implicit costs**
- If the monopolist is earning normal profit, it indicates that there is **no abnormal profit**
- The monopolist is simply earning a competitive return and **covering its costs of production**



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*A monopoly may make normal profit in the short-run and this occurs at the profit maximisation level of output and where the price (AR) = ATC*

## Diagram Analysis

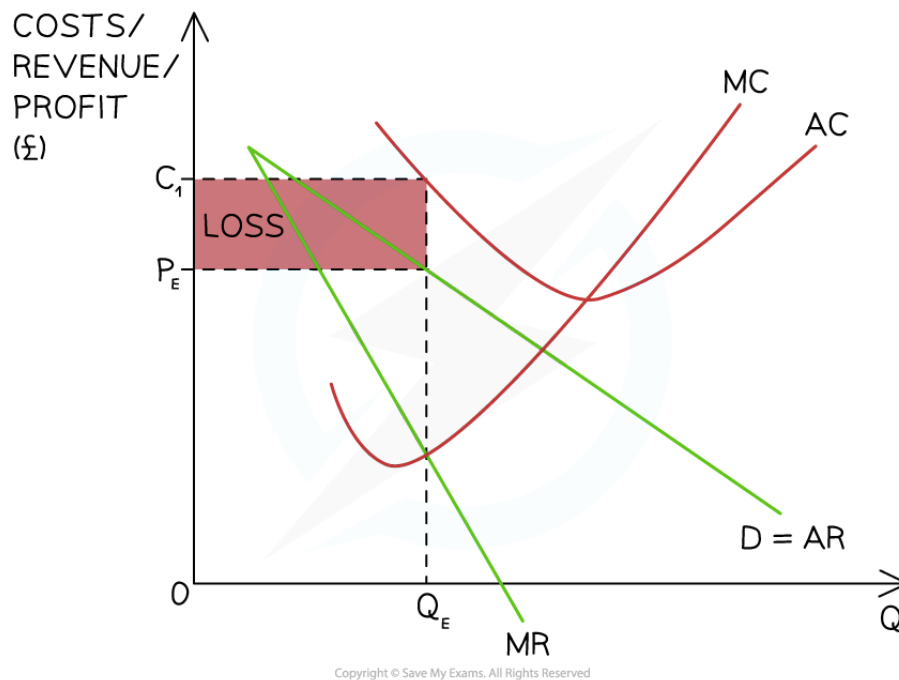
- The firm is following **the profit maximisation rule** and producing at the **level of output where MR = MC** ( $Q_1$ )
- At this level of output, the selling price  $P_1$  (**AR**) = **ATC**
  - This means the firm is **breaking even** and this is considered to be normal profit

## A Monopoly Making Losses in the Short-run



Your notes

- In a monopoly market, a **loss minimisation position** occurs when the monopolist incurs losses but aims to **minimise those losses in the short run**
- The loss minimisation position arises when the **market price (AR) is below the average total cost (ATC) but above the marginal cost (MC) of production**
- In the long run, a monopolist cannot sustain losses indefinitely
  - If losses persist the monopolist might consider **exiting the market or changing its production strategies**



*A monopoly firm is making short-run losses as seen by the fact that at the profit maximisation level of output ( $MC = MR$ ), the selling price is below the average total cost (ATC)*

## Diagram Analysis

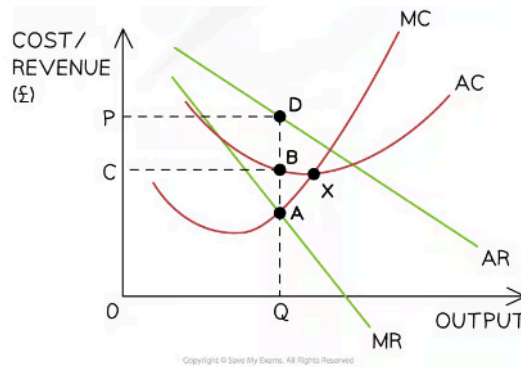
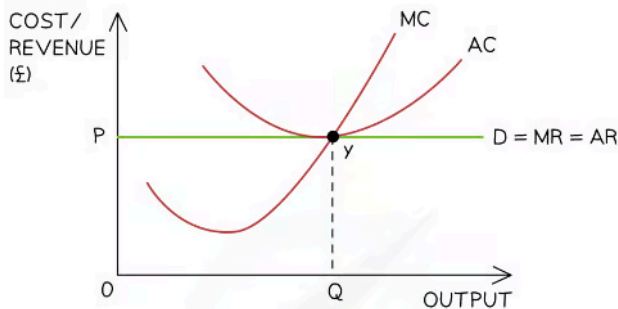
- The firm produces at the **profit maximisation level of output** where  $MC = MR (Q_E)$ 
  - At this level the  $AR (P_1) < AC (C_1)$
  - The firm is **making a loss** =  $(C_1 - P_E) \times Q_E$



Your notes

# Side by Side Comparison of Perfect Competition & Monopoly

- Perfect competition tends to achieve both productive and allocative efficiency due to the presence of competition, whereas monopolies generally result in inefficiencies in both aspects



Side by side comparison of efficiency in perfect competition and monopoly markets

## Diagram Analysis

### Perfect competition on the left

- The firm produces at the **profit maximisation level** of output where **MC=MR (Y)**
- The firm is **productively efficient** as **MC=AC** at this level of output
- The firm is **allocatively efficient** as **AR (P)=MC**
- There is no welfare loss

### Monopoly market on the right

- The firm produces at the **profit maximisation level** of output where **MC=MR (A)**
- The firm is not **productively efficient** as **AC > MC** at this level of output (**B-A**)
  - Productive efficiency** would occur at point X where MC=AC
- The firm is not **allocatively efficient** as **AR (P) > MC** at this level of output (**D-A**)
  - Allocative efficiency** would occur where AR=MC (point F)

- The welfare loss is equal to the area of the shaded triangle - ADF

## Costs & Benefits of a Monopoly Market Structure

- In several instances where a government regulator (e.g. The European Competition Commission) has acted to **decrease/limit monopoly power**, the firms have taken the Regulator to court to attempt to convince them that the **firms market power will benefit consumers**
  - Theoretically this is possible, however in many cases the desire to **maximise profits** would prevent this from happening



Your notes

### The Advantages & Disadvantages of Monopoly Power

Stakeholder	Advantages	Disadvantages
<b>The Firm</b>	<ul style="list-style-type: none"> <li>▪ <b>Abnormal profits</b> generate money for continued investment in technology &amp; <b>product innovation</b></li> <li>▪ Market power enables the firm to increase its <b>global competitiveness</b></li> <li>▪ <b>Economies of scale</b> can increase thereby lowering the average cost</li> <li>▪ Producer surplus increases</li> </ul>	<ul style="list-style-type: none"> <li>▪ Due to a lack of competition, there is a reduced incentive to be efficient</li> <li>▪ <b>Cross subsidisation</b> can create inefficiencies</li> <li>▪ Monopolies lead to a <b>misallocation of resources as <math>P &gt; MC</math></b>. The price is above the opportunity cost of providing the goods</li> <li>▪ Due to a lack of competition, <b>innovation sometimes lacks effectiveness</b></li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>▪ Abnormal profits often result in <b>higher wages</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Having only one supplier in the industry limits the opportunity to <b>change employers</b></li> </ul>
<b>Consumers</b>	<ul style="list-style-type: none"> <li>▪ Product innovation due to the firm's abnormal profits may result in a <b>better-quality product</b></li> <li>▪ <b>Cross subsidisation</b> can lower prices on <b>some products</b> that the firm provides</li> <li>▪ <b>Prices may fall</b> if firms pass on their cost savings (due to economies of</li> </ul>	<ul style="list-style-type: none"> <li>▪ A lack of competition is likely to result in <b>higher prices</b> as <b>no substitute goods</b> are available</li> <li>▪ A lack of competition may result in <b>no product innovation</b> &amp; worse product quality over time</li> <li>▪ May experience <b>worse customer service</b> as the incentive to improve it is limited</li> </ul>



Your notes

	scale) in the form of lower product prices	<ul style="list-style-type: none"> <li>▪ Cross subsidisation is likely to <b>increase prices on some products</b> offered by the firm</li> <li>▪ Consumer surplus decreases</li> </ul>
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>▪ <b>Increased sales volume</b> for some suppliers as they are able to supply products that are distributed nationally or internationally</li> </ul>	<ul style="list-style-type: none"> <li>▪ There is less competition for their products &amp; a monopoly often has the power to <b>dictate what price</b> they will pay to suppliers (monopsony power)</li> <li>▪ This price may <b>not be profitable</b> in the long run</li> </ul>

### EXAMINER TIP



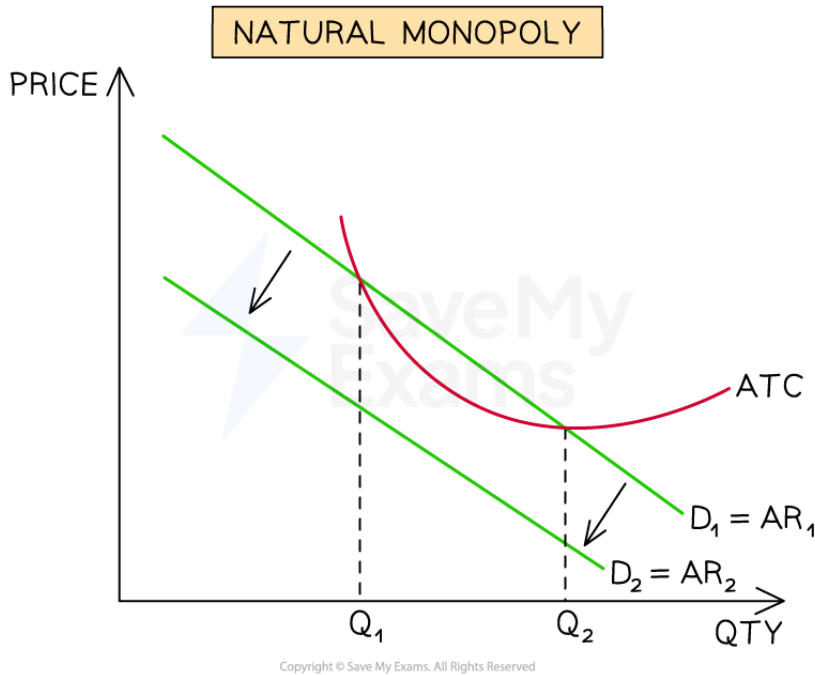
When **evaluating monopolies** demonstrate critical thinking by acknowledging the positives as well as the negatives. For example, Amazon has partly become a monopoly by being very good at what they do & consumers benefit from lower prices & greater choice. However, this power means that they can also **abuse the suppliers** on their platform.

## Natural Monopoly

- A **natural monopoly** occurs when the **most efficient number of firms in the industry is one**
  - This is often due to **associated infrastructure issues** e.g. delivery of utility services like water where it does not make sense to have multiple pipelines
  - It can also be due to the significant cost that is generated when entering the industry e.g. the **sunk costs**
  - It can also be due to the ability of **economies of scale** to lower prices for consumers e.g. it makes sense to have one firm building five nuclear power stations as opposed to five firms as average costs will be lower with one firm producing
- **Natural monopolies** usually occur in utility industries & are **regulated by the Government** to ensure that consumers are not charged higher monopoly prices
  - This regulation is often in the form of a **maximum price**



Your notes



*Natural monopolies spend large sums in production and make a profit between  $Q_1$  and  $Q_2$ . If another firm enters the market their demand will decrease and they will make a loss*

## Diagram Analysis

- Assume a utility company spends \$billions **building out a new delivery network**
- Their average total costs (ATC) are initially very high, but fall as they are able to gain **economies of scale**
- As they gain an increasing number of **customers ( $D_1 = AR_1$ )**, the firm is initially in a **loss making position** experienced between  $0 \rightarrow Q_1$  customers
- Between  $Q_1 \rightarrow Q_2$ , the firm is now making a profit as the  $AR > ATC$
- Should another firm enter the market, the **demand will be split between two firms** and the demand curve for this firm will **shift from  $D_1 \rightarrow D_2$**
- This shift of demand puts the monopoly in a position where  **$AR < ATC$  and the firm is making a loss at every level** of output
- It therefore **makes no sense** to have more than **one firm in the industry**

### EXAMINER TIP



When **evaluating natural monopolies**, consider the **government failure** that may occur with regard to **regulation & the imposition of maximum prices**. There is a lot of disagreement about the **level of profits** that natural monopolies should be allowed to make. It is a normative issue.



Your notes



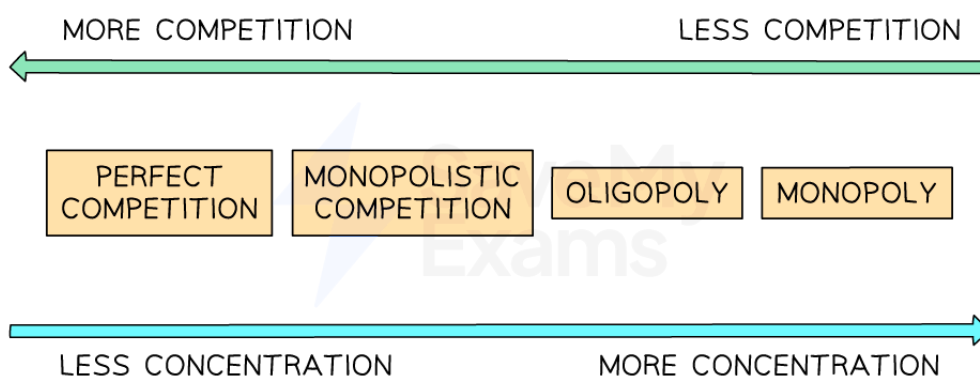


Your notes

## 2.11.5 Market Power & Oligopolies

### Market Power in Oligopoly Market Structures

- Most markets are **imperfectly competitive**
- Most imperfectly competitive industries operate in an **oligopoly** market structure
  - E.g., Banks, insurance companies, department stores, supermarkets, petrol retailers, sport stores etc.
- Market power** refers to the ability of a firm to influence and control the conditions in a specific market, allowing them to have a significant impact on **price, output**, and other market variables



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*The level of market power is high for oligopoly firms*

- Oligopoly firms **have significant market power**, a **large market share** and the **concentration ratio** of the top 5 firms is usually high
- There is significant market failure in **oligopoly market structures**
  - Governments regulate and intervene in mergers and acquisitions in order to ensure (in many economies) that no single firm gains more than 25% market share

#### Characteristics of an Oligopoly Market



Your notes

High Barriers to Entry & Exit	High Concentration Ratio
<ul style="list-style-type: none"> <li>▪ <b>Entering the industry</b> is difficult due to the <b>existing dominance</b> of relatively few firm</li> <li>▪ <b>Start-up costs</b> tend to be high e.g. setting up a renewable energy company costs billions</li> <li>▪ <b>Leaving the industry</b> is difficult due to the high level of <b>sunk costs</b> e.g. mobile phone companies are bidding billions on 5G auctions run by the Government and they <b>cannot recoup this money</b> if they leave the industry</li> </ul>	<ul style="list-style-type: none"> <li>▪ A <b>concentration ratio</b> reveals what percentage of the total market share a <b>specific number</b> of firms have</li> <li>▪ A <b>10-firm concentration ratio</b> reveals the total market share (concentration) of the top 10 firms in the industry</li> <li>▪ A <b>5-firm concentration</b> reveals the total market share (concentration) of the top 4 firms in the industry</li> <li>▪ The <b>higher the value</b> - and the <b>lower the number of firms</b> - the more concentrated the <b>market power</b> in the industry e.g. the UK supermarket's 5-firm concentration ratio is constantly around 67%</li> </ul>
Interdependence of Firms	Product Differentiation
<ul style="list-style-type: none"> <li>▪ With relatively few competitors, firms study each other's behaviour and are <b>highly interdependent</b> in their actions</li> <li>▪ This interdependence generates the use of <b>game theory</b></li> <li>▪ There is a <b>strong incentive to collude</b> as this will lead to greater profits</li> <li>▪ There is <b>little incentive to compete on price</b> as this does not change each firms market share by much - and lowers profits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Products tend to be <b>highly differentiated</b></li> <li>▪ Occasionally products are similar (e.g. petrol). However, the <b>brand</b> around the product is highly differentiated to the point where <b>consumers perceive it as different</b> and are extremely brand loyal</li> </ul>

## Measuring Concentration Ratios

- The most commonly used **concentration ratios** in the UK are the five-firm, ten-firm, & twenty-firm concentration ratios



- A **five-firm concentration ratio** of around 60% is considered to be an **oligopoly**
- A one-firm concentration ratio of 100% would be a **pure monopoly**
  - many government regulators define a monopoly as a firm with more than 25% market share
    - They act to prevent **mergers or acquisitions** from taking place which would give one firm more than 25% market share

### WORKED EXAMPLE

The following table shows the value of UK Supermarket sales for the 3 months to the 31st March 2022.

Company	Value of Sales (£ million)	Company	Value of Sales (£ million)
Tesco	136.5	Waitrose	24
Morrisons	55	Asda	77.5
The Co-operative	30	Lidl	33
Sainsbury's	75	Iceland	15
Aldi	44	Others	10

Calculate the five-firm concentration ratio. Show your working. [2]

Answer:

**Step 1: Identify the top five firms by value of sales & add the value of their sales together**

$$\text{Tesco (136.5) + Asda (77.5) + Sainsbury's (75) + Morrisons (55) + Aldi (44)}$$

$$= 136.5 + 77.5 + 75 + 55 + 44 \text{ (1 mark for any correct working)}$$

$$= \text{£388 million}$$

**Step 2: Calculate the percentage of total sales that the top five firms have**

$$\frac{388}{500} \times 100 \text{ (1 mark)}$$

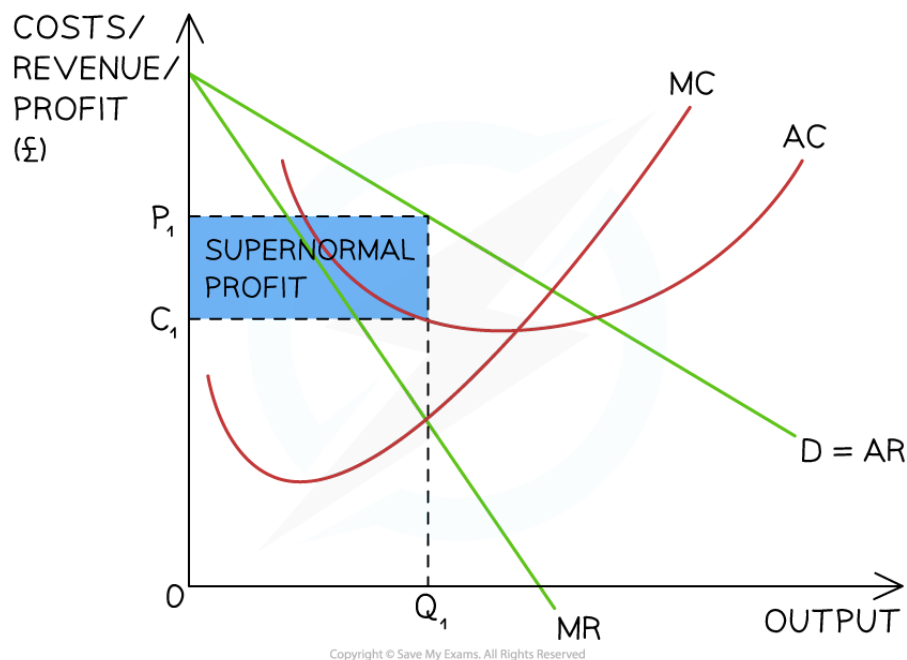
$$= 77.6\%$$



Your notes

## Reasons For Collusive & Non-collusive Behaviour

- **Collusive behaviour** in oligopolies occurs when firms cooperate to **fix prices & restrict output**
  - They cease to compete as vigorously as they can
  - The incentive to collude is high
- **Non collusive behaviour** in oligopolies occurs when firms **actively compete** to maintain/increase market share
  - Price wars may break out occasionally between competitors
  - Little is to be gained as **competitors can quickly follow each others actions** resulting with very little change in market share - but a significant **loss in profits** due to the lower prices generated by the price war



*A collusive oligopoly removes competition and causes the firms in the industry to act as a monopoly*

### Diagram Analysis

- Five firms with a concentration ratio of 80% meet secretly and **agree to fix prices** at a particular level



Your notes

- The five firms present in the market **as a single firm**
- The firm produces at the **profit maximisation level of output** where  $MC = MR (Q_1)$ 
  - At this level the  $AR (P_1) > AC (C_1)$
  - The collusive oligopoly is making higher levels of **abnormal profit**

#### Reasons for Collusion

Reason	Explanation
<b>Few firms/competitors</b>	<ul style="list-style-type: none"> <li>▪ This makes it relatively easy for each firm to understand other <b>competitors' actions</b> &amp; responses, or to <b>collaborate on prices/output</b></li> </ul>
<b>Similar costs</b>	<ul style="list-style-type: none"> <li>▪ Firms face almost identical costs as any remaining competitors have all experienced <b>economies of scale</b></li> </ul>
<b>Similar revenue</b>	<ul style="list-style-type: none"> <li>▪ Competitors' goods/services sell for <b>similar prices</b> as there is little incentive to lower them as other firms would respond by keeping their market share the same but decreasing the profits</li> </ul>
<b>High barriers to entry</b>	<ul style="list-style-type: none"> <li>▪ The <b>barriers to entry</b> make it unlikely that <b>new entrants</b> will emerge to disrupt the status quo</li> </ul>
<b>Ineffective regulation</b>	<ul style="list-style-type: none"> <li>▪ A lack of regulation <b>empowers firms to collude</b> as there is little consequence for their actions</li> </ul>
<b>Brand loyalty</b>	<ul style="list-style-type: none"> <li>▪ There is usually a <b>high degree of brand loyalty</b> in oligopoly markets &amp; firms have an <b>established market share</b>. This decreases the benefits of competition as consumers are unlikely to change brands</li> </ul>

## Types of Collusion

- Collusion can be **overt** or **tacit**
  - The **net effect of collusion** is that a group of firms end up acting more like a **monopoly** in the market
1. **Overt collusion** occurs when firms explicitly agree to limit competition or raise prices (price fixing)



Your notes

- A **cartel** is the most restrictive form of collusion & is illegal in most countries
  - The consequences of overt collusion include:
    - Higher prices for consumers
    - Less output in the market
    - Poor quality products and/or customer service
    - Less investment in innovation
  - **Overt collusion** often happens in the following ways
    - **Price fixing**
    - Setting **output quotas** which limit supply & naturally results in price increases
    - Agreements to **block new firms** from entering the industry
    - Agreements to pay suppliers the same price thereby driving down prices in the supply chain (**monopsony power**)
2. **Tacit collusion** occurs when firms **avoid formal agreements** but closely **monitor** each other's behaviour usually following the lead of the largest firm in the industry
- The most common form of tacit collusion is **price leadership**
    - This occurs when firms **monitor the price** of the largest firm in the industry & then adjust their prices to match
    - It is difficult for **regulators** to prove that collusion has occurred
    - It provides **similar benefits** to firms as overt collusion, but perhaps not to the same degree
    - It has similar **consequences for consumers** as overt collusion, but perhaps not to the same degree

## Game Theory – Interdependence Between Oligopoly Firms

- **Game theory** is a mathematical framework which is used by firms to ensure **optimal decisions are made** in a strategic setting where there is a **high level of interdependence** (such as in oligopoly markets)
- **Any game has three elements**
  - The players - (firms)
  - The **strategies** available to the players
  - The **payoffs** (outcomes) that each player receives for each combination of strategies



Your notes

- It was first illustrated using a simple model called **The Prisoners Dilemma**
  - Two criminals are caught after a train robbery (Carol & Doug)
    - The prosecutor does not have much evidence
    - The **criminals are guilty** but have **agreed with each other** that they will deny all involvement
    - The prosecutor wants one (or both) to confess
  - The strategies & payoffs available to the prisoners are presented in a **payoff matrix**

		DOUG	
		DENY	CONFESS
CAROL	DENY	3 YEARS 3 YEARS	1 YEAR 10 YEARS
	CONFESS	10 YEARS 1 YEAR	5 YEARS 5 YEARS

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**A prisoner's dilemma payoff matrix which illustrates game theory**

### Diagram Analysis

- If Carol & Doug stick to their plan & deny involvement, they each get 3 years jail time
- If **Doug** confesses & indicates Carol's involvement, then Doug gets a **lenient sentence** of 1 year & Carol gets 10 years
- If **Carol** confesses & indicates Doug's involvement, then Carol gets a **lenient sentence** of 1 year & Doug gets 10 years
- There is a strong **incentive to collude** as it will yield the **most beneficial outcome** for Carol and Doug (3 years each)



- Fearing the worst, both players decide to confess and receive **5 years each**
  - This outcome is called the **dominant strategy** as it carries the least risk



Your notes

## How Firms Use Game Theory

- Firms typically use **game theory** in the following situations:
  - When making decisions to **raise or lower prices**
  - When making decisions about new **advertising & branding initiatives**
  - When making decisions about **investment in product innovation**
  - When making decisions on **product bundling** e.g. combined phone & broadband packages
- Below is a **payoff matrix** representing the strategic options available to Burger King & McDonald's when making advertising decisions
  - The £ payoffs represent **the likely profits** for each combination of choices selected

			
		DON'T ADVERTISE	ADVERTISE
	DON'T ADVERTISE	£3 BILLION £3 BILLION	£5 BILLION £1 BILLION
	ADVERTISE	£1 BILLION £5 BILLION	£2 BILLION £2 BILLION

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**A payoff matrix which illustrates the strategies & payoffs available to firms when they are deciding to advertise or not to advertise**





Your notes

## Diagram Analysis

- If Burger King & McDonald's **collude** & agree not to advertise (top left), they can each enjoy £3 bn. in profits
  - There is a **strong incentive** to collude
- If **Burger King advertises & McDonald's does not**, then Burger King's profits are £5 bn. & McDonald's are £1 bn.
- If **McDonald's advertises & Burger King does not**, then McDonald's profits are £5 bn. & Burger King's are £1 bn.
- Both firms decide to advertise & receive **£2 bn. of profits each**
  - This outcome is called the **dominant strategy** as it carries the least risk
  - The **risk of collusion** is that one player will cheat and by doing so, get ahead

### WORKED EXAMPLE

The grid below shows the possible pricing strategies of two coffee companies. *The Bean* and *Black Gold*. Assuming that demand is price inelastic.

Black Gold's price		The Bean's price	
		High	Low
High	A	B	
Low	C	D	

Which strategy in the grid would maximise the revenue of the two firms? Explain your answer. [4]

Answer:

**Step 1: Use the information provided to select the correct option**

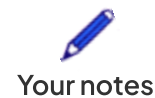
A (1 mark)

**Step 2: Explain your answer using economic knowledge**

With reference to the revenue rule, firms whose demand is price inelastic should raise their price to maximise revenue. Due to the fact that consumers consider coffee a necessity, they will continue to pay the high prices. (1 mark)

However, there is a strong likelihood that firms will charge a low price (D) as the **payoff matrix** carries the lowest risk. (1 mark)

If firms do collude to charge the high price, then B & C represent higher revenue for any firm that first decides to cheat on the agreement (lower their price so that their market share will increase) (1 mark)



## Price Competition

- Firms in an oligopoly market engage in three types of price competition
1. **Price wars:** occur when competitors **repeatedly lower prices** to undercut each other in an attempt to gain or increase market share. This often occurs when there is a lower level of **non-price competition** & where firms find it difficult to collude (either formal or tacit)
  2. **Predatory pricing:** this is the practice of **lowering prices** when a new competitor joins the industry in order to drive them out. Prices are often lowered to a point below the **cost of production**. Once they have left the market, prices are raised again. This pricing strategy is usually illegal as it is **anticompetitive**
  3. **Limit pricing:** occurs when firms set a limit on how **high the price** will go in the industry. A lower price reduces profit & disincentivize other firms from joining the industry. The greater the **barriers to entry** the higher the limit price is likely to be as firms are already disincentivized

## Types of Non-price Competition

- Firms engage in a wide range of **non-price competition** strategies
  - The aim is to increase product differentiation, develop or increase brand loyalty, & to increase market share

### A Range of Strategies used in Non-price Competition

Loyalty cards & rewards	Branding	Packaging	Celebrity/influencer endorsement
Corporate sponsorship e.g. Nike sponsoring Rafael Nadal	After sales service	Delivery policies	Product warranties

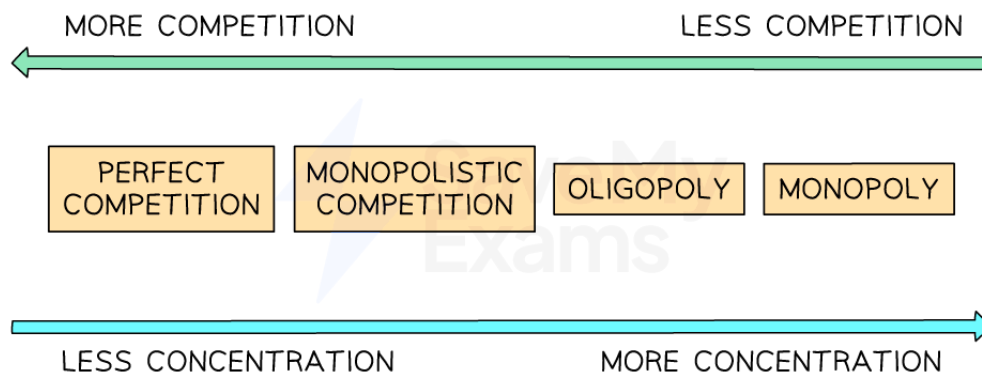


Your notes

## 2.11.6 Market Power & Monopolistic Competition

### Characteristics of Monopolistic Markets

- **Market power** refers to the ability of a firm to influence and control the conditions in a specific market, allowing them to have a significant impact on **price**, **output**, and other market variables
- Firms in monopolistic competition **have some market power, a slightly higher market share than perfect competition** and a low industry **concentration ratio**



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*The level of market power is relatively low in monopolistic competition*

- A monopolistic market structure is one in which there are many **firms offering a similar product** but with **some product differentiation**
  - Examples include
    - Nail salons
    - Hairdressing or barber shops
    - Massage parlours
    - Fruit and veg stores

#### Characteristics of Monopolistic Competition



Your notes

Characteristic	Explanation	Characteristic	Explanation
<b>Nature of the product</b>	<ul style="list-style-type: none"> <li>▪ <b>The products are slightly differentiated</b></li> <li>▪ This structure exists as consumers have different desires                             <ul style="list-style-type: none"> <li>▪ E.g. two nail bars differentiate their product through express or pampered service - a relatively homogenous product has now been differentiated</li> </ul> </li> </ul>	<b>Degree of efficiency</b>	<ul style="list-style-type: none"> <li>▪ More competition pushes the firm to better efficiency</li> <li>▪ <b>Allocative efficiency</b> in the long-run</li> </ul>
<b>Customer loyalty</b>	<ul style="list-style-type: none"> <li>▪ Relatively low due to <b>number of substitutes</b></li> <li>▪ However, can also be relatively <b>strong based on client/customer relationship</b> e.g loyalty to a specific hairdresser</li> </ul>	<b>Type of profit</b>	<ul style="list-style-type: none"> <li>▪ Can be abnormal in the short-run</li> <li>▪ Normal (breakeven) in the long-run</li> </ul>
<b>Price taker or maker?</b>	<ul style="list-style-type: none"> <li>▪ Some price setting ability</li> </ul>	<b>Level of market power</b>	<ul style="list-style-type: none"> <li>▪ There is a <b>low degree of market power</b></li> </ul>
<b>Barriers to entry</b>	<ul style="list-style-type: none"> <li>▪ <b>There are low barriers to entry and exit from the industry</b></li> <li>▪ Firms can start-up or leave the industry with relative ease which increases the level of competition</li> </ul>	<b>Slope of the demand curve</b>	<ul style="list-style-type: none"> <li>▪ Shallow (elastic)</li> <li>▪ Same shape as monopoly revenue curves, but those are steeper (more inelastic)</li> </ul>
<b>Number of firms</b>	<ul style="list-style-type: none"> <li>▪ <b>There are a large number of small firms</b></li> <li>▪ Each one is relatively small and can act independently of the market</li> </ul>		

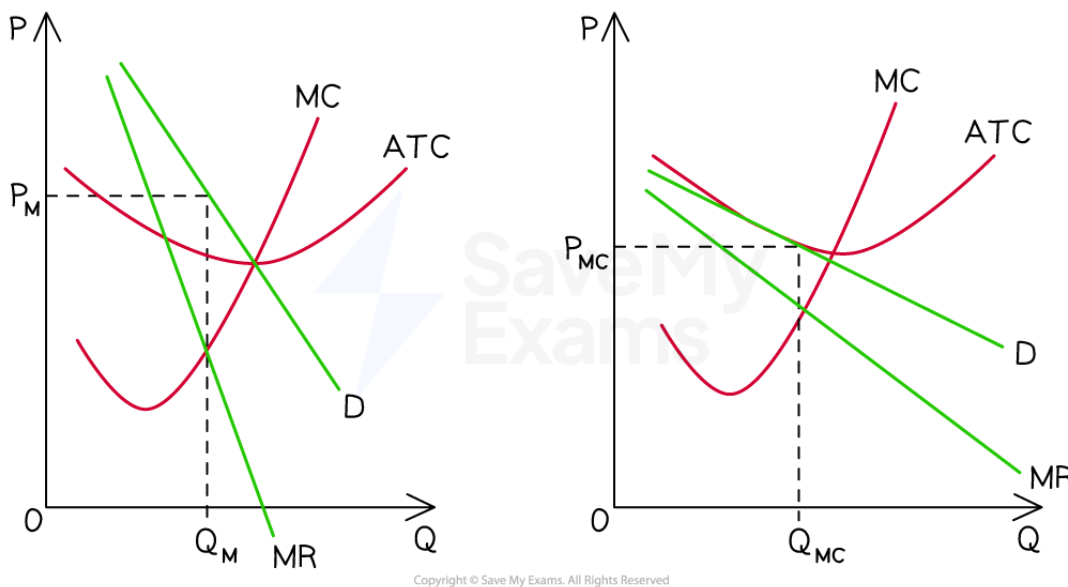


Your notes

- There is some market failure in monopolistic competition, **especially in the short run when firms are making abnormal profits**

## A side by side Comparison of Monopolistic Competition and a Monopoly

- The diagrams are essentially the same, however the monopoly revenue curves are steeper (more inelastic)



*The diagram on the left is a monopoly diagram as it has steeper revenue curves and is making abnormal profits*

## Diagram Analysis

- The **monopoly market on the left** has steeper revenue curves as the demand for the product is **price inelastic**
  - There are few or no substitute products
  - This market is also making **abnormal profit** in the long run ( $P > ATC$ ) at profit maximisation level of output ( $Q_1$ )

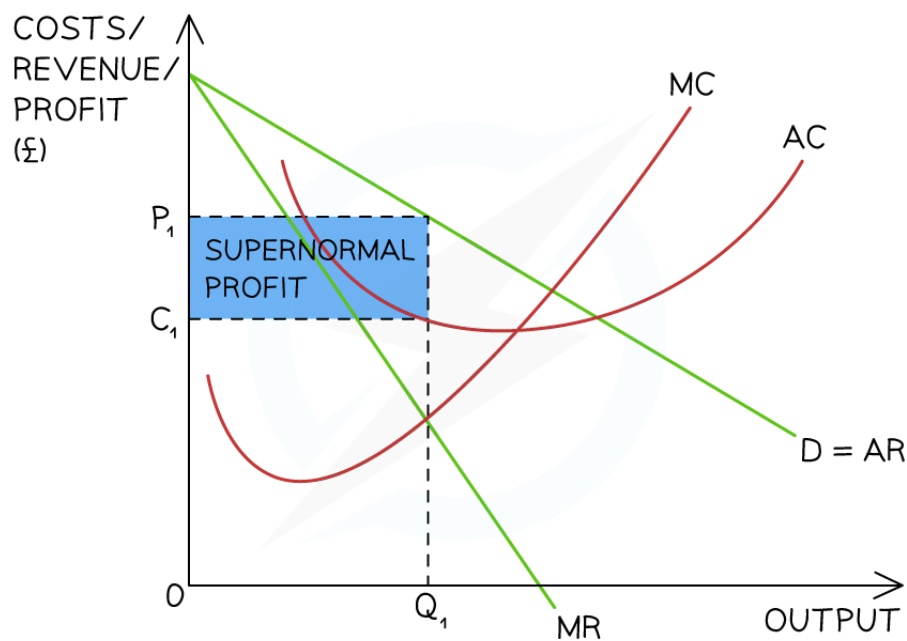


Your notes

- The **monopolistic market on the right** has shallower revenue curves as the demand for their product is more **price elastic**
  - There are a large number of **substitute products**
  - The market is making **normal profit** in the long run ( $P = ATC$ ) at the profit maximisation level of output ( $Q_1$ )

## Abnormal Profit in Monopolistic Competition in the Short-run

- In order to **maximise profit**, firms in monopolistic competition produce up to the level of output where **marginal cost = marginal revenue** ( $MC=MR$ )
- The firm can make **abnormal profit** in the short-run
- The **average revenue (AR) curve** is the **demand curve** of the firm and it is downward sloping
  - The firm has some **market power** due to the level of **product differentiation** that exists
    - To sell an additional unit of output, the firm will have to decrease its price
    - The **marginal revenue (MR)** curve will fall twice as quickly as the AR



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Your notes

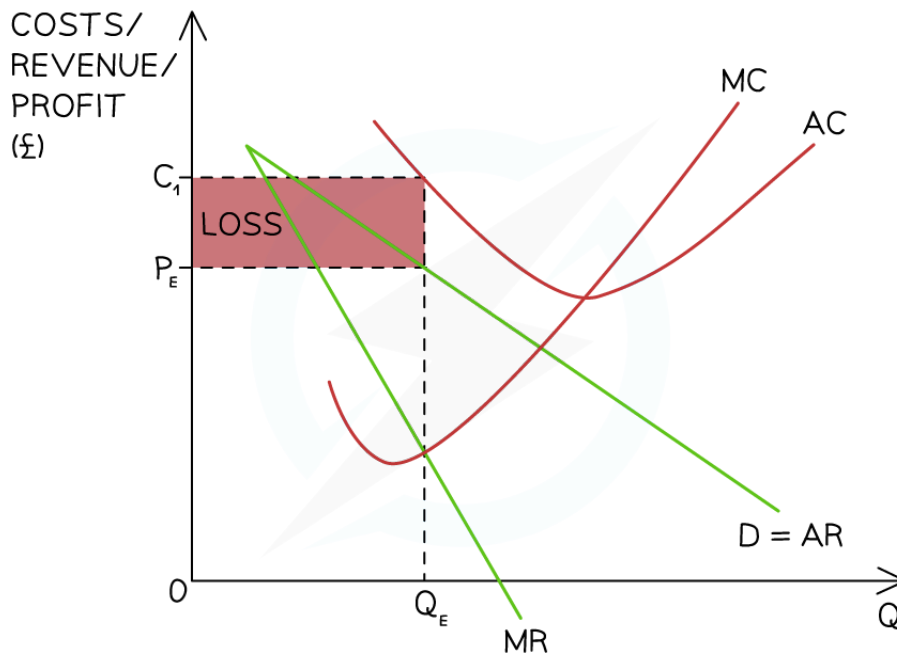
A diagram illustrating a monopolistically competitive firm making abnormal profit in the short-run as the  $AR > AC$  at the profit maximisation level of output ( $Q_1$ )

## Diagram Analysis

- The firm produces at the **profit maximisation level of output** where  $MC = MR (Q_1)$ 
  - At this level the  $AR (P_1) > AC (C_1)$
  - The firm is making **abnormal profit**  $= (P_1 - C_1) \times Q_1$

## Losses in Monopolistic Competition in the Short-run

- Firms in **monopolistic competition** are able to make **losses** in the **short-run**



A diagram illustrating a monopolistically competitive firm making losses in the short-run as the  $AR (P_E) < AC$  at the profit maximisation level of output ( $Q_E$ )

## Diagram Analysis

- The firm produces at the **profit maximisation level of output** where  $MC = MR (Q_E)$ 
  - At this level of output, the  $AR (P_E) < ATC (C_1)$
  - The firm's loss is  $= (P_E - C_1) \times Q_E$



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## Normal Profit in Monopolistic Competition in the Long-run

### From Abnormal to Normal Profit

- If firms in **monopolistic competition** make **abnormal profit** in the **short-run**, new entrants are attracted to the industry & the number of sellers increases
  - They are **incentivised** by the opportunity to make supernormal profit
  - There are low **barriers to entry** and it is easy to join the industry
- **Abnormal profit will be eroded** & the firm will return to the long-run equilibrium position of making normal profit

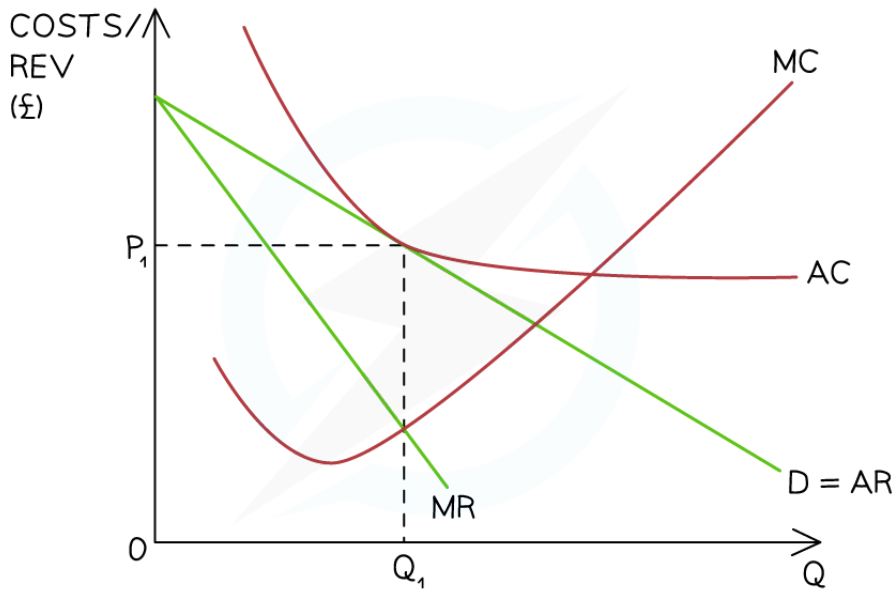
### From Losses to Normal Profit

- If firms in **monopolistic competition** make losses in the **short-run**, some will shut down
  - The **shut down rule** will determine which firms shut down
  - There are low **barriers to exit**, so it is easy to leave the industry
- **For the remaining firms, losses will be eliminated** & the firm will return to the **long-run equilibrium** position of making **normal profit**





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A diagram illustrating the long-run equilibrium position for a monopolistically competitive firm which is making normal profit.  $AR(P_1) = AC$  at the profit maximisation level of output ( $Q_1$ )

## Diagram Analysis

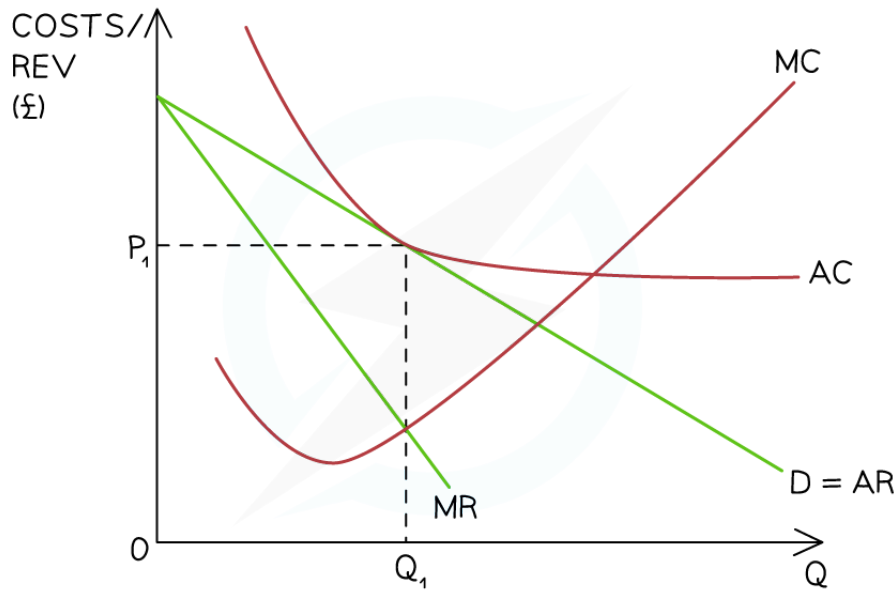
- The firm is producing at the **profit maximisation level of output** where  $MC = MR(Q_1)$
- At this level of output  $P_1 = AC$  & the firm is making normal profit
- **In the long-run**, firms in **monopolistic competition** always make **normal profit**
  - Firms making a **loss** leave the industry
  - Firms making **supernormal profit** see it slowly **eradicated** as new firms join the industry

## Efficiency in Monopolistic Competition

- Due to the more competitive environment, there are **higher levels of efficiency in monopolistic competition** than in other forms of **imperfectly competitive market structures**
  - This is true even when they are making abnormal profits in the short-run
    - There are also **more products/services available** for customers
- In the long run, there are even higher levels of efficiency



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*Efficiency in Monopolistic Competition in the Long-run*

**Diagram Analysis**

- The firm produces at the **profit maximisation level** of output where **MC=MR**
- The firm is not **productively efficient** as **AC > MC** at this level of output
  - **Productive efficiency** would occur where **MC=AC**
- The firm is not **allocatively efficient** as **AR (P) > MC** at this level of output
  - **Allocative efficiency** would occur where **AR=MC**

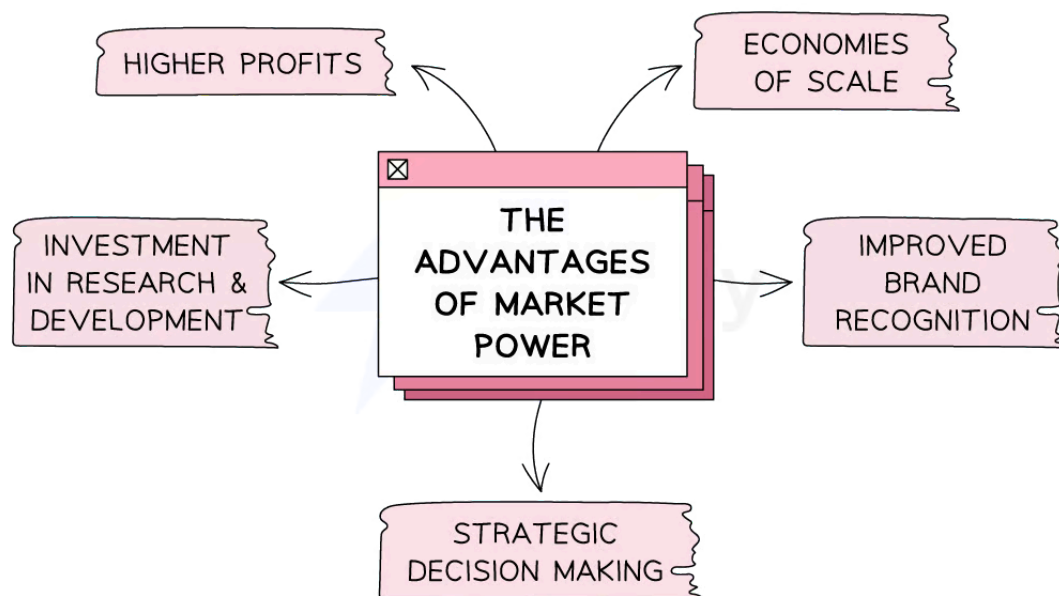


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## 2.11.7 Market Power & Government Intervention

# The Advantages and Disadvantages of Market Power

- **Market power** refers to a situation in which a firm has the ability to **influence prices, output levels, or other market outcomes** due to its significant market share or unique competitive advantage



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### *The advantages to firms of having market power*

- The advantages and disadvantages of market power **can vary depending on the specific industry, market dynamics, and the behaviour of the firms involved**
- Government intervention and **anti monopoly policies play a crucial role in ensuring fair competition, protecting consumers, and addressing potential negative consequences associated with market power**

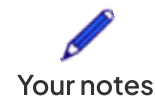
### **An Explanation of the Advantages Offered by Market Power**



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Advantage	Explanation
<b>Higher Profits</b>	<ul style="list-style-type: none"> <li>▪ Firms with market power can often set prices above their marginal costs, allowing them to <b>earn abnormal profits</b></li> <li>▪ Higher abnormal profits improve the reputation of the company amongst its shareholders and make it easier for the firm to <b>access greater finance</b></li> </ul>
<b>Research, Development &amp; Innovation</b>	<ul style="list-style-type: none"> <li>▪ Higher profits provide the means and incentive for firms to invest in research and development, innovation, and expanding their operations</li> <li>▪ This may result in a <b>better quality product</b> for consumers</li> </ul>
<b>Economies of Scale</b>	<ul style="list-style-type: none"> <li>▪ Larger firms can take advantage of <b>economies of scale</b> to <b>lower their average costs</b></li> <li>▪ With lower costs, firms can <b>leave price levels the same and enjoy higher profits</b> - or firms can <b>lower prices and pass on the cost benefits</b> to their customers</li> </ul>
<b>Branding and Reputation</b>	<ul style="list-style-type: none"> <li>▪ Market power enables firms to <b>build strong brands and reputations</b> <ul style="list-style-type: none"> <li>▪ This can <b>create customer loyalty</b> and trust</li> </ul> </li> <li>▪ Established brands often have a <b>competitive advantage</b>, allowing firms to <b>charge premium prices</b></li> </ul>
<b>Strategic Decision-Making</b>	<ul style="list-style-type: none"> <li>▪ Firms with market power have <b>more strategic options</b> in terms of their business decisions</li> <li>▪ They can pursue long-term goals, <b>undertake mergers and acquisitions</b>, engage in <b>vertical integration</b>, and explore new markets</li> <li>▪ This strategic freedom can lead to increased market dominance and sustained profitability.</li> </ul>

### An Explanation of the Disadvantages Created by Market Power



Advantage	Explanation
<b>Reduced Competition</b>	<ul style="list-style-type: none"> <li>A firm with significant market power is likely to limit the entry of new competitors or engage in anti-competitive practices that <b>stifle competition</b></li> <li>This can lead to <b>higher prices, reduced consumer choice, and decreased efficiency</b> in the market</li> </ul>
<b>Lack of Innovation &amp; Efficiency</b>	<ul style="list-style-type: none"> <li>In the absence of competition, firms may have <b>less motivation to improve their products</b>, lower costs, or invest in research and development</li> <li>This can harm <b>consumer welfare</b> and hinder overall industry progress</li> </ul>
<b>Regulatory &amp; Legal Risks</b>	<ul style="list-style-type: none"> <li>Firms with significant market power often face increased <b>scrutiny and regulation</b> from anti-monopoly authorities</li> <li>These firms may be subject to <b>legal actions, fines, or forced divestitures</b> if their market power is deemed anti-competitive</li> </ul>

## The Use of Legislation & Regulation to Reduce Market Power

- **Legislation** involves the creation of new laws by government
- **Regulation** involves enforcing the laws
  - This is usually assisted by the **creation of regulatory agencies** such as the Environmental Protection Agency (EPA) in the USA or the European Competition Commission
- Legislation and regulation **play a critical role in reducing market power** and promoting fair competition within industries
- Governments implement laws and regulations **to prevent anti-competitive practices and protect consumers, workers and the environment**

- **Overregulation can stifle competition** and deter investment, while insufficient regulation can lead to market dominance and anti-competitive behaviour

**Common Approaches used in Legislation & Regulation to Reduce Market Power**



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Approach	Explanation	Example
<p><b>Creating a Competition Regulator</b></p>	<ul style="list-style-type: none"> <li>▪ One way to <b>control monopoly power</b> is to prevent it from forming in the first place</li> <li>▪ A key function of agencies is to monitor <b>merger activity</b> with the aim of preventing any single firm gaining <b>more than 25% market share</b> <ul style="list-style-type: none"> <li>▪ If there are concerns about the merger then the regulator has the <b>authority to stop it</b> from happening</li> </ul> </li> <li>▪ Competition regulators also intervene by <b>placing maximum prices</b>, especially when monitoring <b>natural monopolies</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ The <b>Competition &amp; Markets Authority (CMA)</b> is the UK Government regulator tasked with ensuring that the creation of <b>monopoly power is avoided</b></li> <li>▪ There are similar regulators in Europe (<b>European Competition Commission</b>) &amp; in the USA (<b>Antitrust Commission</b>)</li> <li>▪ E.g. in July 2022 the CMA launched an <b>investigation</b> into the <b>merger of two companies</b> which produce foam used in bedding &amp; cleaning products as they believed it would lead to <b>higher prices &amp; less choice</b></li> </ul>
<p><b>Protecting Suppliers</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Monopsony power</b> is abusive towards suppliers &amp; over time can <b>change</b> the nature of <b>entire industries</b> in an economy</li> <li>▪ Governments can pass <b>anti monopsony laws</b> and issue fines if breaches occur</li> <li>▪ They can set <b>minimum prices</b> which buyers have to pay suppliers</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Autorité de la concurrence (Competition Authority in France)</b> launched an investigation in 2018 on big retailers for <b>unfair practices</b> in the food sector</li> <li>▪ They <b>fined several supermarket chains</b> for using abusive commercial practices against their suppliers, such as unilaterally changing contract terms and <b>imposing excessive payment delays</b></li> <li>▪ These actions aimed to protect suppliers from <b>unfair treatment and ensure fair competition</b> within the industry.</li> </ul>



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<p><b>Protecting Employees</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Wage bills</b> for firms are often one of their <b>highest costs</b> as a proportion of expenditure</li> <li>▪ With a goal of <b>profit maximisation</b> firms will always seek to reduce their wage expenditure as this will result in higher profit</li> <li>▪ There is a role for government <b>to protect workers</b> who could be exploited by firms</li> <li>▪ The government uses the following methods to <b>protect employees</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>National minimum wage</b> legislation</li> <li>▪ <b>Legislation</b> on health &amp; safety, working hours &amp; employment conditions e.g. maternity pay</li> <li>▪ Permitting <b>trade unions</b> to operate in the economy (some countries limit or ban the existence of unions as they view them as <b>anti-competitive</b> e.g. Singapore)</li> </ul>
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## The use of Government Ownership to Reduce Market Power

- **Nationalisation** can occur for various reasons, including
  - Governments may choose to nationalise industries or companies that are considered **strategically important** for national security or economic stability e.g energy and telecommunications
  - Nationalisation can be implemented to ensure the **provision of essential services** to the public such as healthcare or education
  - Nationalisation can be used to promote economic development, **address market failures**, or redistribute wealth by bringing key industries under state control

### The Advantages & Disadvantages of Nationalisation

Explanation	Advantages	Disadvantages
<ul style="list-style-type: none"> <li>▪ Nationalisation occurs when the Government</li> </ul>	<ul style="list-style-type: none"> <li>▪ This can generate efficiencies, especially when delivering utilities (gas, water,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Government firms can often <b>run very</b></li> </ul>

takes **control and ownership** of firms which were in the private sector

electricity) to the national population

- It **creates more equity in society** as all citizens have the same access to the same resource at the same price e.g. Norway nationalised much of the oil industry when oil was first discovered in 1972. The **profits belong to the citizens**
- The business can **generate significant revenue for the government**

**inefficiently**

- There is an **opportunity cost** associated with the money required to run it
- The Government may **lack the expertise** to run the business



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## The use of Fines to Reduce Market Power

- Fines are usually **imposed by regulators** in specific markets
- In Europe, firms are fined 10% of their **sales revenue** for breaching anti-competitive practices
  - These fines can be significant as many firms have **profit margins** of less than 10%

### Advantages of Using Fines

- Corrects anti-competitive behaviour
- Generates additional revenue for the government to redistribute

### Disadvantages of Using Fines

- Monopoly firms have **high profits** and use these to take **legal action against regulators**
  - The court cases often take years to settle
  - The firms settle out of court and pay reduced fines
  - The level of the **fine is often less than the profit generated by the anti competitive behaviour** so does not necessarily change their behaviour