Edexcel A Level Economics A

Your notes

3.1 Business Growth

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- 3.1.3 Demergers

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3.1.1 Size & Types of Firms

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Reasons for Growth & Reasons to Remain Small

- Many firms start small & will grow into large companies or even **multi-national corporations** (Amazon started in a garage)

Reasons Why Firms Grow

Owners/Shareholders/Managers desire to **run a large business** & continually seek to grow it	Owners/shareholders desire for **higher** levels of **profit**	Desire for **stronger market power** (monopoly) so as to increase profits
Desire to reduce costs by benefitting from **economies of scale**	Growth provides opportunities for **product diversification**	Larger firms often have **easier access** to finance

- While many firms grow, others do not or they intentionally choose to remain small

Reasons Why Small Firms Exist

They offer a **more personalised service** & focus on building relationships with their customers	Unable to **access finance** for expansion	They provide a product that is in a **niche market** - smaller market size but can be very profitable
Many small firms operate in mass markets with low **barriers to entry**	Rapid growth can cause **diseconomies of scale** which can be difficult to deal with & so many owners choose to avoid these	Owners goal is not **profit maximisation** but rather an acceptable quality of life (**satisficing**)

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Divorce of Ownership & Control


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- As firms grow, the **owners** (or shareholders) often appoint **managers** to run the business for them
- There is a **separation (divorce)** between the **owners** and the managers who **control the day-to-day running** of the business
- This divorce gives rise to the **Principal-Agent problem**
  - E.g. Shareholders want to **maximise their profits**, but workers want to **maximise their salaries**
  - E.g. Shareholders want to maximise their profits, but managers may want to maximise the **number of sales** over the **value of the sales**
- The problem is exacerbated by i**nformation gaps** in that the **agents** have a lot more information than the owners and are often able to **control the flow** of that infromation
- One way that Principals attempt to diminish the problem is by granting **share options** to managers
  - If managers are shareholders, then they will be likely to **align their interests** more with those of the owners

Public & Private Sector Organisations

- **Public sector** organisations are **owned & controlled by the Government**
  - Their goal is not profit maximisation but to provide a service
  - There are a wide variety of government owned organisations in the UK
    - Corporations like the *BBC* and *Channel 4*
    - National services such as *State Schools* & *National Health Service Trusts*
    - Local services such as *Transport for Greater Manchester*
    - Civil service departments such as Defence, Police, Education
    - Regulatory bodies such as the *General Dental Council*

- **Private sector** organisations are **owned & controlled by private individuals**
  - Types of ownership vary from sole trader to partners to **company shareholders**
  - The goal of most private sector organisations is **profit maximisation**
    - This often causes the private sector to be **more efficient** than the public sector with higher levels of **productivity**

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Profit & Not-for-profit Organisations


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- Most firms In the **private sector** exist to **make a profit**, even if their goal is not profit maximisation
  - If they do not make a profit then they are likely to go out of business

- Exceptions to this are **not-for-profit organisations** which also operate in the private sector
  - They exist to provide a **service** or meet a need
  - Many sell goods/services & **use the profits** they generate to **further their objectives, e.g.** The British Heart Foundation
  - The government exempts them from paying **direct taxes**

- All Charities are **not-for-profit organisations** and are regulated by the UK Charity Commission

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3.1.2 Business Growth

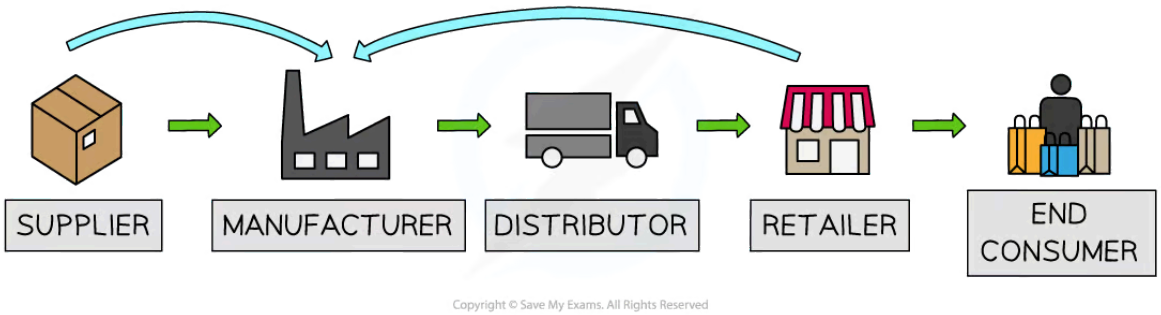
Your notes

How Businesses Grow

- Business growth can be **organic** or **external**

- **Organic growth (internal)** is usually generated by
  - gaining greater **market share**
  - product diversification
  - opening a new store
  - international expansion
  - Investing in **new technology**/production machinery

- **Inorganic growth (external)** usually takes place in one of three ways
  - **Vertical integration** (forward or backwards)
  - **Horizontal integration**
  - **Conglomerate integration**



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A diagram that illustrates how a firm can grow through forward or backward vertical integration

- **Forward vertical integration** involves a **merger** or **takeover** with a firm further forward in the supply chain
  - E.g. A dairy farmer merges with an ice-cream manufacturer
- **Backward vertical integration** involves a merger/takeover with a firm further backward in the supply chain
  - E.g. An ice-cream retailer takes over an ice-cream manufacturer

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Advantages & Disadvantages of Different Types of Growth

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- Firms will often **grow organically** up to a point where they are in a position to **integrate** with others

An Explanation of the Advantages & Disadvantages of Each Type of Growth

Type of Growth	Advantages	Disadvantages
Organic	▪ The **pace of growth** is manageable ▪ **Less risky** as growth is financed by profits and there is expertise in the industry ▪ Avoids **diseconomies of scale** ▪ The management know & understand every part of the business	▪ The pace of growth can be slow and frustrating ▪ Not necessarily able to benefit from **economies of scale** ▪ Access to **finance** may be limited
Vertical Integration	▪ Reduces the **cost of production** as middle man profits are eliminated ▪ Lower costs make the firm more **competitive** ▪ Greater control over the supply chain **reduces risk** as access to raw materials is more certain ▪ **Quality** of raw materials can be controlled ▪ Forward integration adds **additional profit** as the profits from the next stage of production are assimilated ▪ Forward integration can increase **brand visibility**	▪ **Diseconomies of scale** occur as costs increase e.g. unnecessary duplication of management roles ▪ There can be a **culture clash** between the two firms that have merged ▪ Possibly **little expertise** in running the new firm results in **inefficiencies** ▪ The price paid for the new firm may take a long time to recoup
Horizontal Integration	▪ Rapid increase of **market share** ▪ Reductions in the cost per unit due to **economies of scale**	▪ **Diseconomies of scale** may occur as costs increase e.g. unnecessary duplication of management roles

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	▪ Reduces competition ▪ Existing knowledge of the industry means the merger is more likely to be successful ▪ Firm may gain new **knowledge or expertise**	▪ There can be a **culture clash** between the two firms that have merged
Conglomerate Integration	▪ Reduces overall **risk** of business failure ▪ Increased size and connections in new industries opens up **new opportunities for growth** ▪ Parts of the new business may be **sold for profit** as they are duplicated in other parts of the conglomerate	▪ Possible **lack of expertise** in new products/industries ▪ **Diseconomies of scale** can quickly develop ▪ Usually results in job losses ▪ **Worker dissatisfaction** due to unhappiness at the takeover can reduce **productivity**


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Constraints on Business Growth


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- There are several factors that **constrain** (hold back) firms from growing

1. **The size of the market:** the more niche the market the smaller the number of potential customers. Even large firms face this constraint as they move closer to capturing the domestic market - to increase market size they will have to expand internationally
2. **Access to finance:** small firms find it harder to access loans as they are considered to be **more risky** than larger firms. Due to the perceived risk, **interest rates** for any loans acquired tend to be higher
3. **Owner objectives:** Many owners desire to grow a business to a point that provides a certain **lifestyle** or standard of living - and not beyond.
4. **Regulation:** Large firms are often constrained by competition regulation that aims to limit monopoly power. Firms that sell demerit goods also find growth can be limited by government policies such as age restrictions, minimum prices & indirect taxes

Exam Tip

Business growth is frequently tested in MCQ and structured response questions. You are often provided with **real world examples** of mergers/takeovers & then asked to identify the **type of growth** - or **reasons for the growth**. If you know your theory then the first part is easy! When considering reasons for growth, look carefully at the two types of business you have been presented with & make a judgement about the most likely reason they chose to grow. Often there is a clue in the text provided so read it carefully.

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3.1.3 Demergers

Your notes

Reasons for Demergers

- A **demerger** occurs when a firm **sells off** at least one of the businesses it owns, or **splits itself into separate parts** to create two or more firms

Reasons For Demergers

Reducing diseconomies of scale	Increased business focus	Cultural differences
Decreasing the size of the firm can reduce the diseconomies & lower the **cost/unit** which increases the **profitability**	If efforts & resources are scattered across a large number of firms/ industries it can be **hard to maintain focus and profitability**. Narrowing the focus can improve profitability	The most common reason for failures of mergers is **cultural differences.** Sometimes these **differences are irreconcilable** & not worth the expense to change
Remove loss making divisions	**Increase liquidity & dividend payments**	**Comply with the demands of the Competition Commission**
It can be more profitable to **remove loss-making divisions** and replace them with **outsourcing**	Demergers generate extra **revenue** for the firm in the year they occur. This may increase the profit & **dividend payments**	Sometimes firms are forced to demerge by the **competition regulator** due to concerns about the high level of **market share** they may have, which is considered to be **anti-competitive** & bad for consumers

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Impacts of Demergers on Stakeholders


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- **The impacts on the firm** conducting the demerger should be mostly positive and include
  - Opportunity for a more narrow focus on the core business
  - Removing loss-making portions of the business
  - Increased efficiency and **lower costs/unit**
  - Increasing the annual profits for the year that the demerger occurred
  - Removing some difficult cultural differences

- **The impacts on employees include**
  - Some workers may lose their jobs
  - **Reduced friction** from cultural differences can help build better **team dynamics**
  - Smaller workforce provides more **opportunity for promotion**
  - Less complication in daily tasks due to more narrow focus

- **The impacts on consumers include**
  - If successful, **better quality** products & **customer service**
  - If successful, **lower prices** due to the firms new efficiencies
  - If unsuccessful, a narrower product range & perhaps worse quality/customer service

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3.2 Business Objectives

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* 3.2.1 Business Objectives

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3.2.1 Business Objectives

Your notes

Profit & Revenue Maximisation

Profit Maximisation

- 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

- 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 **Competition Commission**
    - The profit maximisation level of output often results in **high prices** for consumers
    - Changing prices changes the **marginal revenue**

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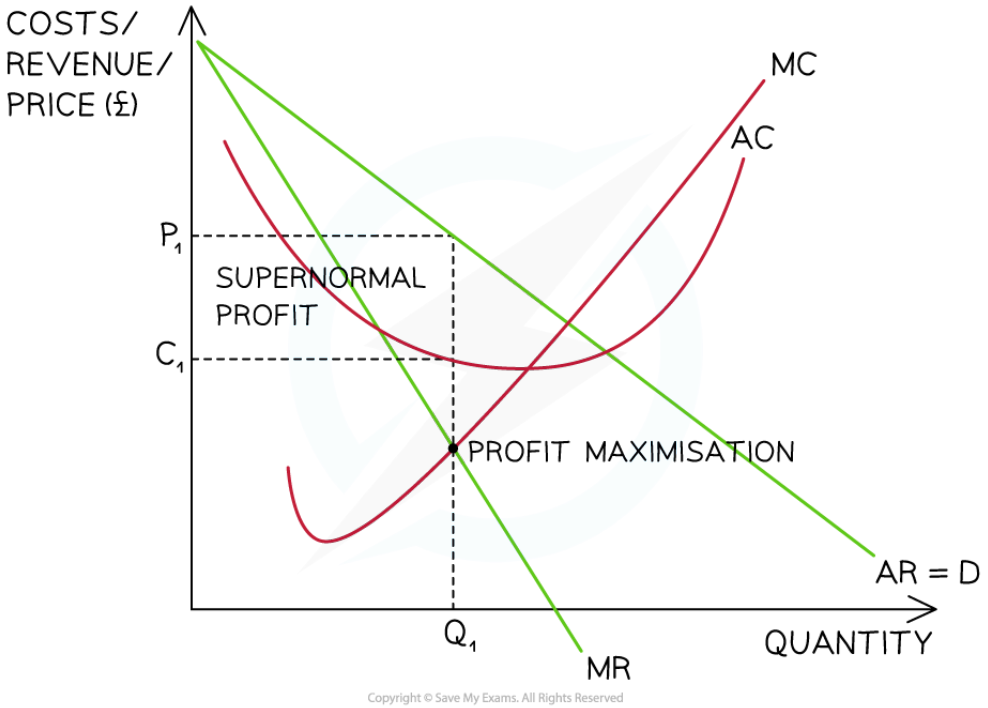

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The profit maximisation level of output occurs at Q_1 where MC = MR resulting in a market price of P_1

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** = $(P_1 - C_1) \times Q_1$

Revenue Maximisation

- Some firms have the business objective of **revenue maximisation**
  - This often occurs due to the **principal agent problem**
    - Sales managers often receive **commission** on sales as part of their wages and this **incentivises** them to maximise sales
    - Profit maximisation for shareholders becomes a secondary objective for the sales managers
  - Firms will also **maximise revenue** in order to increase output & benefit from **economies of scale**

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- In the short-term firms may use this strategy to **eliminate the competition** as the price is lower than when focussing on profit maximisation

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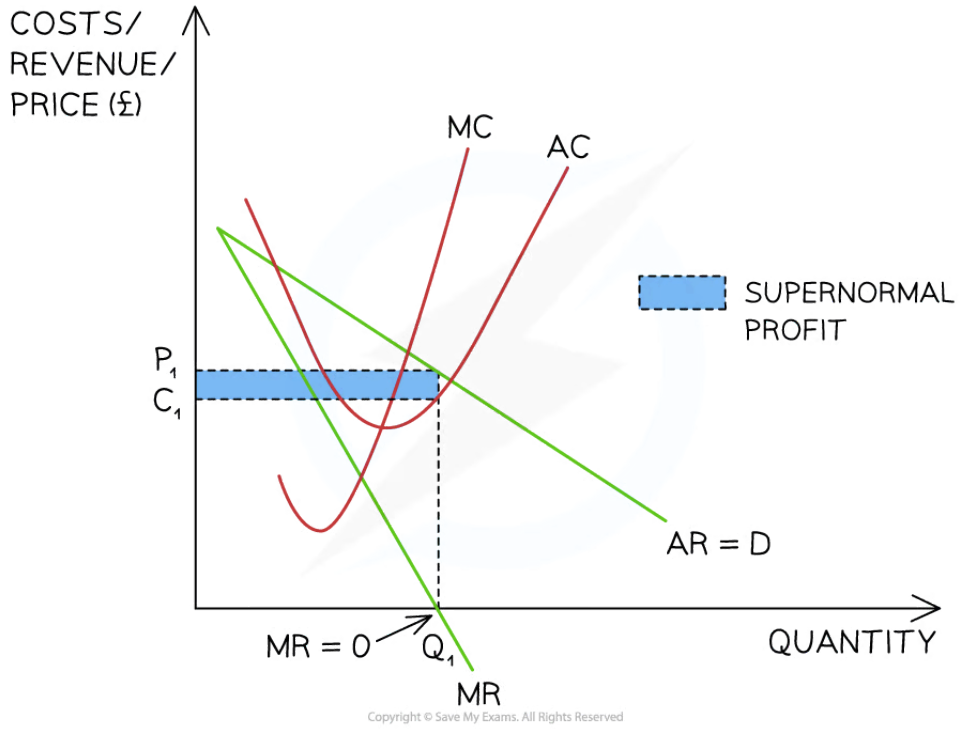
- To achieve revenue maximisation firms produce up to the **level of output where MR = 0**
  - When MR > 0, producing another unit of output will **increase total revenue**



The revenue maximisation level of output occurs at Q_1 where MR = 0 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 revenue maximisation level of output **(MR = 0)**
  - The selling price is P_1
  - The average cost is C_1
  - The **supernormal profit** = $(P_1 - C_1) \times Q_1$
  - The supernormal profit is less than when the firm follows the **profit maximisation rule**

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Exam Tip

Profit and revenue maximisation is all about the quantity of output.

To determine the level of profit:

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

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Sales Maximisation & Satisficing

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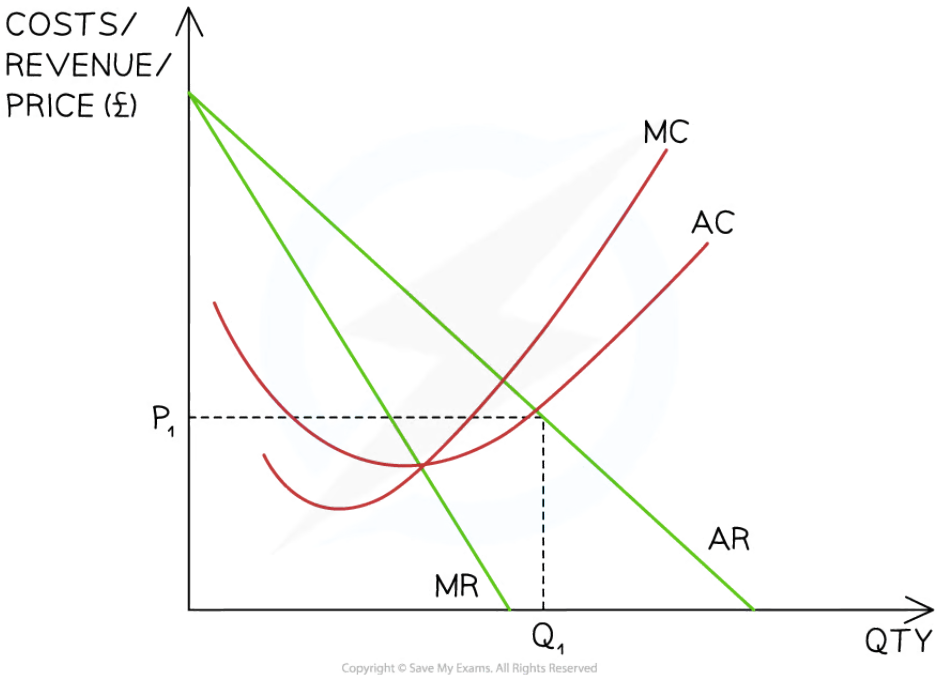
Sales Maximisation

- Some firms have the business objective of **sales maximisation**
  - This occurs at the level of output where **AC = AR (normal profit/breakeven)**
  - In the short-term firms may use this strategy to **clear stock during a sale**
    - They sell remaining stock without making a **loss per unit**



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The sales maximisation level of output occurs at Q_1 where AC = AR 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 sales maximisation level of output **(AC = AR)**
  - The selling price is P_1
  - The average cost is also at P_1
  - The firm is breaking even (normal profit)

Satisficing

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- Some firms have the business objective of **satisficing**
- This often occurs as a result of the **principal agent problem**
  - Rationally, managers know **shareholders want to profit maximise**
  - Rationally, **managers want to maximise sales** or revenue so as to increase their wages
  - Managers (who control the business) settle for a level of output somewhere **between profit and sales** maximisation
    - This increases their wages and **reduces potential conflict** with shareholders


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3.3 Revenues, Costs & Profits

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- 3.3.1 Revenue
- 3.3.2 Costs
- 3.3.3 Economies & Diseconomies of Scale
- 3.3.4 Normal Profits, Supernormal Profits & Losses

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3.3.1 Revenue

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Total, Average & Marginal Revenue

- **Total revenue** is the total value of all sales a firm incurs

$$\text{Total revenue (TR)} = \text{selling price (P)} \times \text{quantity sold (Q)}$$

- **Average revenue** is the overall revenue per unit

$$\text{Average revenue (AR)} = \frac{\text{TR}}{\text{Q}}$$

- **Marginal revenue** is the extra revenue received from the sale of an additional unit of output

$$\text{Marginal revenue (MR)} = \frac{\Delta \text{ in TR}}{\Delta \text{ in Q}}$$

- The relationship between TR, AR & MR is different in **perfect competition** and **imperfect competition**

Perfect Competition

The Relationship Between TR, AR & MR In Perfect Competition Can Be Seen Numerically Below

P (£)	Q	TR $(P \times Q)$	AR $\frac{TR}{Q}$	MR $\frac{\Delta \text{ in TR}}{\Delta \text{ in Q}}$
8	5	40	8	8
8	6	48	8	8
8	7	56	8	8
8	8	64	8	8

- The situation in the table above is illustrated in the diagram below

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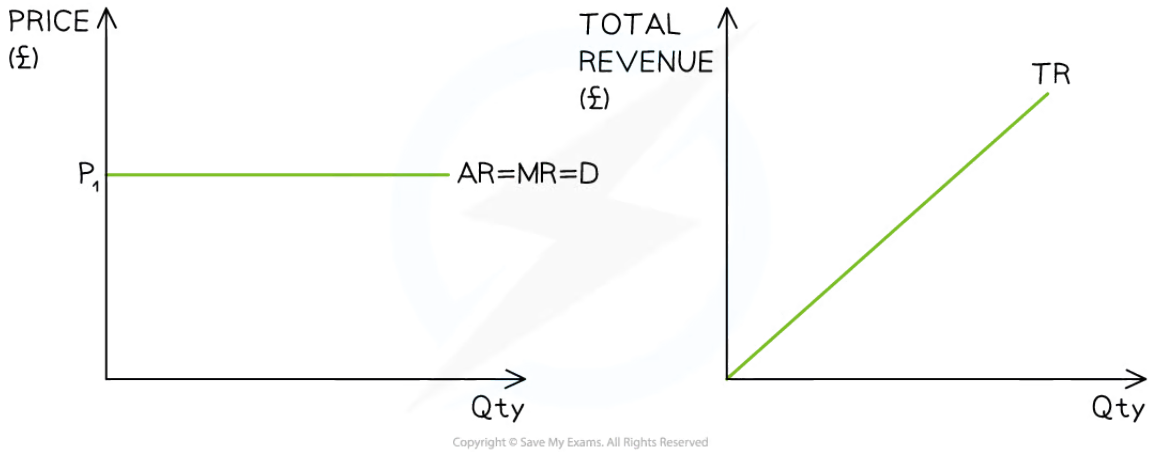

An illustration of the relationship between AR, MR & TR

Observations

- The firm is a **price taker** at P_1 (£8)
  - Every unit of output is sold at the same price
  - A higher price would decrease sales to zero
  - A lower price would result in all sellers lowering their price
- TR increases at a constant rate
- **MR = AR = Demand**

Imperfect Competition

The Relationship Between TR, AR & MR For Imperfect Competition Can Be Seen Numerically Below

P (£)	Q	TR $(P \times Q)$	AR $\frac{TR}{Q}$	MR $\frac{\Delta \text{ in TR}}{\Delta \text{ in Q}}$
8	1	8	8	8
7	2	14	7	6
6	3	18	6	4
5	4	20	5	2
4	5	20	4	0
3	6	18	3	-2

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2	7	14	2	-4
1	8	8	1	-6

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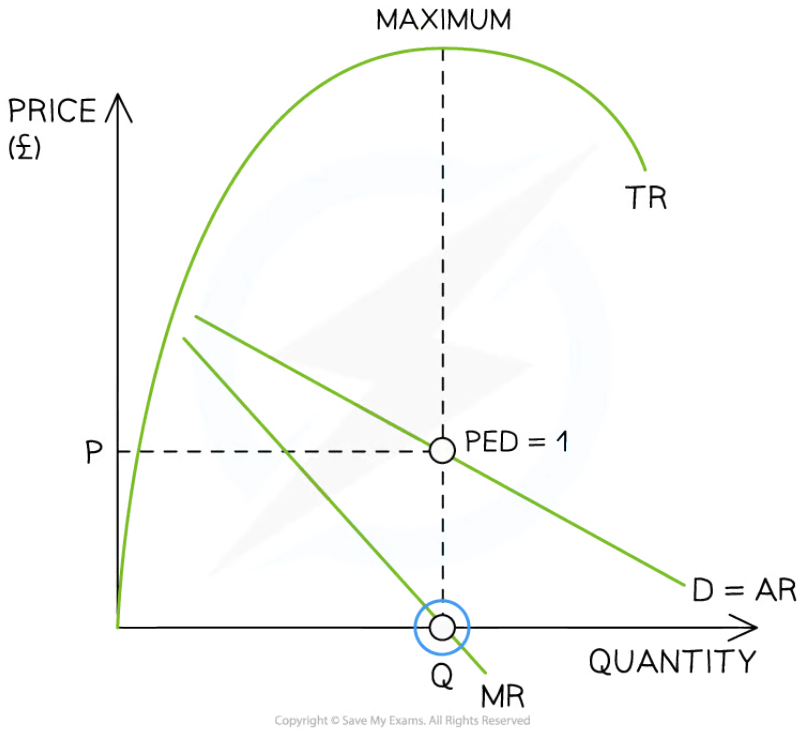
- The situation in the table above is illustrated in the diagram below



An illustration of the relationship between AR, MR & TR for imperfect competition

Observations

- The firm is a **price maker**
  - In order to sell an additional unit of output, the **price (AR)** must be lowered
  - Both **AR & MR fall** with additional units of sale
  - When the AR falls, the **MR falls by twice as much**
    - The gradient of the MR curve is **twice as steep** as the AR curve
  - TR is maximised when MR = 0
- AR is the demand (D) curve
- When MR = 0, then the **price elasticity of demand** (PED) = 1

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- This is **unitary elasticity**


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PED & Total Revenue

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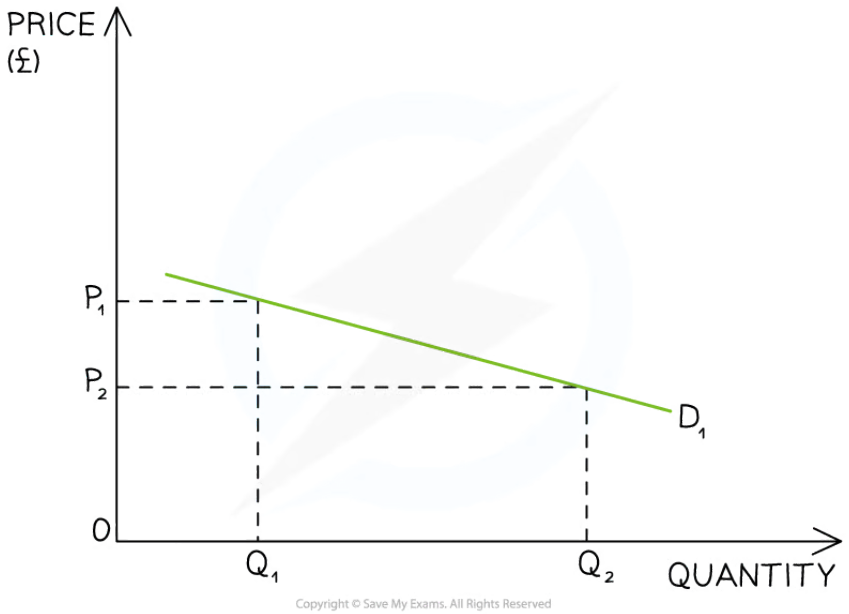
- The **total revenue rule** states that in order to **maximise revenue**, firms should **increase** the price of products that are **inelastic** in demand and **decrease prices** on products that are **elastic** in demand
- This can be illustrated using an average revenue (AR) curve which is the demand curve



An illustration of price elastic demand where a small decrease in price from $P_1 \rightarrow P_2$ causes a large increase in quantity demanded from $Q_1 \rightarrow Q_2$

Observations

- When a good/service is **price elastic in demand,** there is a greater proportional increase in the quantity demanded to a decrease in price
- **TR is higher** once the price has been **decreased**
  - $(P_2 \times Q_2) > (P_1 \times Q_1)$

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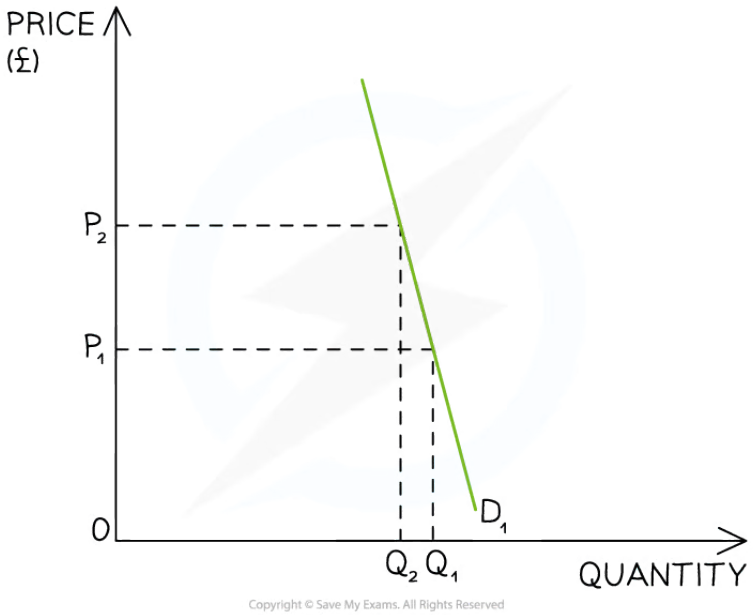

An illustration of price inelastic demand where a large increase in price from $P_1 \rightarrow P_2$ causes a small decrease in quantity demanded from $Q_1 \rightarrow Q_2$

Observations

- When a good/service is **price inelastic in demand,** there is a smaller than proportional decrease in the quantity demanded to an increase in price
- **TR is higher** once the price has been **increased**
  - $(P_2 \times Q_2) > (P_1 \times Q_1)$

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3.3.2 Costs

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The Relationships Between Different Types of Costs

- **Fixed costs** are costs that do not change as the level of output changes
  - These have to be paid whether output is zero or 5000
    - e.g. building rent, management salaries, insurance, bank loan repayments etc.

- **Variable costs** are costs that vary directly with output
  - These increase as output increases & vice versa
    - E.g. raw material costs, wages of workers directly involved in production

- **Marginal cost** is the cost of producing an additional unit of output

Cost Calculations

Based on the above definitions, we can calculate several different types of costs

1. $\text{Total costs (TC)} = \text{total fixed costs (TFC)} + \text{total variable costs (TVC)}$
2. $\text{Total variable cost (TVC)} = \text{variable cost (VC)} \times \text{quantity (Q)}$
3. $\text{Average total cost (AC)} = \dfrac{\text{total cost (TC)}}{\text{quantity (Q)}}$
4. $\text{Average fixed cost (AFC)} = \dfrac{\text{Total fixed costs (TFC)}}{\text{quantity (Q)}}$
5. $\text{Average variable cost (AVC)} = \dfrac{\text{Total variable costs (TVC)}}{\text{quantity (Q)}}$
6. $\text{Marginal cost (MC)} = \dfrac{\Delta \text{ in total cost (TC)}}{\Delta \text{ in quantity (Q)}}$

Cost Calculations Using the Above Formulas

Output (Q)	TFC	TVC	TC = TFC + TVC	AFC = $\frac{TFC}{Q}$	AVC = $\frac{TVC}{Q}$	AC = $\frac{TC}{Q}$	MC = $\frac{\Delta TC}{\Delta Q}$
0	200	-	-	-	-	-	-

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1	200	60	260	200	60	260	60
2	200	100	300	100	50	150	40
3	200	130	330	66.67	43.33	110	30
4	200	170	370	50	42.50	92.50	40
5	200	230	430	40	46	86	60
6	200	320	520	33.34	53.33	86.77	90
7	200	440	640	28.58	62.86	91.44	120
8	200	620	820	25	77.50	102.5	180


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Short-run Cost Curves

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Concepts That Help to Provide Understanding of How the Cost Curves Are Derived

Concept	Explanation
Short-run	That period of time in which at least one **factor of production** is fixed. E.g. it is difficult to change machinery or the number of factories **in the short run**, but that can be achieved in the long run. The **variable factor** that is usually added to production is **labour** as it is easy to hire new workers
Long-run	That period of time in which all of the **factors of productions are variable.** This is also called the *planning stage* as firms can plan for increased capacity and production
Marginal product of labour (MP)	The **change in output** that results from adding an **additional unit of labour**
Law of diminishing marginal productivity	In the short run, as more of a variable factor (e.g. labour) is added to fixed factors (e.g. capital), there will initially be an increase in productivity. However, a point will be reached where adding additional units begins to decrease productivity due to the relationship between labour and capital

- In the **short-run**, the shapes of the cost curves (AC, AVC & MC) are determined by the **law of diminishing marginal productivity**

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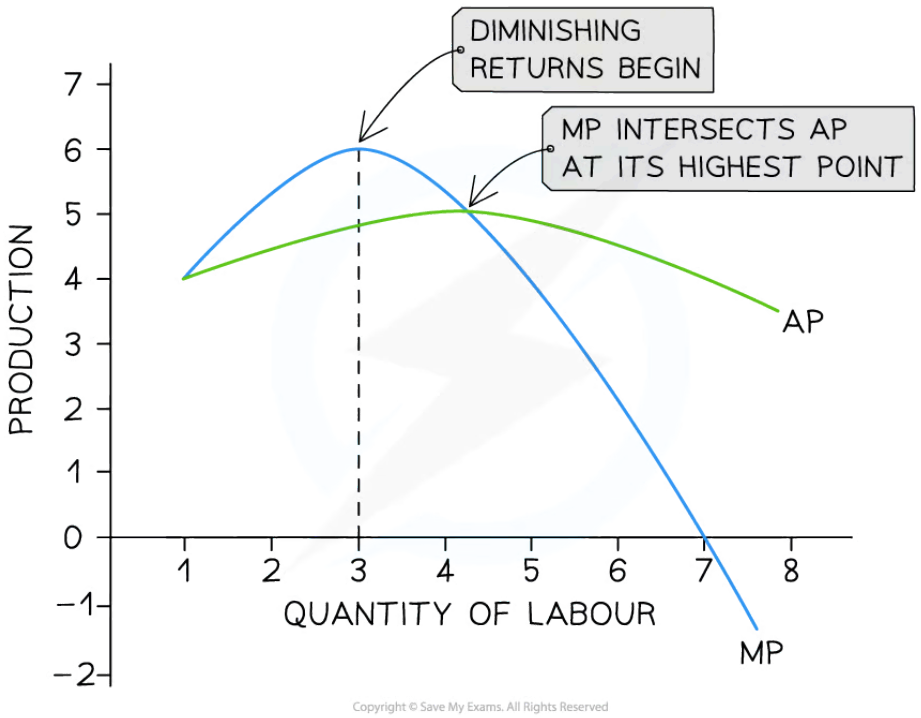

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In the short run, marginal product (MP) increases with the addition of three workers before diminishing returns for each additional worker begin

Diagram Analysis

- A small food van selling burgers (product) at a music festival **increases productivity** up to the addition of a third worker
- After that, workers get in each other's way & there is not enough **grill space (capital)** & MP no longer increases
- If more workers are hired, then the **MP** of each additional worker begins to fall
- Adding additional workers up to the 7th worker will keep increasing the **total product**
- With the hiring of the 7th worker, the **MP turns negative** which will decrease the total product

Connection Between Diminishing Marginal Returns & The Cost Curves

- As the **marginal product increases**, **marginal costs decrease**
  - There is an inverse relationship
    - Increasing returns = decreasing costs
    - Decreasing returns = increasing costs

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Your notes

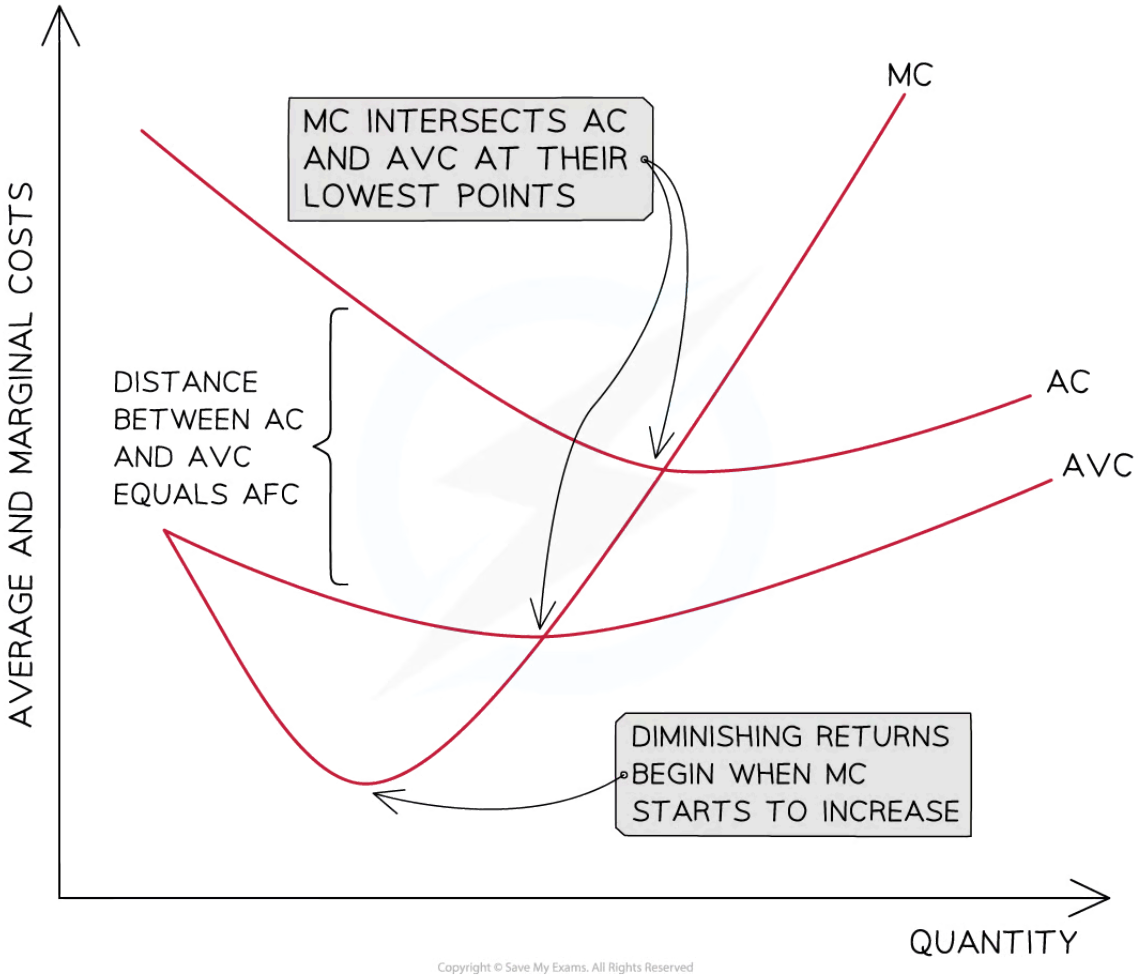

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Diagram Analysis

- The **distance** between the **AVC & AC = the AFC**
  - AVC converges towards AC as the **AFC continuously decreases** with an increase in output
  - AVC decreases as **additional workers are added** & each worker produces additional product
- **Marginal costs (MC)** decrease initially as additional workers are added & the **marginal product** is increasing
- **Diminishing returns** begin when the MC starts to increase
- MC will cross the AVC and AC curves at their **lowest point**
  - As long as the **cost** of producing the next unit (MC) is **lower than the average**, it will pull down the average
  - When the **cost** of producing the next unit (MC) is **higher than the average**, it will pull up the average

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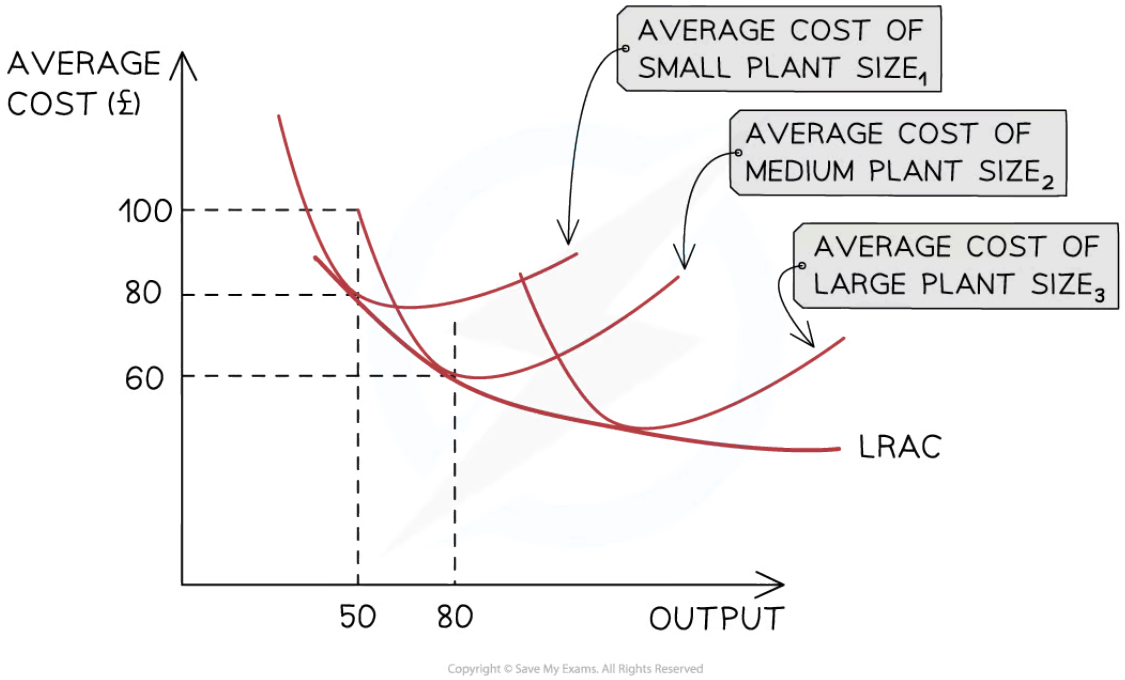
Short-run and Long-run Average Costs Curves

Your notes

- Day to day operations of a firm occur in the **short-run**
- In the **long-run**, they are able to **plan** to increase the **scale of production**
  - E.g by increasing the size of the factory
  - **Larger scale = more output** & the firm moves onto a **new SRAC curve** in which the average unit costs are lower

- In the **long-run,** a growing firm is likely to keep repeating this process,
  - Each time a **more efficient SRAC** is generated

- The **long-run average cost curve (LRAC**) is the line of best fit between the lowest points of the **short-run ATC curves**



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The LRAC curve is generated by the addition of successive SRAC as the firm expands its scale of production

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3.3.3 Economies & Diseconomies of Scale

Your notes

Economies & Diseconomies of Scale

- As a firm increases its **scale of output in the long-run**, its **long-run average total costs (LRATC)** will initially **decrease** due to the benefits it receives
  - These benefits are called **economies of scale**
    - During this period the firm is enjoying **increasing returns to scale**

- As a firm continues increasing its **scale of output in the long-run**, its LRATC will start to **increase** at some point
  - The reasons for the increase in the LRATC are called **diseconomies of scale**
    - During this period the firm is facing **decreasing returns to scale**

Types Of Economies & Diseconomies of Scale

Economies of Scale	Diseconomies of Scale
Financial Economies	**Management Diseconomies**
Managerial Economies	**Communication Diseconomies**
Marketing Economies	**Geographical Diseconomies**
Purchasing Economies	**Cultural Diseconomies**
Technical Economies	
Risk-bearing Economies	

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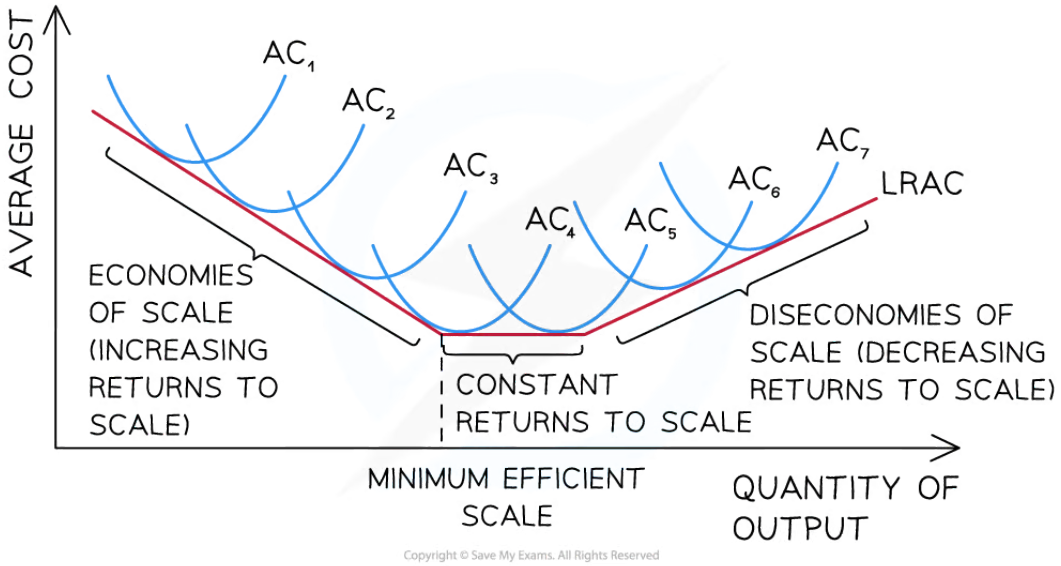
Minimum Efficient Scale

Your notes

- The **minimum efficient scale** is the lowest cost point on a **long-run average total cost (LRATC)** curve
  - It represents the **lowest possible cost per unit** that a firm in the industry can achieve in the long run.



As a firm grows, economies of scale help a firm to reach its minimum efficient scale before diseconomies raise the cost/unit again

Diagram analysis

- Each subsequent short-run average cost (SRAC) curve **represents growth** & an increase in size
  - **Output increases** with each period of growth
- Initially firms experience **increasing returns to scale** as a result of the **economies of scale**
- At a certain level of output, the firm will reach the **minimum efficient scale** where it experiences **constant returns to scale**
- If it continues to grow beyond that level of output the firm will experience **decreasing returns to scale** as **diseconomies of scale** occur

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Internal & External Economies of Scale


Your notes

- All of the **economies of scale** explained above are **internal economies of scale**

- **External economies of scale** occur when there is an increase in the size of the industry in which the firm operates
  - The firm is able to benefit from lower LRATC generated by factors outside of the firm

Sources Of External Economies Of Scale

Source	Explanation
Geographic Cluster	As an industry grows, **ancillary firms** move closer to major manufacturers to cut costs and generate more business. This lowers the **LRATC** e.g. car manufacturers in Sunderland rely on the service of over 2,500 ancillary firms
Transport Links	**Improved transport links** develop around growing industries in order to help get people to work and to improve the transport logistics. This lowers the **LRATC** e.g. transport links around the **M4 Corridor Tech Area** between Reading & Bracknell have experienced significant improvement
Skilled Labour	An increase in skilled labour can **lower the cost of skilled labour**, thereby decreasing the LRATC. The larger the geographic cluster, the larger the pool of skilled labour
Favourable Legislation	This often generates significant reductions in LRATC as **governments support certain industries** in order to **achieve their wider objectives** e.g the animation cluster in Bristol & Bath is growing due to the tax incentives offered to the industry by the Government

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Exam Tip

Diminishing marginal returns are the reason for the shape of the short-run cost curves. **Economies & diseconomies of scale** are the reason for the shape of the long-run cost curves. Students often get their language confused on this theory. **Increasing & decreasing returns to scale** only happen in the long run. **Increasing & diminishing marginal returns** only happen in the short run.

Your notes

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3.3.4 Normal Profits, Supernormal Profits & Losses

Your notes

Condition for Profit Maximisation

- To maximise profit firms should produce up to the level of output where **marginal cost (MC) = marginal revenue (MR)**

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**

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Normal Profit, Supernormal Profit & Losses

Your notes

- 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

- **Supernormal 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

Observations

- **Supernormal 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**

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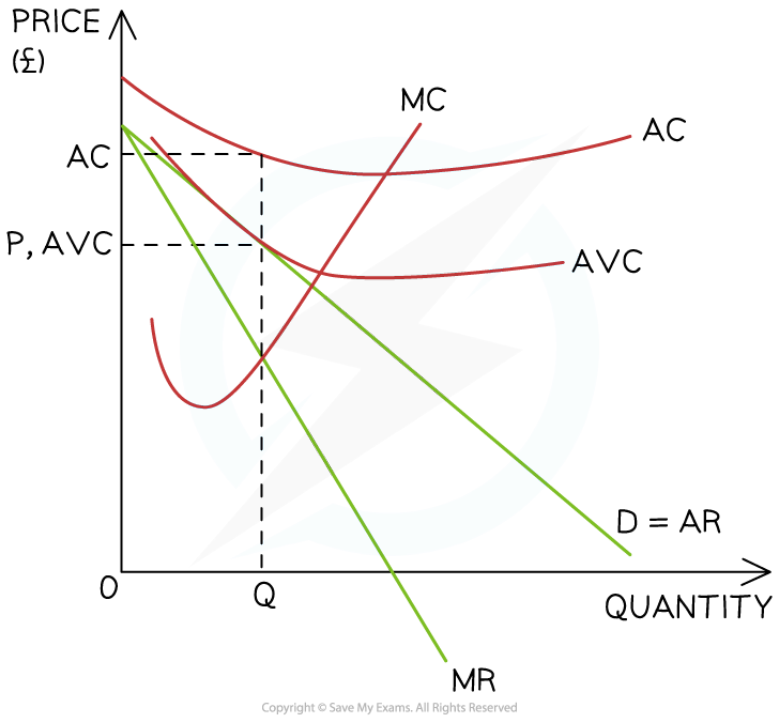
Short-run & Long-run Shut-down Points

Your notes

- Firms do not always **make a profit** & may endure losses for a period
  - Entrepreneurs often keep firms going in the hope that **market conditions will change** & demand for their products will increase leading to **profitability**
  - This raises the question, '**when is it the best time for a firm to shut down?**'
- The **shut-down rule** provides the answer by considering both the long-run & short-run periods

The Short-run Shut Down Point

- In the **short-run**, if the selling price **(average revenue) is higher than the average variable cost (AVC)**, the firm should keep producing (AR > AVC)
  - **If the selling price (AR) falls to the AVC it should shut down (AR = AVC)**



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A firm should shut down in the short-run if the selling price (AR) is unable to cover the AVC

Diagram analysis

- The firm produces at the **profit maximisation level of output (Q)** where MC=MR

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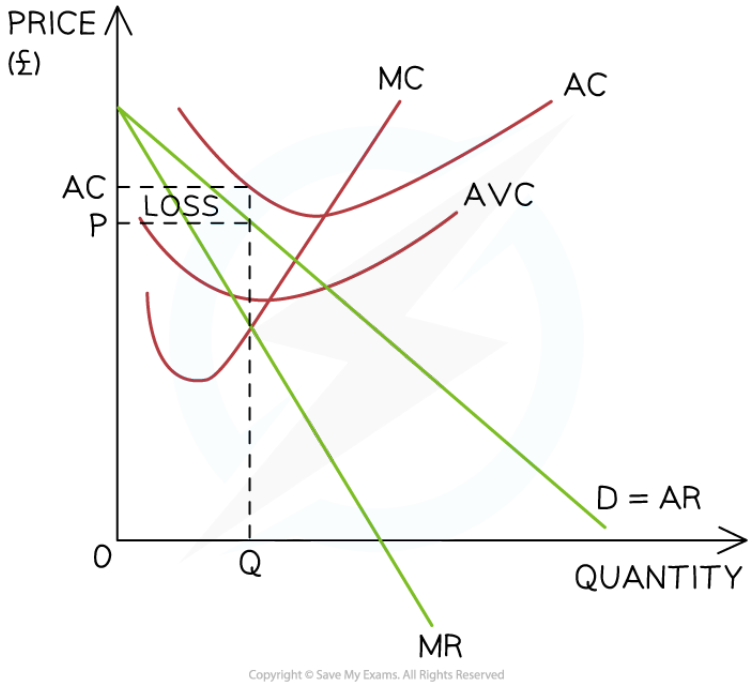
Your notes

- At this level, the P = AVC
  - This means that there is no **contribution** towards the firm's **fixed costs**
    - The selling price literally only covers the **cost of the raw materials** used in production
    - There is no point in continuing production & **the firm should shut down**

The Long-run Shut Down Point

- In the **long-run**, if the **selling price (AR) is higher than the average cost (AC)** the firm should remain open (AR > AC)
  - **if the selling price (AR) is equal to or lower than the average cost (AC), the firm should shut down (AR = AC)**



A firm should shut down in the long-run if the selling price (AR) is unable to cover the AC

Diagram analysis

- The firm produces at the **profit maximisation level of output (Q)** where MC=MR
- At this level, **P < AC**
  - It could continue operating in the **short-run** as the AR > AVC, but in the **long-run** they are making a loss & the firm will shut down

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Your notes

3.4 Market Structures

Contents

- 3.4.1 Efficiency
- 3.4.2 Perfect Competition
- 3.4.3 Monopolistic Competition
- 3.4.4 Oligopoly
- 3.4.5 Monopoly
- 3.4.6 Monopsony
- 3.4.7 Contestability

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3.4.1 Efficiency

Your notes

Types of Efficiency

An Explanation of the Four Types of Efficiency

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
Dynamic Efficiency	▪ **Long-term efficiency** is a result of innovation as a firm **reinvests its profits** ▪ It results in improvements to **manufacturing methods** ▪ This lowers both the **short-run & long-run average total costs**
X-inefficiency	▪ Occurs when a firm **lacks the incentive** to control **production costs** ▪ The ATC is higher than it should be ▪ It often occurs due to a **lack of competition** in industry or in a firm that has no consequences for making a loss (e.g. some government owned companies)

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Efficiency & inefficiency in Different Market Structures

Your notes

- **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 & 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

- Market structures can be separated into **perfect competition** & **imperfect competition**

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

Efficiency & Inefficiency in Perfect/Imperfect Competition

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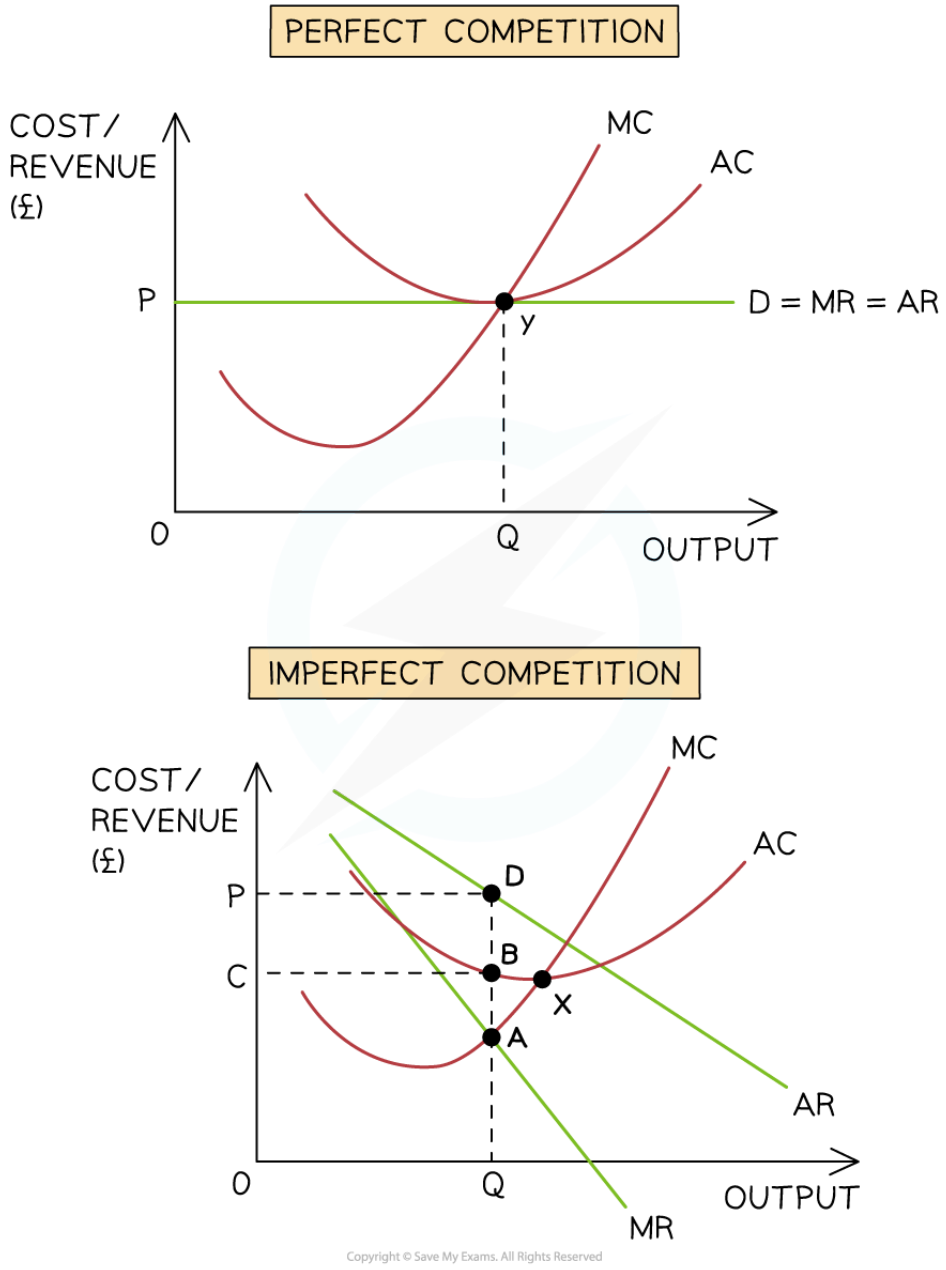
Your notes



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A perfectly competitive market on the top which experiences allocative & productive efficiency. An imperfect market on the bottom in which inefficiencies exist at the profit maximisation level of output

Perfectly competitive market diagram observations

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- 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 **supernormal profits** to reinvest


Your notes

Imperfectly competitive market diagram observations

- 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

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3.4.2 Perfect Competition


Your notes

Characteristics of Perfect Competition

- 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 & 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** & any price changes will result in losing customers

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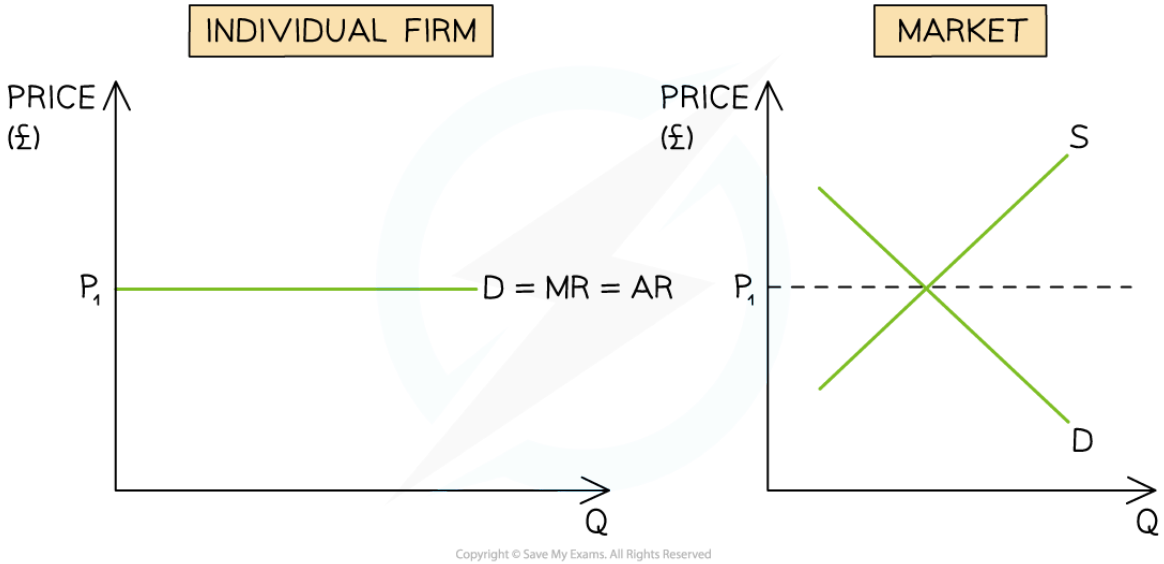
Profit Maximising Equilibrium in the Short & Long-run

Your notes

- 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**



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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 **supernormal profit or losses** in perfect competition
- However, they will always return to the long-run equilibrium where they make **normal profit**

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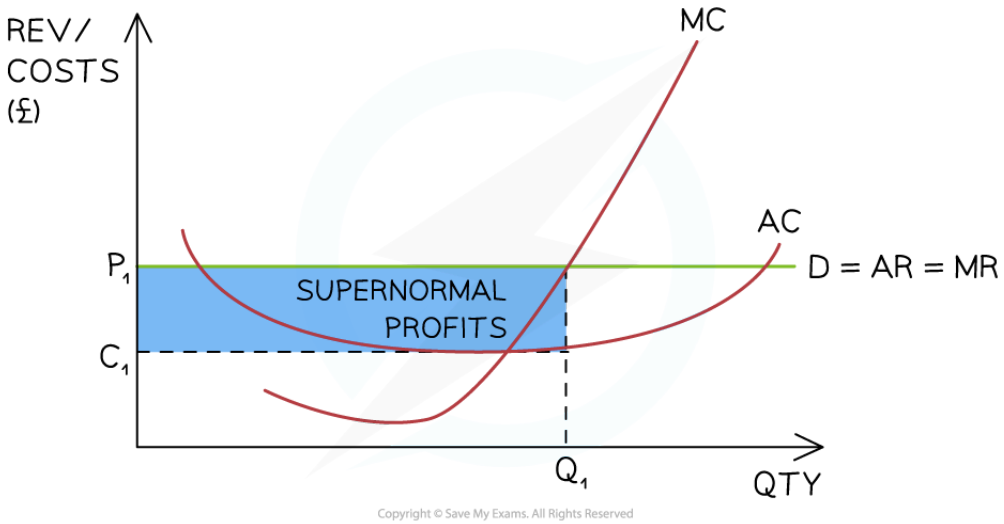
Perfect Competition Diagrams

Your notes

Short-run Profit Maximisation

- Firms in **perfect competition** are able to make **supernormal 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 supernormal profit in the short-run as the AR > AC at the profit maximisation level of output (Q_1)

Diagram Analysis

- The firms 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 **supernormal profit** $= (P_1 - C_1) \times Q_1$

Short-run Losses

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

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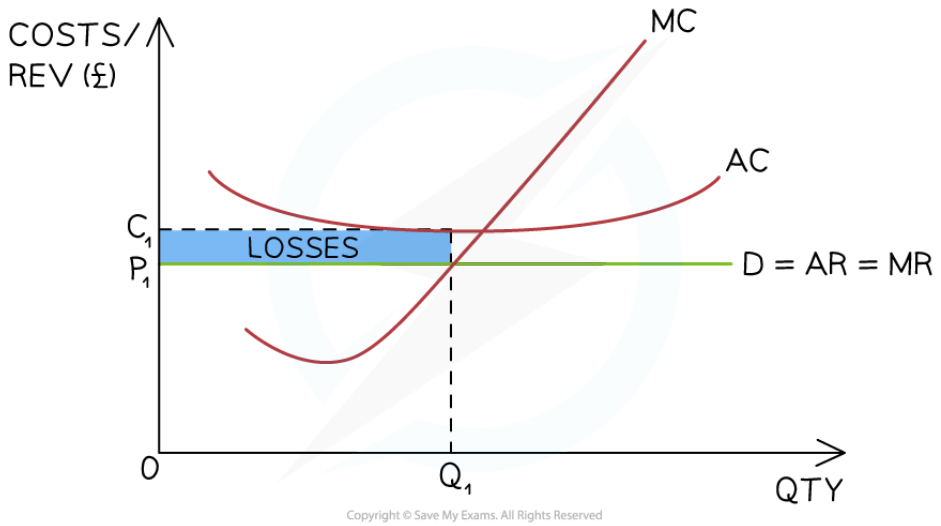

A diagram illustrating a perfectly competitive firm making losses in the short-run as the AR < AC at the profit maximisation level of output (Q_1)

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 Short-run Profits to the Long-run Equilibrium

- If firms in **perfect competition** make **supernormal 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

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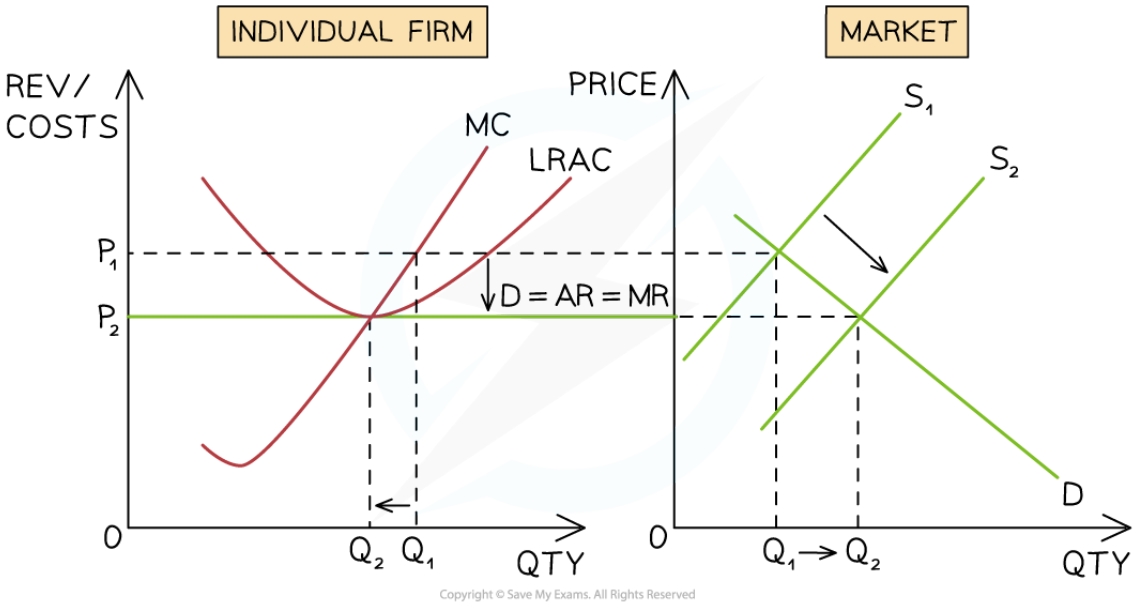

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A diagram illustrating how new entrants shift the industry supply curve to the right ($S_1 \rightarrow S_2$) which changes the industry price from $P_1 \rightarrow P_2$. The firm can now only sell its products at P_2 and supernormal profits are eliminated

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 supernormal 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 **supernormal profit** see them slowly **eradicated** as new firms join the industry

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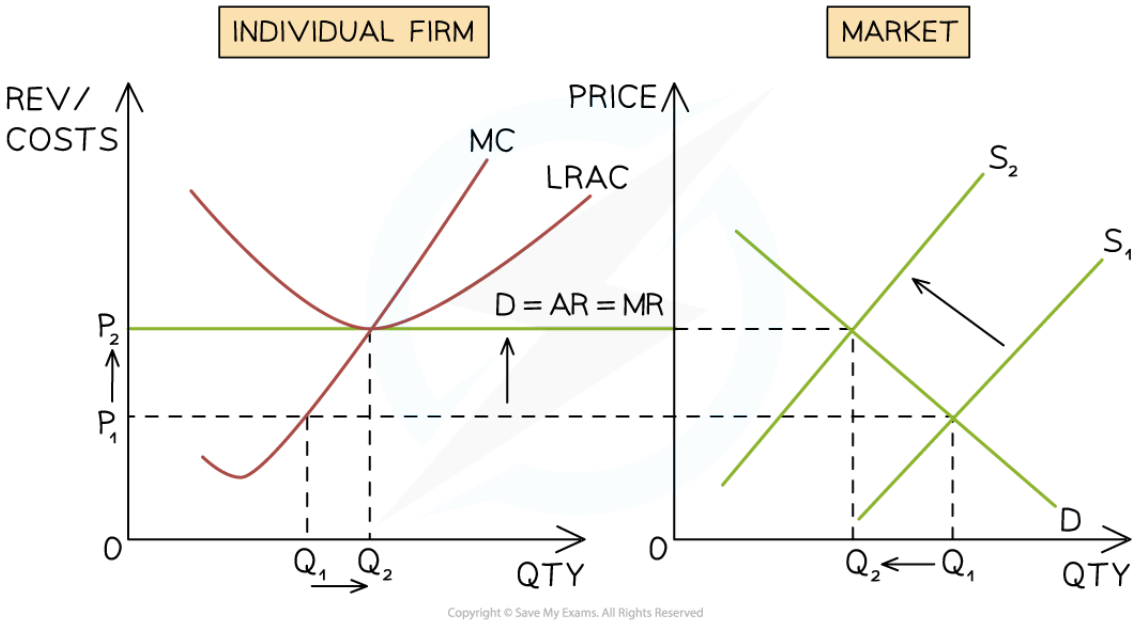
Your notes

Moving From Short-run Losses to Long-run Equilibrium

- 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 shifts 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 only 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

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- The **output of the firm increases** from $Q_1 \rightarrow Q_2$ as it now has a **larger market share** of the smaller industry


Your notes

- 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 **supernormal profit** see them slowly **eradicated** as new firms join the industry

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3.4.3 Monopolistic Competition

Your notes

Characteristics of Monopolistic Markets

- The characteristics of **monopolistic competition** are as follows

1. **There are a large number of small firms:** each one is relatively small and can act independently of the market
2. **There is low barriers to entry & exit from the industry:** firms can start-up or leave the industry with relative ease which increases the level of competition
3. **The products are slightly differentiated**: this structure exists as consumers have different desires e.g. two nail bars differentiate their product through express or pampered service. Some consumers want an express service & others want to linger. A relatively homogenous product has now been differentiated
4. There is a **low degree of market power** & some price setting ability

Profit Maximising Equilibrium in the Short & Long-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 does have some **market power** and is able to influence the price & quantity
  - The firm is a **price maker**
    - This is due to the fact that they have a **differentiated product** that is desirable by certain consumers

- The firm can make **supernormal profit** in the short-run

- In the long-run, the firm will return to a long-run equilibrium position in which they make **normal profit**
  - This is due to inability to defend against **new competitors who enter the market** & copy the products of existing sellers
  - Firms will attempt to find new ways to **differentiate their product** to prolong the period of supernormal profit e.g. a barber shop may add in a pool table & beer fridge for their customers to enjoy thus making them different from the competition (for a period of time)

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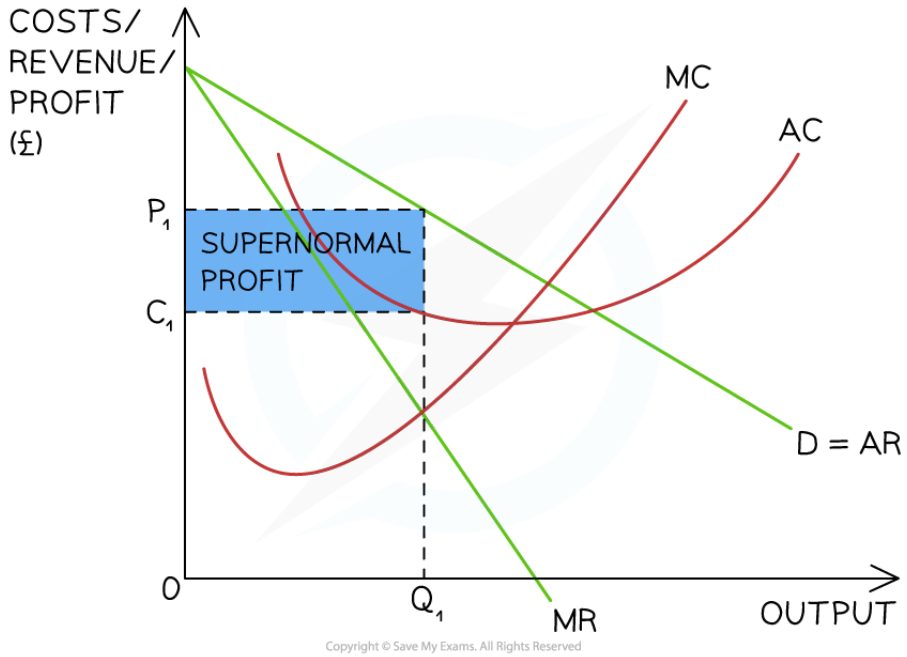
Monopolistic Competition Diagrams

Your notes

Short-run Profit Maximisation

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

- The **AR curve** is the **demand curve** of the firm & 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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A diagram illustrating a monopolistically competitive firm making supernormal 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 **supernormal profit** $= (P_1 - C_1) \times Q_1$

Short-run Losses

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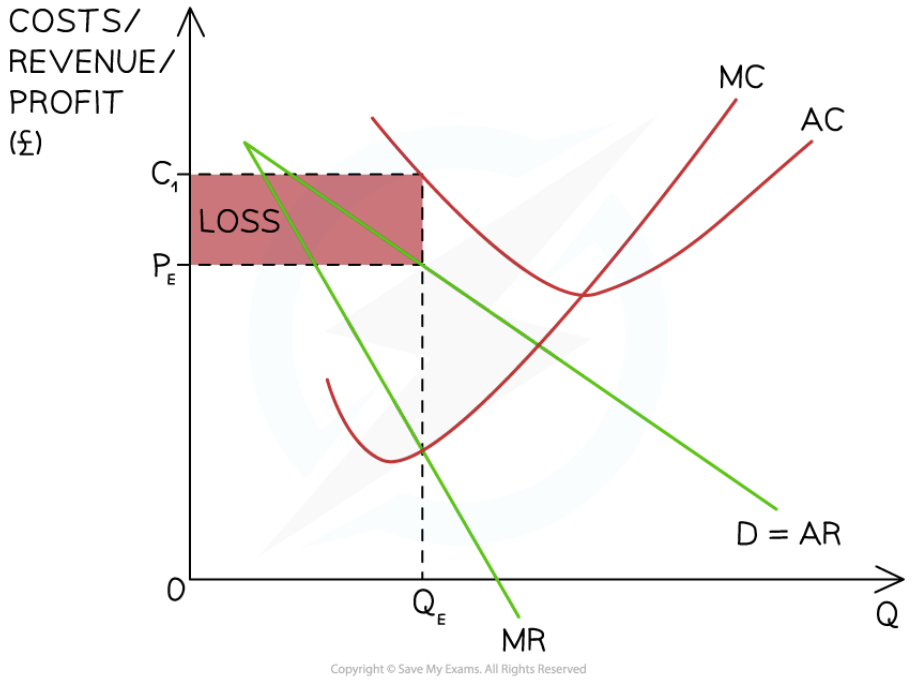
- Firms in **monopolistic competition** are able to make **losses** in the **short-run**



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) < AC (C_1)**
  - The firm's loss is = $(P_E - C_1) \times Q_E$

Moving From Short-run Profit/Loss to the Long-run Equilibrium

From Supernormal to Normal Profit

- If firms in **monopolistic competition** make **supernormal 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**
    - It is easy to join the industry

Your notes

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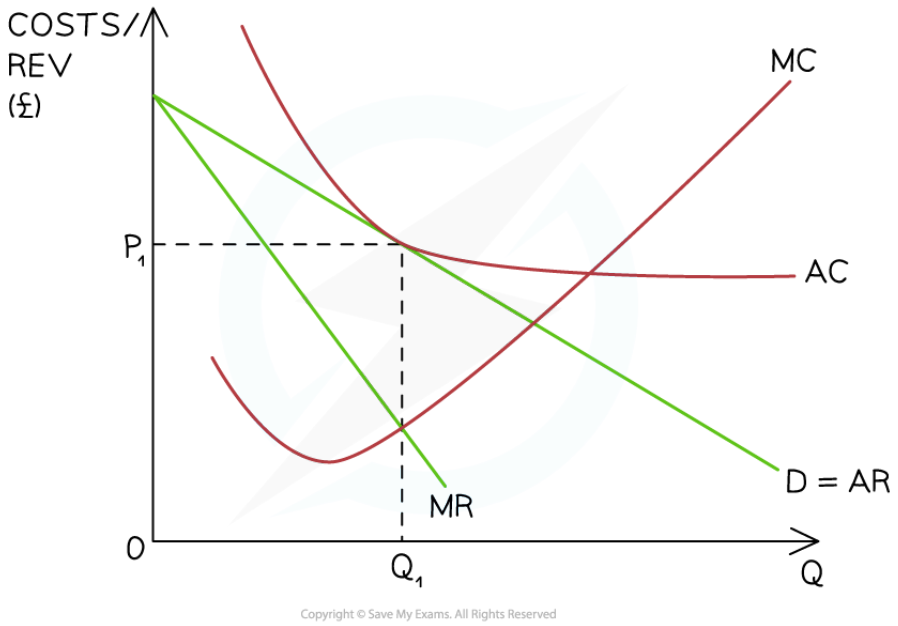
- **Supernormal profit will be eroded** & the firm will return to the long-run equilibrium position of making normal profit

Your notes

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 initially 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

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3.4.4 Oligopoly

Your notes

Characteristics of Oligopoly

- 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.

Characteristics Of an Oligopoly Market

High barriers to entry and exit	High concentration ratio
▪ **Entering the industry** is difficult due to the **existing dominance** of relatively few firms. **Start-up costs** tend to be high e.g. setting up a renewable energy company costs billions ▪ **Leaving the industry** is difficult due to the high level of **sunk costs** e.g. mobile phone companies are bidding billions on 5G auctions run by the Government. They cannot recoup this if they leave the industry	▪ A **concentration ratio** reveals what percentage of the total market share a **specific number** of firms have ▪ A **10-firm concentration ratio** reveals the total market share (concentration) of the top 10 firms in the industry ▪ A **5-firm concentration** reveals the total market share (concentration) of the top 5 firms in the industry ▪ The **higher the value** - and the **lower the number of firms** - the more concentrated the market power in the industry e.g. the UK supermarket's 5-firm concentration ratio is constantly around 67%
Interdependence of firms	**Product differentiation**
▪ With relatively few competitors, firms study each other's behaviour and are **highly interdependent** in their actions ▪ This interdependence generates the use of **game theory**	▪ Products tend to be **highly differentiated** ▪ Occasionally products are similar (e.g. petrol). However, the **brand** around the product is highly differentiated to the point where **consumers perceive it as different** and are extremely brand loyal

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Calculation of Concentration Ratios

Your notes

- 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**
  - The UK **Competition Commission** defines a monopoly as a firm with more than 25% market share
    - It prevents **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)
Tesco	136.5
Morrisons	55
The Co-operative	30
Sainsbury's	75
Aldi	44
Waitrose	24
Asda	77.5
Lidl	33
Iceland	15
Others	10
	500

`

Calculate the five-firm concentration ratio. Show your working.

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

Tesco (136.5) + Asda (77.5) + Sainsbury's (75) + Morrisons (55) + Aldi (44)

$= 136.5 + 77.5 + 75 + 55 + 44$

$= £\,388 \text{ million}$

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

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$$\frac{388}{500} \times 100$$

$$= 77.6\%$$

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
- **Non collusive behaviour** in oligopolies occurs when firms actively compete to maintain/increase market share

Reasons For Collusion

Few firms/competitors	This makes it relatively easy for each firm to understand other **competitors' actions** & responses, or to **collaborate on prices/output**
Similar costs	Firms face almost identical costs as any remaining competitors have all experienced **economies of scale**
Similar revenue	Competitors' goods/services sell for **similar prices** as there is little incentive to lower them as other firms would respond by keeping their market share the same but decreasing the profits
High barriers to entry	The **barriers to entry** make it unlikely that **new entrants** will emerge to disrupt the status quo
Ineffective regulation	A lack of regulation **empowers firms to collude** as there is little consequence for their actions
Brand loyalty	There is usually a **high degree of brand loyalty** in oligopoly markets & firms have an **established market share**. This decreases the benefits of competition as consumers are unlikely to change brands

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Types of Collusion


Your notes

- 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)
   - 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

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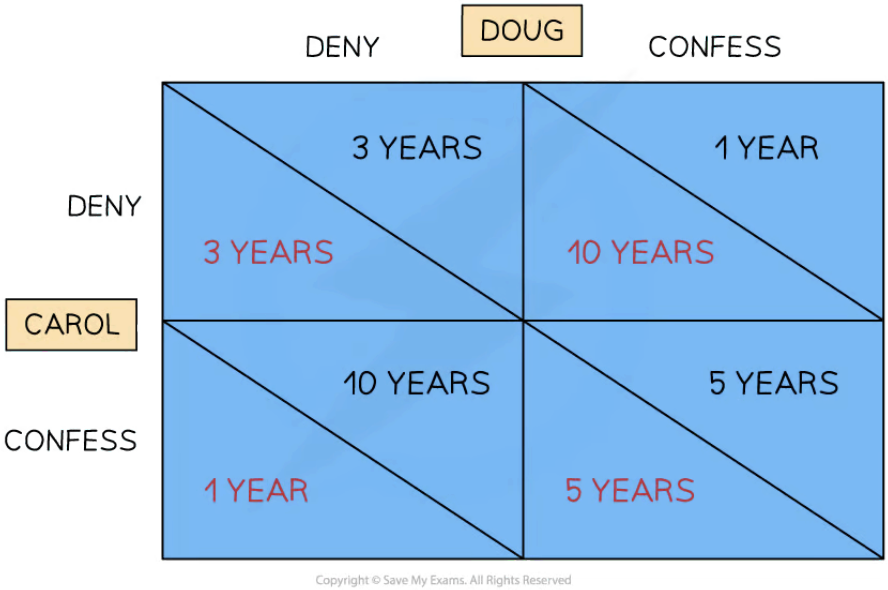
Game Theory

Your notes

- **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

- 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 prosector wants one (or both) to confess
  - The strategies & payoffs available to the prisoners are presented in a **payoff matrix**



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

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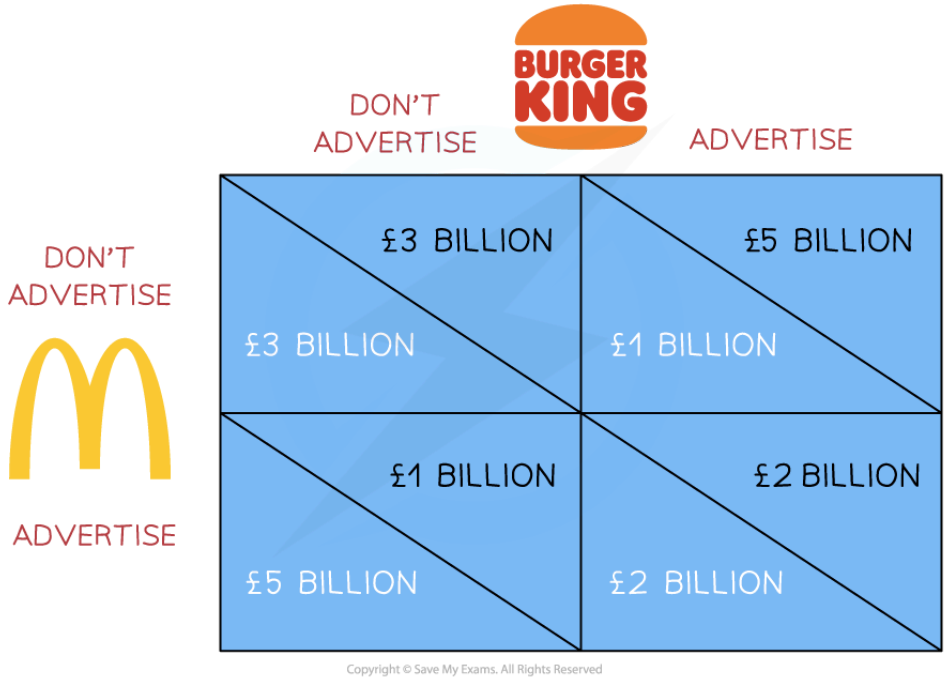
Your notes

- 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

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



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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.

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

Which of the following strategies in the grid would maximise the revenue of the two firms? Explain your answer.

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

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A

Your notes

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. However, there is a strong likelihood that firms will charge a low price (D) as the payoff matrix carries the lowest risk. If firms do collusively or non-collusively decide to charge the high price, then B & C represent higher revenue for any firm that first decides to lower their price (their market share will increase)

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

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Types of Non-price Competition


Your notes

- 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

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3.4.5 Monopoly


Your notes

Characteristics of Monopoly

- 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
  - 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
- The **UK Competition & Markets Authority** defines a monopoly as any firm having more than 25% **market share**
  - It acts to **prevent** this from happening in most industries

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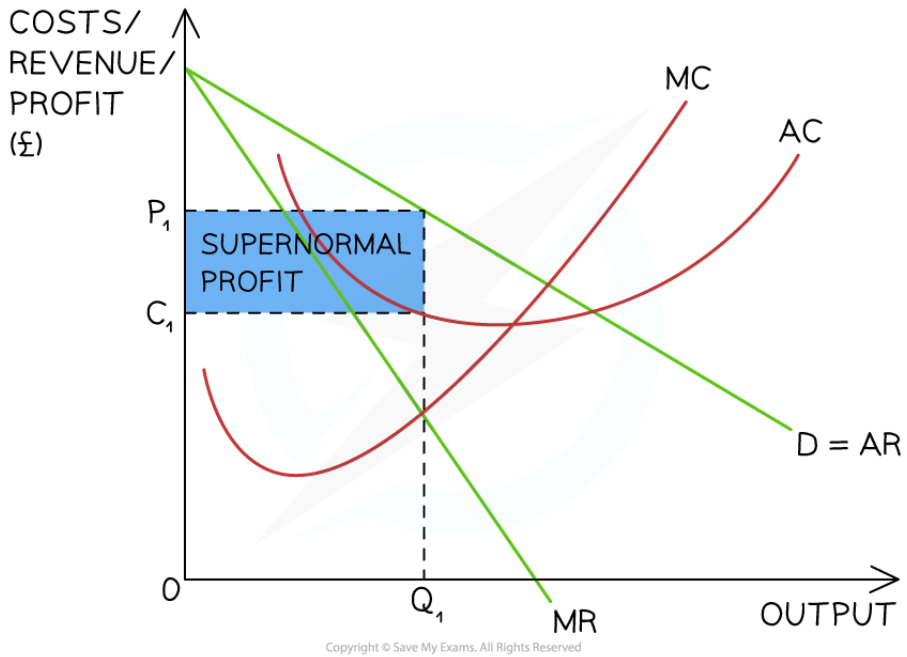
Profit Maximising Equilibrium

Your notes

- 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)



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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 **supernormal profit** $= (P_1 - C_1) \times Q_1$

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Exam 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.

Your notes

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Third Degree Price Discrimination

Your notes

- **Price discrimination** occurs when a firm charges a **different price** for the **same good/service** in order to maximise its revenue
  - There are different **types (degrees) of price discrimination**

- **Third degree price discrimination** occurs when a firm charges **different prices to different consumers** for the **same good/service** e.g. rail fares are priced differently depending on the time of travel

- **Markets** are often **sub-divided** based on time, age, income & geographic location
  - Some airline ticket portals **charge higher prices** to customers using an **Apple computer** as they are likely to have higher income

The Following Conditions Must Be Met for Third Degree Price Discrimination to Occur

Market Power	Varying Consumer Price Elasticity of Demand (PED)	Ability To Prevent Resale of Tickets
The firm must have the ability to **change prices** & it works best when there are no/few **substitutes**	Some consumers must be **willing to pay more** & the firm must be able to identify these different c**onsumer groups** i.e. split the market into sub-markets	It must be able to **prevent consumers** buying in the low-price sub-market & reselling in the higher ones

Illustrating Third Degree Price Discrimination

- In order to illustrate **third degree price discrimination** diagrammatically, the different sub-market diagrams are placed side by side
- The total market diagram is a combination of the sub-market diagrams
  - The **total profit** is a combination of profits from the sub-markets
- The diagram below illustrates the **market for rail travel** in the UK where inelastic demand is **'peak'** hour demand & elastic demand is any other time of the day i.e. **'off-peak'**

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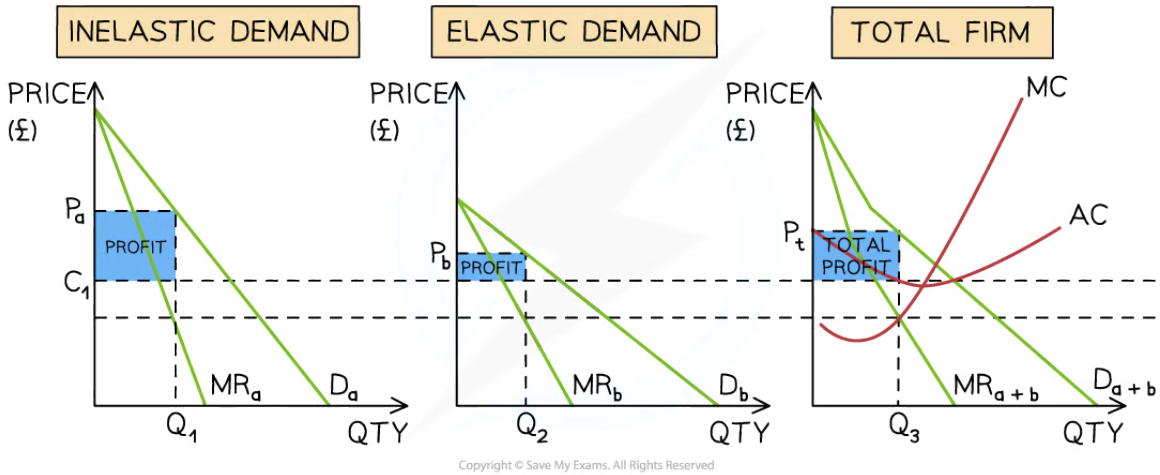

A third-degree price discrimination diagram demonstrates a market that has been divided based on price inelastic (peak travel) & price elastic demand (off-peak travel). Following the revenue rule, prices are raised for peak demand & lowered for off-peak demand

Diagram Analysis

- Each train route has an effective **monopoly provider**
- The overall firm is producing at the **profit maximising level of output** where **MC=MR**
  - This point is **extrapolated to both sub-markets** on the left by using the lower dotted line
  - The average cost is extrapolated across both sub-markets using the **upper dotted line (C_1)**
- A **higher price for peak travel** has been set at P_a & a **lower price for off-peak travel** has been set at P_b
- Following the revenue rule, **total revenue increases** in both markets
- The profit for **sub-market A = (P_a-C_1) * Q_1**
- The profit for **sub-market B = (P_b-C_1) * Q_2**
- The firm's total profit is the average selling price - the average costs
  - **Total profit = (P_t-C_1) * Q_3**
- The firms' **total profits are higher** than if they had charged a single price to all customers

Costs & Benefits of Third-Degree Price Discrimination

Costs & Benefits of Third-Degree Price Discrimination to Consumers & Producers

Consumers	Producers

Your notes

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▪ Many consumers will lose out as they **pay higher prices** ▪ Other consumers **will benefit** as they will be able to take advantage of the **lower prices** ▪ Some consumers will gain as a **higher price decreases the quantity demanded** & in some markets this can increase consumer **utility** e.g. on train services it helps limit over-crowding	▪ The total revenue of producers increases leading to higher profits ▪ Firms increase their **producer surplus** at the expense of a decrease in **consumer surplus** ▪ Setting up & enforcing price discrimination **can increase average costs**

Your notes

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Costs & Benefits of Monopoly

Your notes

- In several instances where the **Competition & Markets Authority** 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

The Advantages & Disadvantages Of Monopoly Power

Stakeholder	Advantages	Disadvantages
The Firm	▪ **Supernormal profits** generate money for continued investment in technology & **product innovation** ▪ Market power enables the firm to increase its **global competitiveness** ▪ **Economies of scale** can increase thereby lowering the average cost ▪ Producer surplus increases ▪ **Price discrimination** can increase revenue	▪ Due to a lack of competition, there is a reduced incentive to be efficient ▪ **Cross subsidisation** can create inefficiencies ▪ Monopolies lead to a **misallocation of resources as P > MC**. The price is above the opportunity cost of providing the goods ▪ Due to a lack of competition, **innovation sometimes lacks effectiveness**
Employees	▪ Supernormal profits often result in **higher wages**	▪ Having only one supplier in the industry limits the opportunity to **change employers**
Consumers	▪ Product innovation due to the firm's supernormal profits may result in a **better-quality product** ▪ **Cross subsidisation** can lower prices on some products that the firm provides ▪ **Prices may fall** If firms pass on their cost savings (due to economies of scale) in the form of lower product prices	▪ A lack of competition is likely to result in **higher prices** as **no substitute goods** are available ▪ A lack of competition may result in **no product innovation** & worse product quality over time ▪ May experience **worse customer service** as the incentive to improve it is limited ▪ Cross subsidisation is likely to **increase prices on some products** offered by the firm e.g. Champagne prices

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		▪ Consumer surplus decreases
Suppliers	▪ **Increased sales volume** for some suppliers as they are able to supply products that are distributed nationally or internationally	▪ There is less competition for their products & a monopoly often has the power to **dictate what price** they will pay to suppliers (monopsony power) ▪ This price may **not be profitable** in the long run


Your notes

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**

Exam 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.

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.

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3.4.6 Monopsony

Your notes

Monopsony Power

- A **monopsony** occurs when there is a **single buyer in the market**
- A pure monopsony is actually very rare, however there are many cases where there is a **dominant buyer** in an oligopoly or monopoly market structure
  - E.g. **Supermarkets** in the UK **buy the majority of milk** supplied by dairy farmers & collectively act as a monopsony
  - E.g. The **Ministry of Defence** is often a dominant purchaser of **war materials** supplied by UK companies
  - E.g. The **National Health Service** is the dominant purchaser of **nursing labour**

- A **monopsonist** has three main characteristics

1. **They are wage makers:** this is especially prevalent in industries where the **government is the majority purchaser** of labour e.g. doctors, nurses, teachers, emergency services staff, military personnel
2. **They are profit maximisers:** They aim to **minimise their costs & maximise their profits** by **paying suppliers** as little as possible
3. They purchase a **large portion** of the **market supply** provided by sellers

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Costs & Benefits of a Monopsony


Your notes

- Consumers frequently cheer **lower prices** as it enables their income to go further. However, lower prices that are generated through **monopsony power** have the potential to **change an entire industry** in the long-run
  - E.g. More than 1,000 dairy farms in the UK have closed since 2013 as supermarkets have exercised their monopsony power **reducing the price, they pay farmers** per litre of milk
  - It is becoming increasingly difficult to **recruit teachers & nurses** as the Government continues to **suppress wages**. This is changing the education & healthcare industries

The Costs & Benefits of Monopsony Power

Stakeholder	Benefits	Costs
Firms	▪ Reduced **costs of production** lead to **higher profits**	▪ May experience some **reputational damage** for the way they treat their suppliers ▪ The continual price pressure on suppliers often results in **conflict** with them which can be difficult to manage ▪ In the long-run, they may drive their suppliers out of business causing **supply chain issues**
Employees	▪ The **higher profits** often result in **higher wages** for the monopsonists employees	▪ Employees may find it difficult to reconcile their **ethics/values** with the way suppliers are treated
Consumers	▪ **Lower average costs** for the firm may result in **lower prices** for consumers	▪ The **quality of the product may decrease** as suppliers attempt to cut their own costs in response to the price pressure from the monopsonist
Suppliers	▪ Supplying to a large well-known monopoly may **enhance the supplier's reputation** & open up new opportunities ▪ Supplying to a large well-known monopoly may provide an opportunity to **increase sales volume**	▪ Suppliers may seek to **reallocate their resources** to more profitable industries leading to less supply in the market (law of supply) ▪ Suppliers may be **driven out of business**

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3.4.7 Contestability

Your notes

Characteristics of Contestable Markets

- A **contestable market** occurs when there is **freedom of entry** into a market & where **costs of exit are low**
  - A contestable market & competition are different
    - **Competition** is based upon the number of **firms competing in a market**
    - A **contestable market** is based upon the **threat of new entrants**

- **Contestable markets are characterised by**

1. **No barriers to entry or exit:** barriers to entry are low or non-existent & there are no **sunk costs**. This allows firms to easily join or leave the market
2. **No competitive disadvantages on entry: n**ew firms are able to setup & immediately compete with existing firms & have access to the **same technology**
3. **Perfect information:** There is no proprietary knowledge that would limit competition **(e.g. patents)**
4. **Hit & run competition:** Short-run **supernormal profit** acts as a profit signaling mechanism & new firms easily enter the market, **extract profit**, then leave

Implications of Contestable Markets for Firms

- The more contestable a market, the more the **behaviour** of existing competitors may be **modified**
  - E.g. Firms making **supernormal profit** may change their pricing strategy from **profit maximisation (MC=MR)** to **limit pricing**
  - They are even likely to set the **price = average cost** (AR=AC)
    - This will reduce **hit & run competition**
    - It will result in **normal profit**
    - There will be less disruption to the market

- The more contestable a market, the more the behaviour of firms **resembles that of firms in perfect competition**

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Types of Barriers to Entry and Exit


Your notes

- **Barriers to entry** are conditions that make it difficult or expensive for a firm to enter a market in order to compete with the existing suppliers

- **Barriers to exit** are factors that either **prevent a firm from leaving a market**, or make it difficult to leave even if they are making a loss

Types of Barriers to Entry

Economies of scale	Legal barriers
Occurs when **an increase in the scale of output** results in a **lower cost per unit** e.g purchasing economies (see sub-topic 3.3.3)	**Patents, copyright & government licenses** prevent competitors from entering the market e.g. 5G licenses in the mobile industry
Ownership of essential resources	**Anti-competitive practices by competitors**
If existing competitors' own resources that are **essential to the production of a product**, entry into the industry will be limited e.g cobalt is essential when manufacturing electric batteries and in 2021, Glencore **controlled** 22% of the world's supply	These include **predatory pricing**, **limit pricing** & aggressive **takeover** activity in order to limit the amount of competition

Sunk Costs & the Degree of Contestability

- One of the main barriers to exit is the existence of **sunk costs**
  - E.g. To enter the industry, the firm may have **acquired expensive assets** that are highly specialised & difficult to resell
  - Other examples include money spent on advertising, research & development, branding etc.

- If sunk costs in an industry are high, it will **limit competition & decrease contestability** as firms will be more hesitant to enter
  - The lower the sunk costs the **more contestable** the market
  - The higher the sunk costs the **less contestable** the market

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Edexcel A Level Economics A

Your notes

3.5 Labour Market

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- 3.5.1 Demand for Labour
- 3.5.2 Supply of Labour
- 3.5.3 Wage Determination in Competitive & Non-competitive Markets

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3.5.1 Demand for Labour

Your notes

Factors That Influence The Demand for Labour

- The **labour market** is composed of **sellers of labour** (households) & **buyers of labour** (firms)
  - **Workers supply** their labour & **firms demand** labour

- The demand for labour is a **derived demand**
  - This means that **it depends on the demand for goods/services**
    - If demand for goods/services increases then the demand for labour will increase - and vice versa

Factors That Influence The Demand for Labour

The price of the product being produced	The demand for the final product
▪ If the **selling price** of the product **increases**, it increases the **marginal revenue product of labour** & the firm will demand more labour ▪ Higher priced products incentivise firms to supply more (law of supply) & demand for labour will continually increase with increasing prices	▪ As demand for labour is a **derived demand**, when an economy is booming then **demand for most goods/services will be high** - and the demand for labour will be **high** ▪ Conversely, when an economy is in a **recession** demand for most goods/services will be lower - and the **demand for labour will be lower**
The ability to substitute capital (machinery) for labour	**The productivity of labour**
▪ Firms will constantly evaluate if it will be possible & **more cost effective** to switch production from using labour to capital (machinery) ▪ If it is more cost effective, then **demand for labour will fall**	▪ If the **productivity** of labour increases (possibly through training) this will lower average costs & firms will likely demand more labour

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3.5.2 Supply of Labour

Your notes

Factors Influencing the Supply of Labour

- There are **numerous factors** that influence the amount of labour supplied to a **particular industry**
  - **Different factors** are present in different markets e.g. in the **labour market for doctors**, the length of time it takes to study to become a doctor **limits the supply of doctors**. However, in the **nursing labour market**, the low wages paid to nurses limit the amount of workers who **offer their labour as nurses**

Factors Influencing The Supply Of Labour

Training period	Wages in other occupations	Changes in migration policy
Long training periods act as a barrier to entry & **exclude many households** from offering labour in certain markets	**Comparative wage rates** in substitute labour markets strongly influence the supply of labour e.g. it is getting harder to recruit economics teachers as the **private sector** offers **higher wages** for their skills	Policies that increase the **net migration rate** increase the supply of labour to certain industries e.g. Brexit revealed the **extent of foreign labour** in the hotel industry in the UK & the withdrawal created a shortage of workers
Income tax levels	**Working conditions**	**Trade union power**
At a certain level, **income taxes become a disincentive to households** offering their labour. The assumption is that **as income tax increases, labour supply decreases** - and vice versa	The working conditions & non-pay benefits can act as strong incentive in certain industries e.g. tech companies are well known for their **laid-back work environment & wide range of benefits** e.g. on-site childcare & restaurants	**Trade unions** can increase the supply of labour to certain industries as **workers consider the benefits** of belonging to the union e.g higher wages & a safer working environment
Level of welfare benefits	**Social trends**	
The **higher** the level of **welfare benefits**, the **lower the incentive** for low-skilled labour to offer their labour - and vice versa	Social trends include any **major changes within society** & can influence the supply of labour to certain industries. Work from home during Covid resulted in **significant changes to the labour**	

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	market once economies opened up again e.g many restaurant workers did not feel safe returning to the jobs they previously had	


Your notes

Market Failure in Labour Markets

- **Market failure** occurs in the labour market when workers are unable to easily move between jobs. This is caused by:

1. **Geographical immobility of labour:** this occurs when workers find it **difficult to move** from one geographical area to another in order to secure employment. **Barriers to mobility** may include family ties, **lack of information** about possible jobs in different parts of the country, & the challenges in **securing/affording accommodation** in an unknown location

2. **Occupational mobility of labour:** this refers to the ability of a worker to **change occupations** when they lose a job. If their **skill base is transferable** between different occupations, then their **occupational mobility is high**. In reality, many workers are not able to easily transfer between occupations & this is a particular issue when an economy is faced with **structural unemployment**

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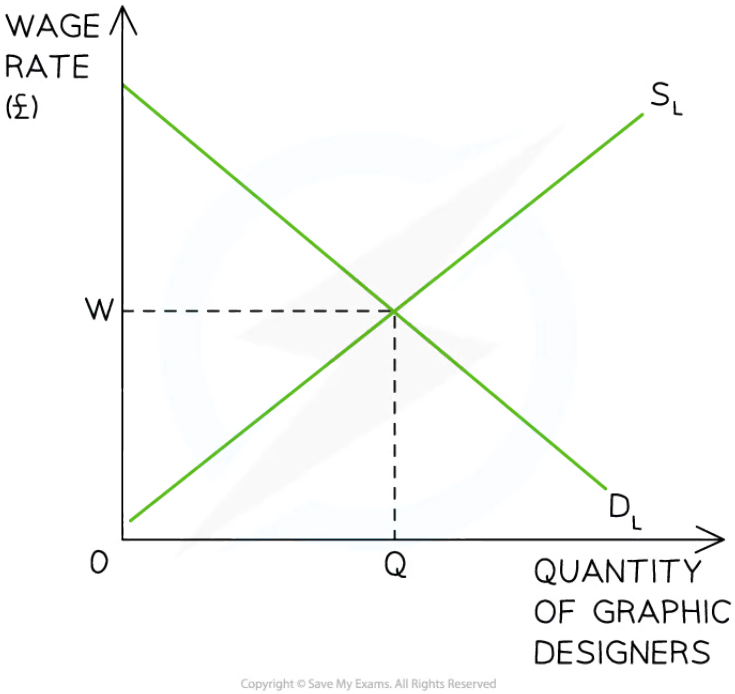
3.5.3 Wage Determination in Competitive & Non-competitive Markets

Your notes

Diagrammatic Analysis of Labour Market Equilibrium

- **Labour market equilibrium** occurs where the **demand for labour (D_L)** is equal to the **supply of labour (S_L)**
  - The D_L is the demand **by firms** for workers
  - The S_L is the supply of labour **by workers**

- Individual firms are **price takers** in the labour market as they have to accept the **wage rate** that workers are being paid in the industry
  - If they offer a **lower wage,** they will likely struggle to recruit workers
  - If they offer a **higher wage** there will be a large number of workers applying to work there



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In the labour market for graphic designers, the equilibrium wage rate is W and the equilibrium quantity is Q. At this point the D_L = S_L

Diagram Analysis

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- The market for graphic designers is in **equilibrium where $D_L = S_L$**
- The **equilibrium wage** is W and the **quantity** of labour is Q
- There is **no excess supply** of labour
- There is **no excess demand** for labour


Your notes

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Current Labour Market Issues


Your notes

- The labour market is extremely important as **jobs provide income** to households, which directly impacts the **standard of living** in an economy
- **Changes to conditions in the labour market** can be traumatic as they may result in changes to wage rates, working conditions and/or the **benefits** associated with a particular job
  - These changes can possibly **decrease the standard of living** for many people

Current Labour Market Issues in the UK

Skills shortages	Youth unemployment	Changes to retirement ages
▪ In December 2021 more than 50% of firms surveyed reported **difficulties in finding skilled workers** ▪ A **shortage** of skilled labour means that firms are having to **increase wage rates** to attract labour ▪ Firms are effectively **poaching skilled labour** from each other & there is a shortage of new skilled labour **entering** the market ▪ Some of the **many labour markets experiencing shortages** include nursing, engineering, pharmacies, secondary teaching, & graphic design	▪ **Unemployment** for 16–24 year olds in April 2022 was at **10.8%** compared to the general unemployment rate of **3.8%** ▪ This means that it is nearly **three times as likely** for a young person to be unemployed ▪ Where possible employers prefer to hire workers with more experience as it can lead to higher productivity ▪ The **education or skills gap** is another reason for youth unemployment. Young people leave school without the skills that **employers require**	▪ In 1995 the **state retirement age** was 60 for women & 65 for men ▪ In recent years, **State Pension** reform has been ongoing and the retirement age is **gradually being increased** to 68 for both men & women ▪ This means that workers are expected to remain in the workforce for longer ▪ One reason for the change is that with **too many pensioners** in the system, it is difficult for the government to fund monthly pension payments ▪ An improvement to **life expectancy** has meant there are more pensioners in the system
School leaving age	**Zero-hour contracts**	**Temporary/flexible working**
▪ The earlier a student leaves school the **lower their skill level** ▪ Different policies are in place in England as compared with	▪ In 2022, nearly 1 million workers were on **zero-hour contracts** which is more than five times the number in 2000	▪ Flexible working is working in such a way that it **meets the employee's needs** ▪ Covid19 has driven changes in thinking around **where work happens**

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Scotland, Northern Ireland & Wales
▪ In the latter three the school leaving age is 16 and there are **no further conditions in place**
▪ In England, students can leave school at 16 but have to do one of the following until they are 18
  ▪ Stay in full-time education, e.g. at a college
  ▪ Start an **apprenticeship** or traineeship
  ▪ Spend 20 hours or more a week working or volunteering, while in part-time education or training
▪ This aims to **increase the skill level** but also puts **increased pressure on training providers**
▪ There are **not enough apprenticeships** to match the demand
	▪ These contracts are extremely **beneficial to employers**
	▪ Workers are **not guaranteed work** & only **get paid for the work they do**
	▪ Workers do not receive many of the benefits that full-time employees receive - this **reduces costs** for the firm
	▪ Some workers do enjoy the flexibility this provides as they can sign **contracts with several firms** & sometimes enjoy a wider variety of work
	▪ These contracts **change unemployment figures** as workers may not end up receiving much work, but are **no longer counted as unemployed**
		▪ Many workers now want to **work from home**
		▪ Some employers prefer this as it **lowers company costs**
		▪ Other employers are insisting on a return to the workplace as it is required, or they want **more control** over their workforce
		▪ There is an increasing focus on **well-being** & more people are opting to work part-time jobs or jobs that offer more flexibility


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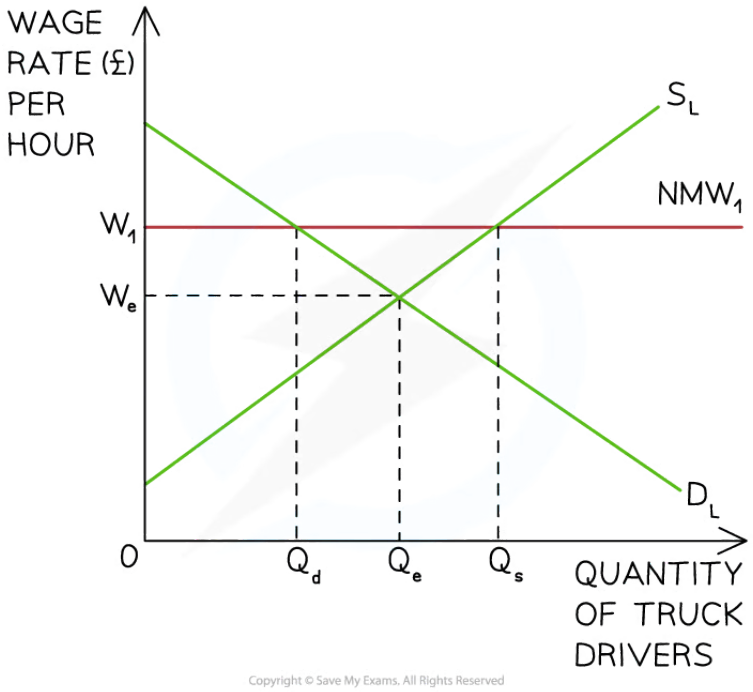
Government Intervention in the Labour Market

Your notes

Maximum & Minimum Wages

- The UK Government usually **intervenes in the labour market** in order to **improve equity** & avoid the **exploitation** of workers
  - A **maximum wage** is a government imposed price ceiling **below the market price** & is rarely used
    - There has been some discussion recently to set **maximum wages for CEOs** as their wages in early 2022 were **86× the average wage** of full-time employees
    - If CEOs were paid less then the **average pay per worker** may increase
  - A **minimum wage** is a **legally imposed wage level** that employers must pay their workers
    - It is set **above** the market rate
    - The minimum wage/hour varies **based on age**



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A national minimum wage (NMW_1) is imposed above the market wage rate (W_e) at W_1

Diagram Analysis

- The **market equilibrium** wage & quantity for truck drivers in the UK is seen at $\mathbf{W_eQ_e}$
- The UK government imposes a **national minimum wage** (NMW) at $\mathbf{W_1}$
- Incentivised by higher wages, the **supply of labour increases** from Q_e to Q_s
- Facing higher production costs, the **demand for labour** by firms **decreases** from Q_e to Q_d

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- This means that **at a wage rate of W_1** there is **excess supply of labour** & the potential for **real wage unemployment** equal to **Q_dQ_s**


Your notes

Exam Tip

When **evaluating** national minimum wages, **do not** assume that they will automatically increase unemployment. Many studies have shown that **unemployment does not increase** - and in some instances employment increases. This is likely due to the fact that workers are receiving higher wages and choose to consume more. This **increases aggregate demand (AD)** in the economy which in turn **increases the demand for labour by firms** - thus eradicating any potential real wage unemployment.

Public Sector Wage Setting

- The **UK government** is the largest employer in the nation
  - In April 2022 there were **5.74 million public sector workers** out of a total of 29.6 million employed workers (19.39%)

- In many industries, the **UK Government is the dominant employer** & so is able to exercise **monopsony power** in setting the wage rates

- There are several implications of this **public sector wage setting**
  - If the government **increases the NMW**, they are significantly **increasing their own wage bill**
  - The private sector often uses public sector wages as a **benchmark** for their own wage calculations
  - If public sector wages increase & private sector ones do not, it can **create tension between workers** in the different sectors
  - Increases to public sector pay often have to be **paid for by increases in tax rates** for the entire working population

- In June 2022, public sector workers were **striking** due to issues with the pay increases offered by the Government
  - Worker's **wages were frozen** from 2010 to 2015 after the 2008 global financial crisis
  - This was followed by rampant **inflation** & wage increases well below the level of inflation

Policies To Tackle Labour Market Immobility

- There are many individual policies that the UK Government employs in order to reduce labour market immobility & together they help reduce the labour market failures

Examples Of Policies Used To Tackle Labour Market Immobility

Policy	Explanation

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Improved education/training	Education improves skills & a wider skill base allows workers to **move more easily** between jobs which are not 100% identical
Targeting skills shortages	Identifying markets with **specific skills shortages & training workers** in those skills provides some opportunity for workers to switch between occupations
Subsidising employers	A **per hire subsidy** from the government provides an incentive for employers to take on workers **without the necessary skills** (& train them) - or workers from a specific demographic (e.g. disabled workers) & this improves occupational mobility
Relocation subsidies	Providing relocation subsidies to workers **reduces both geographical & occupational immobility**
Reducing information asymmetry	Setting up **job centres** and improving the **flow of information** between employers & the unemployed helps workers to quickly identify new opportunities
Reducing discrimination	Reducing discrimination in hiring practices will help some workers improve **occupational mobility**


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Significance of the PED & PES for Labour

Your notes

The elasticity of demand for labour

- This refers to how responsive a **firms demand** for labour is to a **change in the price** of labour (wage rate)
  - If the demand for labour is **elastic**, then an increase in the wage rate will result in a **more than proportional decrease** in the quantity of labour demanded by firms
  - If the demand for labour is **inelastic**, then an increase in the wage rate will result in a **less than proportional decrease** in the quantity demanded of labour demanded by firms
- If demand is elastic firms will be very responsive to changes in wage rates, rapidly **hiring workers when wages fall** and **firing workers when wages rise**
- If demand is inelastic firms will have a much smaller response to rising or falling wages

Factors That Influence PED of Labour

The proportion of labour costs to total costs The higher these are then the more **elastic the demand** for labour will be; the lower these are then the more **inelastic the demand** for labour will be	**Ease & cost of factor substitution** If **substituting capital for labour** is easy & the cost is comparable to the increase in wages, the demand for labour will be **more elastic** - and vice versa
PED of the final product If the **product** being produced is price inelastic in demand, then the demand for labour is likely to be more inelastic i.e if wages rise, firms will **pass on the increased costs** of production to the final consumers	**Time period** In the **short-run**, demand for labour is likely to be more price inelastic i.e an increase in wages will have a **less than proportional decrease** in the quantity demanded. However, in the medium to long-term firms can research **alternative methods of production** & the demand for labour becomes more price elastic

The elasticity of supply of labour

- This refers to how responsive the **supply** of labour is to a **change in the price** of labour (wage rate)
  - If the supply of labour is **elastic**, then an increase in the wage rate will result in a **more than proportional increase** in the quantity of labour supplied
  - If the supply of labour is **inelastic**, then an increase in the wage rate will result in a **less than proportional increase** in the quantity of labour supplied

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- In **low skilled occupations** the quantity of labour supplied is very responsive to a change in wage rates i.e. supply of labour is elastic
- Occupations which require a **longer & higher level of training tend to have an inelastic supply of labour** i.e even if wage rates increased significantly, there would be a less than proportional increase in the supply of labour in the short run


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3.6 Government Intervention

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3.6.1 Government Intervention


Your notes

Intervention to Control Mergers

- The **Competition & Markets Authority (CMA)** is the UK Government regulator tasked with ensuring that the creation of **monopoly power** is avoided & that consumers are not exploited in markets
  - The main forms of consumer exploitation include **higher prices**, **less choice** and/or **poor quality products**

- There are similar regulators in Europe **(European Competition Commission)** & in the USA **(Antitrust Commission)**
- One way to **control monopoly power** is to prevent it from forming in the first place

- A key function of the CMA is to monitor **merger activity** with the aim of preventing any single firm gaining **more than 25% market share**
  - If there are concerns about the merger then the CMA has the **authority to stop it** from happening, or they can allow it to go ahead but insist the new firm sells **certain assets** which would limit its market share
  - E.g. in July 2022 the CMA launched an investigation into the **merger of two companies** which produce foam used in bedding & cleaning products as they believed it would lead to **higher prices & less choice**

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Intervention to Control Monopolies

Your notes

- In addition to controlling merger activity, the CMA continuously **intervenes in markets** in order to promote competition & to protect the interests of consumers

Types Of Intervention In Monopoly Markets

Price regulation	Profit regulation

▪ Monopolies aim to produce at the **profit maximisation level of output (MC=MR)**
▪ This results in **higher prices & limited output** in the market
▪ The CMA uses **maximum prices** to lower prices & increase output
▪ One way in which they determine where the maximum price should be is to identify the point of **allocative efficiency** & set the maximum price there
▪ This strategy is often used on natural monopolies
▪ Firms will make less **supernormal profit** than before
	▪ The CMA may choose to limit the **supernormal profit** a monopoly can earn
	▪ They do this by calculating the firms **total costs** & then adding a percentage of profit to it
	▪ However, it is a very **contentious policy** as
	  ▪ Costs are difficult for the CMA to calculate
	  ▪ Firms often try to inflate their perceived costs so as to **make more profit** than allowed
	  ▪ Monopolies have no incentive to lower costs, so if **costs are higher** than they would be in perfect competition consumers still end up paying **higher prices**
	  ▪ **E**ven with this policy in place, natural monopolies seem to post **record profits** year on year

Quality standards	**Performance targets**
▪ One way to **maximise profit** is to reduce the quality of the raw materials which reduces the quality of the end good/service ▪ If there are **no substitutes** then this is a likely outcome ▪ Regulators can step in to insist that **certain quality standards** are met ▪ It can be difficult for them to know what the potential quality of a product is or what standards to impose ▪ Firms push back on these quality standards as they reduce their supernormal profit	▪ Regulators can also set **performance targets** so as to raise the quality of the service & improve c**ustomer satisfaction** ▪ This is often seen in the **rail industry** where targets are set based on the percentage of trains running on time

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Intervention to Promote Competition & Contestability


Your notes

1. **Promotion of small business:** providing tax incentives or subsidies to small firms can help increase the number of new entrants into industries & thus promote competition
2. **Deregulation:** Goverment regulations can increase industry costs or act as a barrier to entry. Removing regulations can promote competition which will also increase the **contestability** in the market
3. **Competitive tendering for government contracts:** as a major provider of goods/services in the economy the government could choose to manufacture many products itself & this would decrease competition. By outsourcing the supply of these products it generates **more private sector activity** & increases competition
4. **Privatisation:** Firms are hesitant to enter an industry when the **dominant firm** is owned by the government & has access to all of the government's resources. Privatisation **encourages new entrants** to the industry as they feel they can **compete more effectively** with private firms which perhaps have less resources available to them e.g. In April 2022 the UK Government confirmed that **Channel 4** would be privatised

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Intervention to Protect Suppliers & Employees


Your notes

Protecting Suppliers

- **Monopsony power** is abusive towards suppliers & over time can **change** the nature of **entire industries** in an economy
  - Governments can pass **anti monopsony laws** & issue fines if breaches occur
  - They can encourage firms to **self regulate** & trade fairly
  - They can **appoint a regulator** to monitor the practices in the industry
  - They can **subsidise** firms that are suffering from abusive monopsony power
  - They can set **minimum prices** which buyers have to pay suppliers

- **Nationalisation** can also be used to break the market power of the abusive firm resulting in better treatment of suppliers

Protecting Employees

- **Wage bills** for firms are often one of their **highest costs** as a proportion of expenditure
- With a goal of **profit maximisation** firms will always seek to reduce their wage expenditure as this will result in higher profit
- There is a role for government **to protect workers** who could be exploited by firms
- The government uses the following methods to **protect employees**
  - **National minimum wage** legislation
  - **Legislation** on health & safety, working hours & employment conditions e.g. maternity pay
  - Permitting **trade unions** to operate in the economy (some countries limit or ban the existence of unions as they view them as **anti-competitive** e.g. Singapore)
  - Encouraging firms to **adopt best practice** & draw up company codes of conduct towards their employees. This is a form of self regulation

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3.6.2 The Impact of Government Intervention

Your notes

The Impact of Government Intervention

The Desired Outcomes Of Government Intervention

Prices	Profit	Efficiency
Affordable & stable prices	Permitting enough to keep firms in the industry **(normal profit)** but limiting how much they make so that **household income** is protected	**Reducing wastage** of valuable resources & one of the best ways to achieve this is by developing **rigorous competition**
Quality	**Choice**	
Ensuring products are **fit for purpose** & contribute to a better **standard of living**	**Wider choice** improves the standard of living & also helps to improve product quality. More choice also generates more **economic activity** in an economy & increases the **gross domestic product (GDP)**	

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Limits to Government Intervention


Your notes

- **Government intervention** is not always effective. Two of the main reasons for this are the existence of **regulatory capture & asymmetric information**

Regulatory Capture

- **Regulatory capture** occurs when firms **influence the regulators** to **change their decisions/policies** to align more with the **interests of the firm**
  - Firms spend millions **lobbying** regulators directly - or in many cases lobbying politicians who can issue instructions to the regulators e.g in 2021 the former UK Prime Minister, David Cameron, was caught in an embarrassing case of lobbying for a failed financial venture by a firm called Greensill Capital

- **Some lobbying activity is corrupt** & there is a fine line between influencing activity & bribing. The UK Government has an agenda to improve the **transparency** of any lobbying activity
- Naturally, **regulatory capture** can completely prevent fair outcomes in the markets concerned

Asymmetric Information

- Often governments believe they are **making the best decision** in order to meet their aims
- Many times it is not the best decision due to the fact that the government or regulators either **do not have the full & relevant information** - or they **do not understand the market** they are trying to regulate e.g. many financial markets are fast moving & incredibly complex
- This existence of **asymmetric information** has been responsible for some spectacular **government failures**

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