AQA - A Level Economics

Individuals, Firms, Markets & Market Failure

5.1 Perfect competition, imperfectly competitive markets and monopoly

Revision Notes

Contents

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5.1.1 Market structures

Different market structures

Understanding *market structures* helps us figure out how efficiently firms are using resources, how much competition there is, and who's winning , consumers or producers.

🔍 **What is a Market Structure?**

A **market structure** refers to the setup in a particular market. It tells us how many sellers and buyers there are, what kind of products are being sold, and how easy it is to join or leave the market.

Key characteristics of a market structure include:

- **Barriers to entry/exit** – Is it easy or hard for new firms to enter the market? High start-up costs, regulations, or branding can make it difficult.
- **Type of product** – Are firms selling identical products (**homogenous**) like wheat, or different ones (**differentiated**) like clothing or coffee?
- **Number of buyers** – Are there a few or millions of people buying the product?
- **Number and size of firms** – Is the market dominated by one or two giants, or lots of small players?
- **Level of competition** – How fierce is the rivalry between firms?

5.1.1 Market structures

Different market structures

⚖️ **Market Structures: From Perfect to Imperfect**

We usually group market structures into two main categories:

✅ **Perfect Competition**

This is the economist's dream market:

- Many buyers and sellers
- Homogenous (identical) products
- No barriers to entry or exit
- Firms are **price takers** – they can't set their own price

Example: Farmers selling wheat in a global market

❌ **Imperfect Competition**

These markets are a bit messier and less efficient. They include:

Monopolistic Competition

- Many sellers, but products are **differentiated** (e.g. cafés, hairdressers)
- Some price-setting power
- Low barriers to entry

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5.1.1 Market structures

Different market structures

Oligopoly

- A few large firms dominate the market (e.g. airlines, supermarkets)
- Products may be similar or different
- **High barriers to entry** and strategic behaviour (like price wars or collusion)

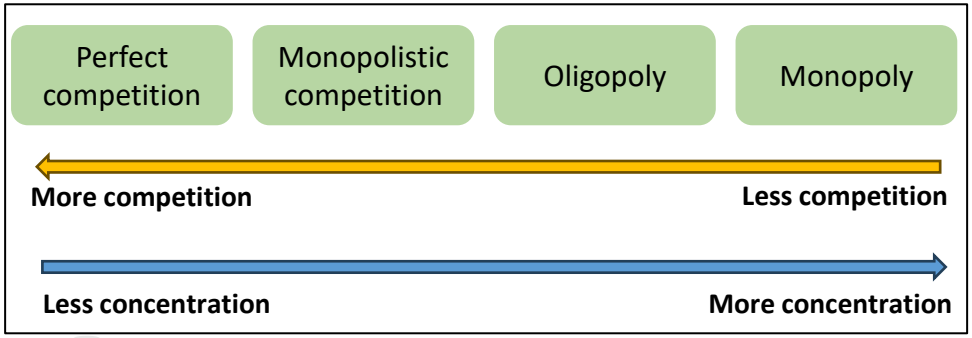
Monopoly

- A single firm dominates (or is the only one)
- **High barriers to entry**, so little threat from new firms
- Can set prices well above marginal cost

5.1.1 Market structures

The spectrum of competition

Think of market structures as a **scale** that goes from super competitive to not competitive at all.



On one end, we have:

- **Perfect Competition** – Loads of small businesses competing with identical products.
  🛒 Example: Farmers selling tomatoes at a market.

In the middle:

- **Monopolistic Competition** and **Oligopoly.** Fewer firms, more power to set prices.
  💇 Example: Hair salons (monopolistic competition) or soft drink brands (oligopoly).

At the far end:

- **Monopoly** – One firm rules the entire market.
  💡 Example: A local water supplier that's the only option.

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5.1.1 Market structures

The spectrum of competition

🔁 **Competition vs. Concentration**

- **More competition** = lower prices, better quality, more choices
- **More concentration** = fewer firms, more power to set prices, less choice

🧠 **Definitions:**

- **Concentration ratio**: The percentage of market share held by the largest firms.
  Higher ratio = less competition.
- **Market share**: A company's slice of the total sales pie.

🏁 **What happens as you move along the scale?**

👉 **The closer you get to a monopoly:**

- Fewer firms control most of the market
- Prices might be higher because there's less competition
- **Consumers lose out** as there is less choice and innovation

👉 **The closer you get to perfect competition:**

- Many small firms compete
- No one has control over price
- **Consumers benefit** as prices stay low and quality stays up

5.1.1 Market structures

The spectrum of competition

⚖️ **Market Power ≠ Market Competition**

- In **competitive markets**, no one firm has too much power. Prices are decided by **supply and demand** and not just one bossy business.
- In markets with **limited competition** (like monopolies or tight oligopolies), firms can influence prices and output more freely. That means outcomes can drift away from what's best for consumers.

5.1.2 The objectives of firms

Profit maximisation

Most businesses have one big goal: **to make as much profit as possible** – this is called **profit maximisation**.

🤑 **Why do they want profits so badly?**

- More profit means more money to reinvest, grow the business, or just beat the competition.
- Profit can be paid to shareholders as **dividends** – which makes investing in the business more attractive.
- A rise in profits usually increases the company's **share price**, boosting the **wealth** of shareholders.

The Golden Rule: MC = MR

To maximise profit, firms use a simple rule:

👉 **Produce at the point where**
Marginal Cost (MC) = Marginal Revenue (MR)

- **Marginal Cost (MC)** = the cost of making one extra unit
- **Marginal Revenue (MR)** = the money earned from selling one extra unit

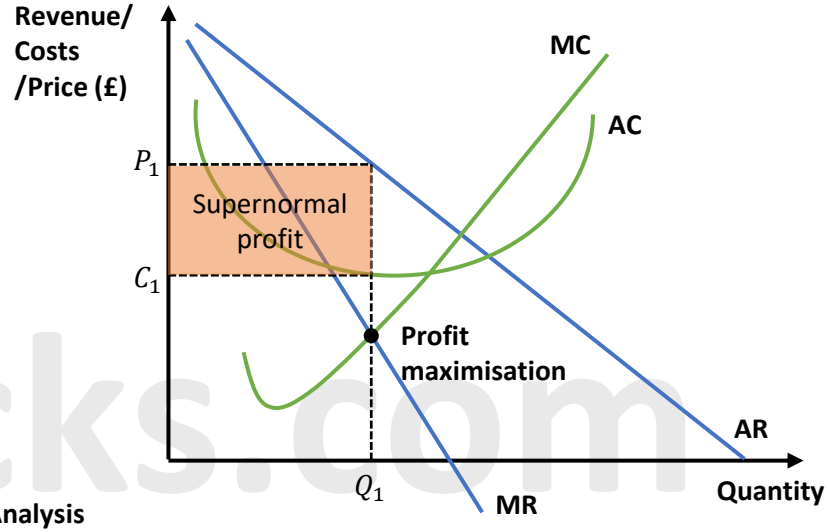
Here's what firms do:

- If **MC < MR**: keep producing – you're making profit on each extra unit.
- If **MC = MR**: stop here – you're at the perfect level (profit maximised!)
- If **MC > MR**: you've gone too far – every extra unit now loses money.

5.1.2 The objectives of firms

Profit maximisation

🤑 **Example**: Imagine a business that sells handmade candles.
It costs £3 (MC) to make one candle, and they sell it for £6 (MR) – great!
But if the cost rises to £6.50 while still selling at £6, they're losing money on every new candle. Time to stop.



Analysis

The diagram shows that the firm will produce at $P_1 Q_1$. At the profit maximisation point (where MC = MR), the firm is making as much money as it possibly can from selling its products. The price (P_1) at this output is determined by the AR (average revenue) curve. The average cost (C_1) per unit is determined by the AC (average total cost) curve.

If **$P_1 > C_1$**, the firm is making more on each unit than it costs to produce – that's called **supernormal profit** (or abnormal profit). It's the extra profit over and above normal expectations.

👉 Formula:
Supernormal profit = ($P_1 - C_1$) × Q_1

🧁 **Example**:
Let's say a bakery sells cupcakes for £4 (P_1), and they cost £2 to make (C_1). If it sells 100 cupcakes (Q_1), then:
Supernormal profit = (£4 – £2) × 100 = £200

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Profit maximisation

🧠 **Why Don't Firms Always Maximise Profit in Real Life?**

Although the MC = MR rule sounds simple, it's harder to apply in real life.

1. Hard to measure

Firms don't always know exactly what their marginal costs and revenues are – especially when prices or production change constantly.

2. Short-term challenges

Costs can change quickly, but businesses can't constantly change prices – that would confuse customers or reduce demand.

3. Long-term adjustments

Over time, firms can change prices or reduce costs to move closer to that ideal profit-maximising level.

4. Government intervention

Sometimes, if prices get too high (especially in essential services), the **Competition Commission** might step in to protect consumers. This can stop firms from pushing prices up, even if that's where profit is maximised.

5.1.2 The objectives of firms

Revenue maximisation

Sometimes, instead of aiming for maximum **profit**, firms go for **revenue maximisation** – that means making as much money from **sales** as possible, even if it doesn't lead to the highest profit. It focuses on increasing total revenue – which is calculated as:

Total Revenue = Price × Quantity Sold

🧠 **Why Would a Firm Do This?**

Not all firms are laser-focused on profit. Here's why:

1. Manager Bonuses

In some companies, sales managers earn bonuses based on revenue, not profit. This encourages them to sell as much as possible, even if costs rise.

2. Grow Fast and Beat Competitors

Start-ups or growing businesses (think: Spotify in its early days) might focus on grabbing customers quickly by keeping prices low and selling more – even if profits are tiny or non-existent.

3. Economies of Scale

Selling more units can help reduce **average costs** (e.g. bulk buying materials), making production more efficient in the long run.

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5.1.2 The objectives of firms

Revenue maximisation

How Do Firms Know When They've Hit Revenue Max?

Firms will produce **up to the point where Marginal Revenue (MR) = 0**.

🧠 **Marginal Revenue** is the extra money a firm makes from selling one more unit.

- If **MR > 0**, selling more still increases revenue = 👍
- If **MR = 0**, they've reached the max – no extra revenue from extra sales.
- If **MR < 0**, they're actually losing revenue on each extra unit.

📌 So, revenue-maximising firms stop producing when **MR = 0**.

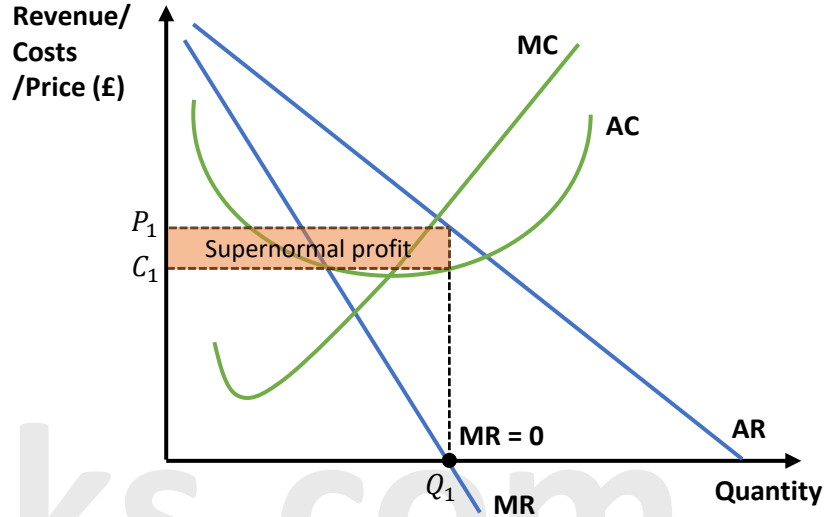
📦 **Example:**

Let's say a bakery sells cupcakes. As it lowers the price, it sells more. At some point, lowering the price further doesn't bring in more money overall – maybe because they've had to cut prices too much. That's the point where **MR = 0** – and where they'll stop if they're trying to maximise revenue.

Imagine a clothing brand selling t-shirts. If lowering the price helps them sell more and generate £10,000 in revenue (even if profit is only £1,000), they might go for it – especially if they want to dominate the market or hit bonus targets.

5.1.2 The objectives of firms

Revenue maximisation



Analysis

When a business is aiming to **maximise revenue**, it keeps increasing output until **MR = 0** – in other words, selling one more unit doesn't bring in any extra money.

At this point:

- The **price charged** is **P_1**
- The **average cost** of production is **C_1**
- The firm still earns **supernormal profit**, calculated as:
  👉 **$(P_1 - C_1) \times Q_1$**

🎯 But here's the catch:
While they do make supernormal profit, it's **less than** what they could have made if they followed the **profit maximisation rule** (where MR = MC). So, they're trading off some profit for more sales.

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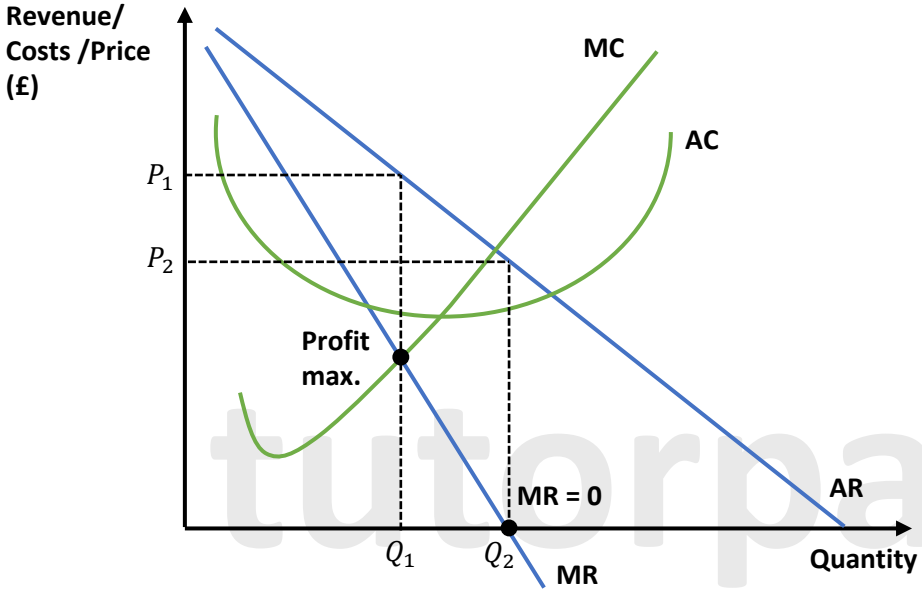
Profit v Revenue maximisation



To **revenue maximise**, a firm will produce at the point where **marginal revenue (MR) = 0**. This is because if MR is still positive, making and selling one more unit will still add to total revenue. So, the firm keeps producing until adding another unit brings in no extra money.

This means they produce a larger quantity, let's call it **Q2**, and sell at a lower price **P2**. In contrast, if they were **profit maximising**, they'd produce where **MR = MC**, which is at a smaller output (**Q1**) and a higher price (**P1**).

In simple terms:
Revenue maximisation = more products sold, lower price.
Profit maximisation = fewer products sold, higher price per unit.

5.1.2 The objectives of firms

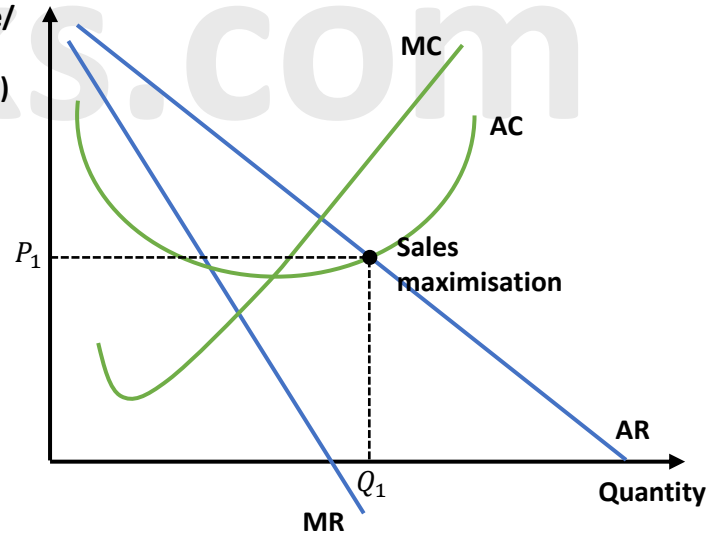
Sales maximisation

Some businesses aren't just chasing profit , instead, they aim to **sell as many units as possible**. This is known as **sales maximisation**.

This happens where average cost (AC) = average revenue (AR).
This is also called the **breakeven point** – where the firm isn't making a loss, but it isn't making a super profit either (just covering all costs, including normal profit).

Why would a business want to do this?

Let's say a company is running a **big end-of-season sale**. Their goal? Get rid of as much stock as they can – even if they don't make much profit – as long as they're not losing money on each sale.



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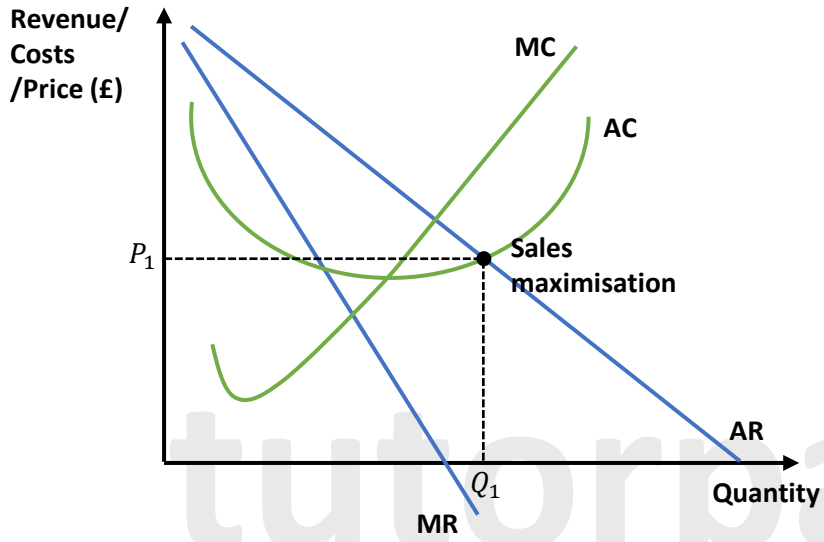
5.1.2 The objectives of firms

Sales maximisation



Analysis

At the **sales maximisation point**, output is at **Q_1** and the selling price is **P_1**.

Here:

- **AR = AC**, so the **firm breaks even** – no supernormal (extra) profit, but no losses either.
- The firm earns **normal profit**, which is just enough to cover all opportunity costs.

5.1.2 The objectives of firms

Satisficing

In the world of business, not everyone wants to squeeze out every last penny of profit. Sometimes, firms aim for a more relaxed objective called **satisficing** – basically making **just enough profit to keep the owners happy**, while also focusing on other goals.

Why does this happen?

It all comes down to something called the **principal-agent problem**. Here's what that means:

- **Principals** = the shareholders or owners of the business
- **Agents** = the managers or directors who run the business day to day

Now, these two groups don't always want the same thing. Owners want **maximum profit** to boost share prices and get big dividends 💰. But managers might have other things in mind – like keeping their jobs, enjoying big salaries, or getting bonuses and perks. So, managers will make sure the firm makes **enough** profit to avoid complaints from the owners… but they might not push for maximum profit if it gets in the way of their own goals.

So, what do managers actually do?

They **satisfice** – they hit a profit target that's "good enough" rather than perfect. This lets them also:

- Spend more on fancy offices or extra staff
- Take less risky decisions
- Give themselves higher wages or bonuses

Of course, doing all this means profits are lower than they could be. But as long as shareholders aren't angry, managers get what they want too. It's a bit of a balancing act.

And how much profit is "good enough"?

That **changes every year**. For example:

- If the economy is down and other firms are making losses, then just breaking even (aka **normal profit**) might be fine.
- But if competitors are booming and raking in profits, shareholders will expect the same – so "good enough" suddenly means **a lot more**.

5.1.2 The objectives of firms

Other business objectives

Not every business is all about the money. While **profit maximisation** is a big goal for many firms, others are driven by different reasons.

1. 🌱 Growth

Some businesses aim to grow bigger and better.

- **Business growth** means expanding in size i.e., more employees, more customers, bigger market share, or more revenue.
- Companies chasing growth often focus on:
  - **Sales revenue** (the money they make from selling goods/services)
  - **Market share** (their slice of the overall industry)
- Growing helps firms **cut costs** through **economies of scale** meaning they can produce more at a lower average cost.
- A growing business is also **less likely to fail** in the long run.

🧃 **Example:** A juice company might reinvest all its profits to open new stores instead of just pocketing the cash.

2. Survival

Especially in the early days, just staying alive is the goal.

- **Business survival** means covering your costs and keeping the doors open.
- It's especially important for startups as around **1 in 4 new businesses fail in their first year.**
- Once a business gets stable, it can shift its focus to making bigger profits.

🍔 **Example:** A new burger joint might not worry about big profits yet; just about paying staff, suppliers, and rent on time.

5.1.2 The objectives of firms

Other business objectives

3. 📈 Increasing Market Share

Market share means the portion of total sales a company has in its industry like a slice of the pie.

Some firms try to grab a bigger slice by selling more products, even if it means making less profit for a while. Why? Because a bigger market share can help them **stay in business** long term and beat out the competition.

🧃 **Example:** Imagine a new smoothie brand that sells its drinks at a super low price to get into lots of stores and build a fanbase. They might not make big profits straight away, but they'll win loyal customers who keep coming back. Once they've grown, they can raise prices and start earning more.

4. 🌟 Improving Quality

Firms often focus on making their **products or services better** to stand out.

Improving **quality** means offering something that works well, lasts longer, or feels premium like friendly service, faster delivery, or tastier food. This can help firms build a good reputation, attract more customers, and even **charge higher prices**, because people are happy to pay more for quality.

👟 **Example:** A shoe company might use better materials and offer free repairs. Customers trust the brand, recommend it to others, and are willing to pay a bit extra.

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5.1.2 The objectives of firms

Divorce of ownership from control

What is it?
This happens when the people who **own** a business (like shareholders) are different from the people who **run** it (like managers or directors).

This is common in **big companies**, where the day-to-day decisions are made by professionals, not the owners. It can lead to a situation where the goals of the owners and the managers **don't always match**.

💼 **The Principal–Agent Problem**

Let's break that down:

- **Principals** = The owners (e.g. shareholders)
- **Agents** = The people hired to run the business (e.g. managers)

The issue? The manager might care more about their own perks (like a bonus or job security) than doing what's best for the shareholder (like boosting dividends or profits). This mismatch is known as the **principal–agent problem** and is also linked to **asymmetric information** where one party knows more than the other and uses that knowledge to benefit themselves.

🔍 Example: A manager might decide to spend company money on fancy office furniture that makes their job nicer, even if it doesn't increase company profits.

5.1.2 The objectives of firms

Divorce of ownership from control

📋 **Examples of This in Real Life**

Example	What Happens
Family Businesses	- Not every family member runs the business. - A few might be in charge, or they might hire external managers. - Some family members might value **long-term stability** or sticking to **family traditions**, while others want fast growth and **profit maximisation**.👩‍👧 For example, a bakery run by a second-generation sibling might want to expand into supermarkets, while the founders want to keep it local and personal.
Public Limited Companies (PLCs)	- In large, stock-market-listed companies, **shareholders** own the business, but **managers** and a **board of directors** make the decisions. - Shareholders might want **maximum profits** (so their shares go up), but managers might prefer growing the company size or brand reputation instead. - 🧠 Think of it like passengers on a cruise ship (owners) wanting a quick trip, but the captain (manager) wants to take the scenic route.

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5.1.3 Perfect competition

Characteristics of perfect competition

Perfect competition is like the ultimate fair market , no one cheats, everyone's equal, and the rules are super strict! Here's what makes it tick:

1. Loads of Buyers and Sellers

There are so many participants in the market that no single buyer or seller has the power to influence price.
👉 That's why **firms are called *price takers*** , they just accept the market price.
🛒 **Example**: Think of farmers selling identical tomatoes at a busy market , if one farmer raises their price, people will just buy from the next stall.

2. No Barriers to Entry or Exit

It's easy to join the market (start a business) or leave it , there's no mountain of paperwork, massive start-up cost, or government rules blocking you.
👉 This makes the market **super competitive**.
🧁 **Example**: Anyone can start baking cupcakes at home and begin selling them tomorrow , and they can stop anytime, no strings attached.

3. Perfect Knowledge

Everyone knows everything. Buyers and sellers all have **perfect information**, especially about **prices**.
👉 So if one seller drops their price, **everyone finds out**, and other sellers must do the same.
🔍 **Example**: Online marketplaces where price comparisons are just one Google search away.

4. Identical Products (Homogeneous Goods)

All products are exactly the same , no branding, no added features.
👉 So, if one seller increases their price even a little, customers will go elsewhere immediately.
🥫 **Example**: A litre of bottled water with no label, sold by dozens of vendors , it's all the same, so price is everything.

🧠 Because of this, **demand is perfectly price elastic**, meaning customers respond dramatically to price changes , even a 1p increase could lose you all your customers.

5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

🔧 **How do firms maximise profit in perfect competition?**

To **maximise profit**, firms produce at the output level where:

👉 **Marginal Cost (MC)** = **Marginal Revenue (MR)**

This is the "sweet spot" , the cost of making one more unit is exactly the same as the revenue earned from selling it. No money is being lost or left on the table.

⚖️ **Why can't these firms charge more?**

Because they're **price takers** , which means they **have no market power**.

- There are **lots of sellers**, so no single firm can raise prices without losing all its customers.
- The price is set by the **market** , every firm sells at the **same price**.

That price becomes the firm's:

📌 **Average Revenue (AR)**
📌 **Marginal Revenue (MR)**
📌 **Demand (D)**

So essentially:
P = AR = MR = D

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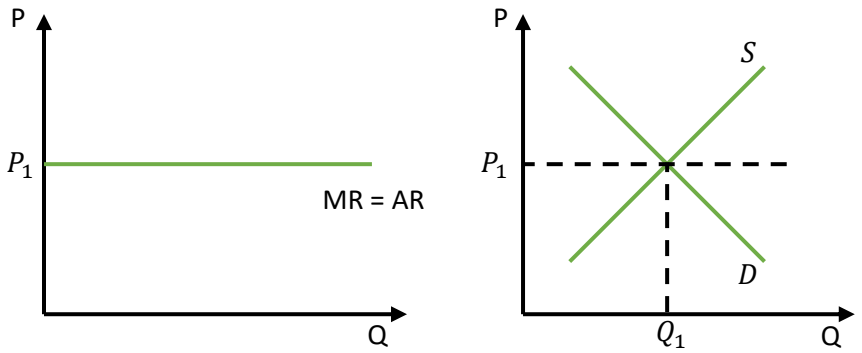
5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run



A Company | Market

📊 **What's happening in the diagrams?**

Left: A company

- The company faces a **horizontal demand curve** at price P_1.
- They accept the market price and choose their quantity where **MC = MR**.

Right: Market

- Price is determined by the **intersection of supply and demand**.
- All firms accept this price (P_1) as the selling price.

5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

🕒 **What's the difference between the short run and long run?**

⏱ **In the short run:**

- Firms can make **supernormal profit** (more than normal) 💸 or even **losses** 💔.
- This happens because there's **not enough time** for new firms to enter or leave the market.

⏳ **In the long run:**

- New firms **enter if profits exist** or **exit if losses mount**.
- This competition **pushes prices down** (if there were profits) or **reduces supply** (if there were losses).
- Eventually, firms make just **normal profit** (they cover all their costs, including opportunity cost).

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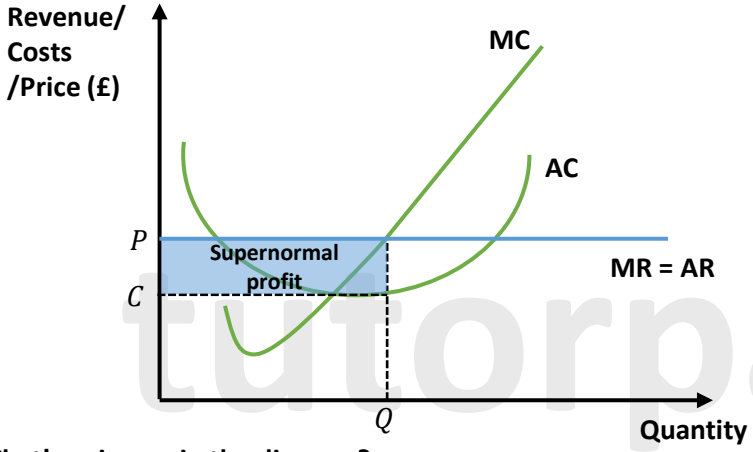
Profit maximising equilibrium in the short run and long run

🎯 Short-run Profit Maximisation

In the **short run**, firms in a **perfectly competitive market** can actually make **supernormal profit.**



💡 What's going on in the diagram?

- The horizontal line (**P**) is the **market price** (and for a perfectly competitive firm, it's also their **AR = MR = D**).
- The firm produces at the point where **MC = MR**, because that's where profits are maximised.

At this output (**Q**):

- The price (P) is **higher than the average cost (C)**
- That gap between price and cost is **profit per unit**
- Multiply that by the quantity produced (Q), and boom , you've got **supernormal profit**

$$\therefore Supernormal\ profit = (P - C) \times Q$$

5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

💸 Short-run Losses in Perfect Competition

Yep , even in **perfect competition**, firms can take a hit and make a **loss** in the short run.

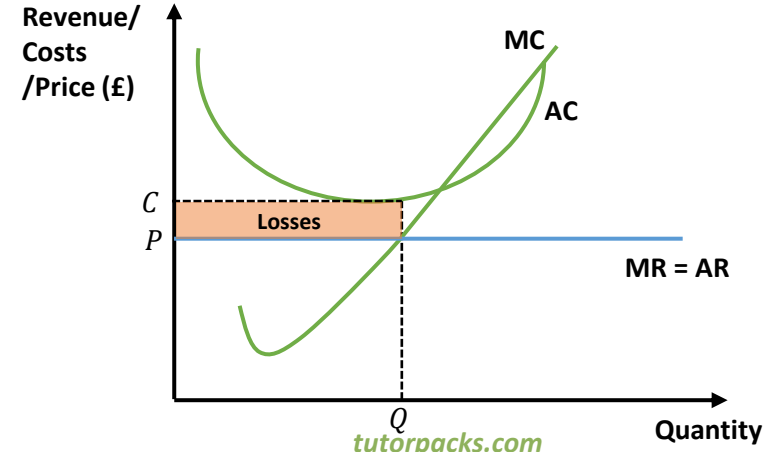
🔍 What's going on here?

In this situation, the firm is still producing at the **profit maximisation output**, which is where **MC = MR** (Marginal Cost = Marginal Revenue). That's the rule for maximising profits , or in this case, **minimising losses**.

But here's the twist:

- The price the firm can charge (P) [which is also its **AR (Average Revenue)]** is **less than** the **AC (Average Cost)** per unit.
- That means each item they sell **doesn't cover its full cost** of production.

Imagine you're selling donuts for £2, but they cost you £3 to make. You're losing £1 on each one , and that adds up fast.



5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

🤔 **Why keep producing?**

Good question. Even though the firm is making a loss, it might still cover its **variable costs** (like wages or ingredients), just not the **fixed costs** (like rent).

As long as **P > AVC (Average Variable Cost)**, it's still better to produce than shut down completely , because you're at least covering something.

📉 **How to calculate the loss:**

The firm's **total loss** is worked out like this:

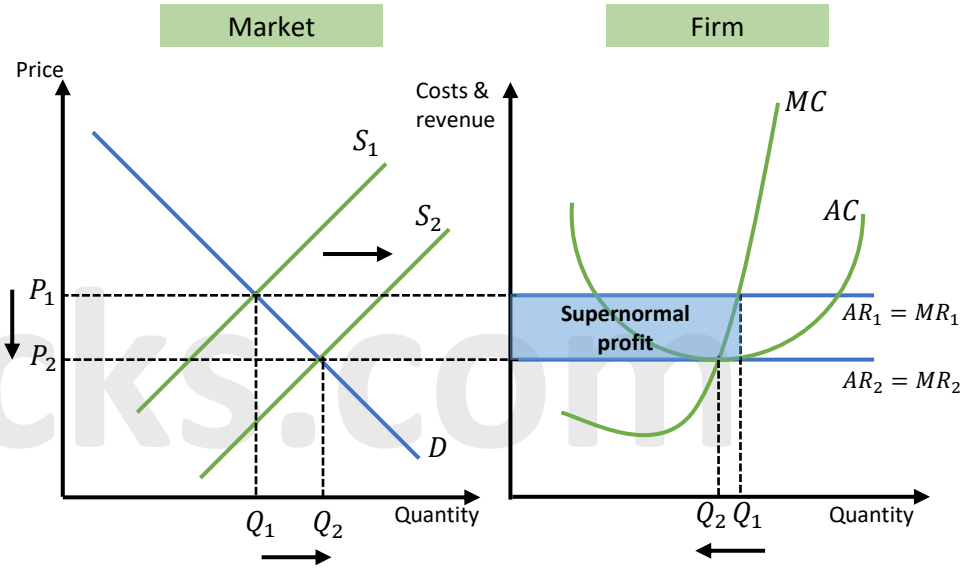
(P – C) × Q

💡 Since C is **greater than** P, this will give you a negative number = a **loss**.

5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

Let's break down how a perfectly competitive market moves from short-run profits to a long-run balance.



💰 **In the Short Run: Supernormal Profits**

In perfect competition, firms can make **supernormal profit.**

- These profits act like a giant magnet 💰 attracting new firms into the industry.
- Why? Because there are **no barriers to entry** – anyone can join in.

Profit maximising equilibrium in the short run and long run

⚖️ **What Happens Next?**

When new firms enter the market, they increase the **overall market supply**. This causes the **supply curve** (S_1) to shift **to the right** (S_2) in the market diagram.

- As supply increases, prices start to **fall** (from P_1 to P_2).
- This means individual firms **can no longer charge the higher price** , they're now **price takers** at the new market price.

📉 **For the Individual Firm:**

- The firm's revenue drops to the new price **P_2**, and now it's producing at a new quantity **Q_2** (smaller than before).
- Its **market share** shrinks because the pie is now divided among more firms.
- At this point, the firm is producing where **average revenue (AR) = average cost (AC)** , meaning it's making just enough to stay in business. That's **normal profit**.

🏁 **In the Long Run...**

In perfect competition, the market always adjusts so that:

✅ Firms that were **making a loss** leave the market.

✅ Firms that were **making supernormal profit** attract competition until the profit disappears.

Eventually, **all firms in the market earn normal profit**, no more, no less.

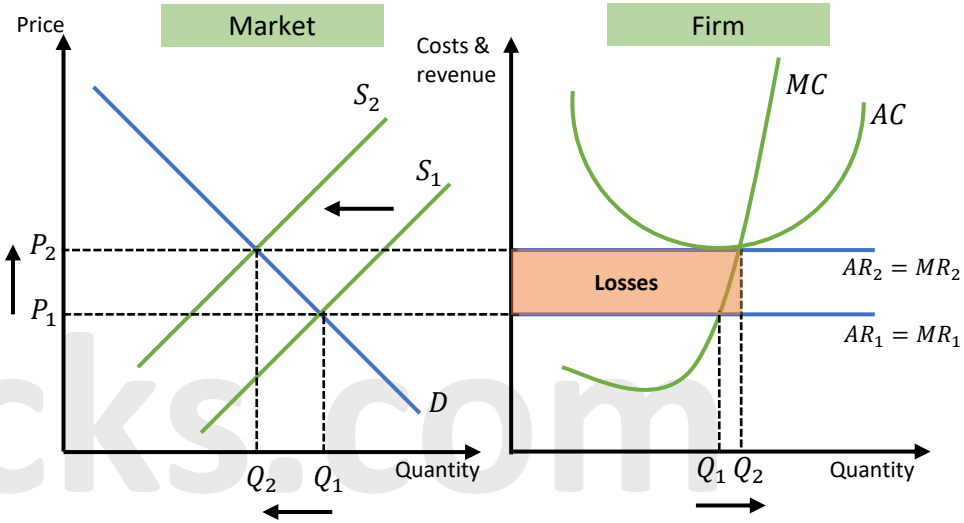
Example 🎯

Imagine a bakery that's earning extra profits from selling croissants. Other bakers notice and open next door. Now croissants are everywhere. Prices drop, and our original bakery is no longer rolling in cash, just breaking even. That's normal profit.

5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

Let's talk about how a perfectly competitive market moves from short-run losses to a long-run balance.



Sometimes in the short-run, even in perfectly competitive markets, firms might **make a loss**. But economics has a way of balancing things out in the long run.

🚪 **So, what happens when firms are losing money?**

- If a firm's **average cost (AC)** is higher than the **price (P)** it can sell at, it's making a **loss**. This is because it costs more to produce each item than they can sell it for.
- Firms are still producing at the **profit-maximising output**, where **MC = MR**, but they're not covering their full costs.
- This is when the **shut-down rule** comes in. If the price drops below the **average variable cost (AVC)**, the firm should shut down immediately. But if the price is above AVC, it may continue in the short run hoping for better days.

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5.1.3 Perfect competition

Profit maximising equilibrium in the short run and long run

👏 **Firms Start Exiting...**

- Because there's **no barrier to exit** in perfect competition, it's super easy for struggling firms to leave.
- As firms exit, **supply in the market decreases** (S_1 shifts to S_2).
- This **reduces total market output** from Q_1 to Q_2.
- Fewer firms = lower supply = **higher price** in the industry (P_1 rises to P_2).

🔄 **What happens to the remaining firms?**

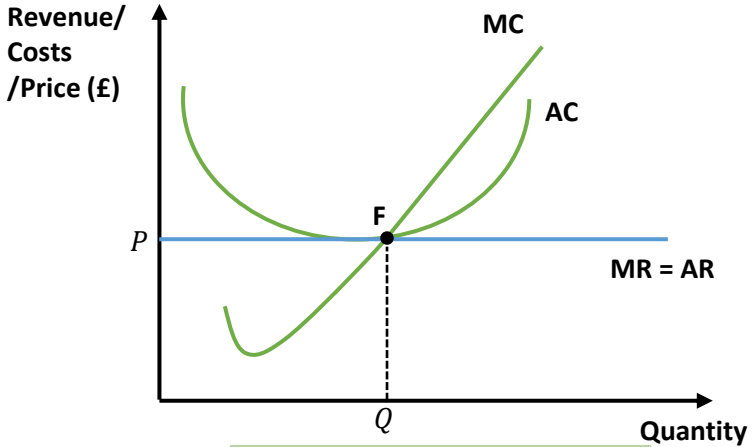
- The remaining firms benefit from this higher market price. Their **output increases** (they get a bigger slice of the smaller market pie).
- They now produce at the point where **AR = AC**, which means they are making **normal profit** – just enough to stay in the game, covering all their costs, including opportunity costs.

5.1.3 Perfect competition

Efficient allocation of resources

In a perfectly competitive market, think farmers at a fruit market , everyone's selling identical apples, no one can control the price, and buyers have tons of choice.

- **Profit maximisation** happens where **marginal cost (MC) = marginal revenue (MR)** , this is where the firm is making as much profit as it can without losing customers. (Let's call this point **F** on the graph).
- The firm is **productively efficient** at this point too because **MC = average cost (AC)** , it's producing at the lowest possible cost per unit.
- It's also **allocatively efficient**, where **price (P) = MC**, which means society is getting the exact amount of the good that it wants.
- But… firms in perfect competition usually only make **normal profit** (just enough to stay in business), so there's not much left for investing in new tech or better products. That's why **dynamic efficiency** is unlikely.



Perfect competition

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5.1.4 Monopolistic competition

Characteristics of monopolistically competitive markets

Monopolistic competition is a type of market structure that sits somewhere between perfect competition and a monopoly. It's super common in the real world – think coffee shops, nail salons, or small clothing brands. Here's a break down:

1. Lots of Small Firms and buyers

There are **many small businesses** in the market, and none of them are big enough to dominate. Each one operates **independently**, meaning their decisions don't really affect others. This also means no one seller or buyer has a large price setting power.

Example: Your local bakery doesn't need to worry about how another bakery two blocks away sets its prices – they just focus on their own delicious cupcakes.

2. Easy to Enter and Exit

There are **low barriers to entry and exit**, meaning it's fairly simple for new firms to start up or for struggling firms to leave. This keeps competition alive and buzzing.

Example: If someone wants to start a small online t-shirt store, they can – without needing millions in capital or government approvals.

3. Slightly Differentiated Products

Products are **not identical** – they're **slightly differentiated**. This means firms try to make their goods or services stand out through branding, style, quality, or customer service.

Example: Two hair salons may offer the same service, but one focuses on speed and convenience, while the other is all about a luxurious, pampering experience.

5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

In the Short Run: Time to Make Some (Supernormal) Profit!

In **monopolistic competition**, firms aim to **maximise profit** just like everyone else. To do that, they produce at the output level where:

Marginal Cost (MC) = Marginal Revenue (MR)
This is the sweet spot where the cost of making one more unit exactly equals the revenue earned from selling it.

Now, here's the cool bit – because the firm offers a **differentiated product** (something that stands out in some way), it has **some control over price**. This means it's a **price maker**, not a price taker like in perfect competition.

Example: Imagine a cupcake shop that offers gluten-free, unicorn-themed cupcakes. Customers love them, and since no one else sells exactly the same thing, the shop can charge a little more.

As a result, in the short run, the firm can earn **supernormal profit** – which is basically profit above and beyond covering all costs (including opportunity cost).

In the Long Run: Hello, Normal Profit

But this doesn't last forever. In the long run, things change.

Because it's **easy to enter the market** (low barriers to entry), new firms get attracted by those juicy profits. They jump in and offer their own unicorn cupcakes.

More firms = more competition = prices fall
Each firm now gets a smaller piece of the pie (market share shrinks)

Eventually, the extra profit disappears, and all the firms are left earning **normal profit**. That's just enough to keep them going – covering all their costs, but nothing extra.

Profit maximising equilibrium in the short run and long run

🔄 **How Firms Try to Stay Ahead**

To keep that edge and stay profitable a bit longer, firms get creative. They try to **differentiate** their product even more:

🎯 **Example**: A barber shop starts offering free coffee, a pool table, and Netflix while you wait – just to stand out and hold onto their customers.

5.1.4 Monopolistic competition

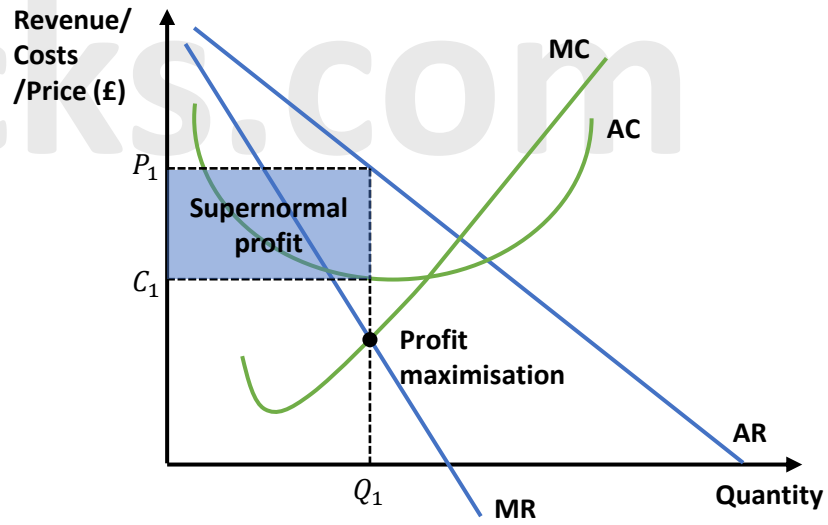
Profit maximising equilibrium in the short run and long run

🎯 **Short-Run Profit Maximisation in Monopolistic Competition**

In the **short run**, firms in **monopolistic competition** can make **supernormal profit.**

💡 **Why? Because They're Not Just Selling Any Old Thing**

Firms in monopolistic competition sell **differentiated products** – meaning their goods or services have something that sets them apart. It could be branding, quality, customer service, or even location. This gives them **market power**, which means they can charge a price above marginal cost.



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5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

📈 **Profit Maximising Point**

The magic spot where the firm maximises profit is where:

🟢 **Marginal Cost (MC) = Marginal Revenue (MR)**

At this point:

- The firm is producing **Q_1 units**
- It's charging a price of **P_1**
- Its **average cost (AC)** is **C_1**

Since **$P_1 > C_1$**, the firm is making **supernormal profit**, shown by the blue box on the graph.

✏️ **The Profit Formula:**

To calculate the profit:

Supernormal profit = $(P_1 - C_1) \times Q_1$

Think of it like this:

- You sell each item for £10 (P_1),
- It costs you £6 to make (C_1),
- You sell 100 of them (Q_1),
- So, profit = (£10 - £6) × 100 = **£400**

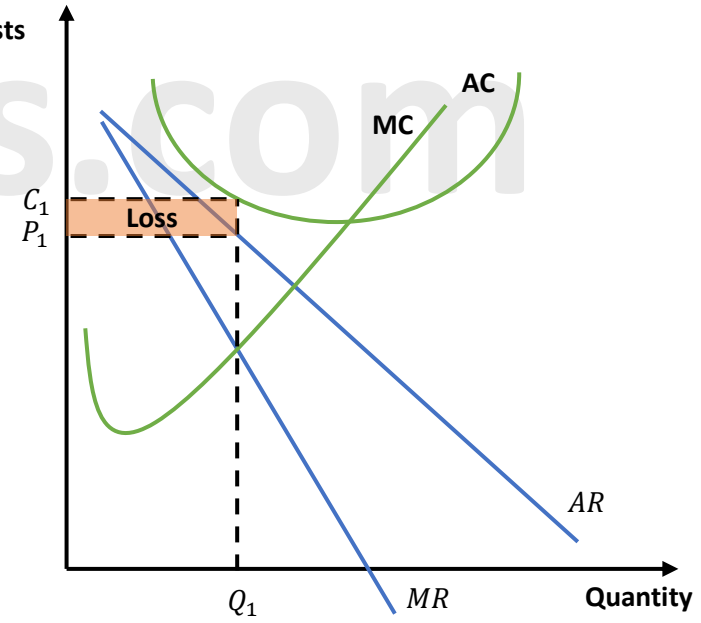
5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

😬 **Short-Run Losses in Monopolistic Competition**

Just like businesses can earn profits, they can also make **losses**, especially in the **short run**.

In **monopolistic competition**, where lots of small firms sell slightly different products (like barbershops, cafés, or nail salons), firms sometimes find themselves in a situation where they're not even covering all their costs. That's when we say they're making a **loss**.



Profit maximising equilibrium in the short run and long run

💡 **What's Happening on the Diagram?**

- The firm is operating at the **profit maximisation level of output**, where:
    - **Marginal Cost (MC) = Marginal Revenue (MR)**
- At this output level (Q_1), the **Average Revenue (AR)** (or the price they're charging, P_1) is **less than** the **Average Cost (AC)**, which is **C_1**.

That means:

- The firm isn't making enough per product to cover everything it costs to produce them , hence, it's in the red. 😟

📉 **The Loss Formula:**

To calculate the loss:

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

Imagine this:

- You charge £4 per unit (P_1)
- It costs you £6 per unit to make (C_1)
- You sell 100 units (Q_1)

Loss = (£4 - £6) × 100 = **-£200**

- That's a £200 loss.

5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

📜 **Why Does This Happen?**

Firms in monopolistic competition have **some market power** thanks to their **product differentiation** but it doesn't protect them from:

- Falling demand
- Rising costs
- Tough competition

5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

Moving from Short-Run Profit or Loss to Long-Run Equilibrium

From Supernormal Profit to Normal Profit

- In **monopolistic competition**, if firms are making **supernormal profit** (profit above what's needed to keep them in business) in the **short run**, more firms will want a piece of the pie 🍰
    - These new firms are **incentivised** (motivated) by the juicy profits
    - Because **barriers to entry** are low (it's easy to start selling), new competitors can enter without much hassle
- As more firms enter:
    - There's more competition
    - The market becomes more crowded
    - Prices start to fall 📉
    - Demand for each individual firm drops (since customers have more options)
- Eventually, that **supernormal profit gets eroded** (wiped out) and firms only make **normal profit** – just enough to stay in the game without losing money.

5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

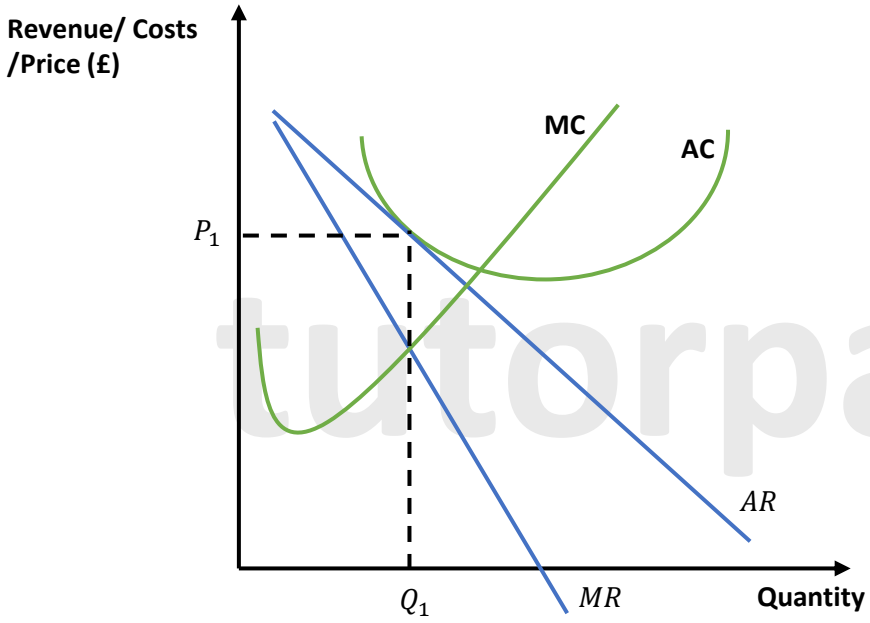
From Losses to Normal Profit

- On the flip side, if firms are making **losses** in the short run (where costs are higher than revenue), not all will stick around 👋
    - The **shut down rule** says a firm should shut down if it can't even cover its **average variable costs**
    - Because **barriers to exit** are also low, it's easy for struggling firms to leave the market
- When firms exit:
    - Market supply decreases 📉
    - Prices go up as fewer goods are being sold
    - The firms that remain see an increase in demand and revenue
    - Eventually, these firms can cover their costs and move back to making **normal profit**

5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

Moving from Short-Run Profit or Loss to Long-Run Equilibrium



5.1.4 Monopolistic competition

Profit maximising equilibrium in the short run and long run

Diagram Analysis:

- Initially, a firm produces where **marginal cost = marginal revenue** (MC = MR), which is the **profit maximisation point**
- At that point, if **price (P_1)** is equal to **average cost (AC)**, the firm is making **normal profit**
- **In the long run**, monopolistic competition always brings firms back to normal profit because:
  - If firms are **losing money**, they leave the market, shrinking supply and raising prices until losses disappear.
  - If firms are making **supernormal profit**, new competitors join in, increasing supply and lowering prices until extra profit is gone.

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5.1.4 Monopolistic competition

Non-price competition

Non-price competition is all about attracting customers without lowering prices. Instead, businesses focus on what makes them stand out like their service, style, or story.

It's super common in **monopolistic competition**, where lots of firms sell similar but slightly different products. The goal? To increase **brand loyalty**, **market share**, and make their product seem unique (this is called **product differentiation**).

🛠️ **So How Do Firms Compete Without Cutting Prices?**

🗣️ **Word of mouth magic:**
When customers love a business, they talk. A small tattoo studio could post client stories online and in return, happy customers might share their fresh ink on social media. Free buzz and great PR.

🌟 **Amazing customer service:**
Firms can compete by giving customers an experience they'll remember. For instance, a vet who follows up after your dog's check-up with a friendly call or a health update, that kind of care builds loyalty.

🧠 **Unique owner style:**
When a business reflects the owner's personality, it stands out. Picture a second-hand bookshop where the owner handwrites notes in their favourite books or gives personal recommendations. That human touch sticks with people.

🎨 **Local engagement:**
Some businesses get involved in their communities. A café might host local poetry nights, art displays, or sponsor a park clean-up. That shows they care, and customers love that.

5.1.4 Monopolistic competition

Non-price competition

📍 **Location matters:**
If you run a business, you want to be where people already are. A surfboard rental shop right by the beach? Perfect. A florist next to a busy train station? Great for last-minute gifts.

🎯 **Why Bother With All This?**

- Because **not everything's about price**. People love businesses that offer something **different**, make them feel **valued**, or align with their **lifestyle** or **values**.
- And when people feel that way, they don't just buy once. They come back. And they tell their friends.

5.1.5 Oligopoly

Characteristics of oligopoly

Most markets we shop in every day (like supermarkets, banks, and petrol stations) are **oligopolies**. This means the market is dominated by just a few powerful firms. Let's break down what makes an oligopoly so unique 👇

🚪 **1. High Barriers to Entry and Exit**

Barriers to entry are things that make it hard for new firms to enter a market. In an oligopoly, these barriers are **super high**.

- **Getting in is tough**: A few big companies dominate the market. It takes a lot of **money** to compete. For example, starting a new mobile network or energy company could cost **billions**.
- **Getting out is no fun either**: Firms often face **sunk costs**, expenses they can't get back. Think of a mobile company spending billions on 5G rights. If they quit, that money is gone forever.

🔢 **2. High Market Concentration**

An oligopoly has a **high concentration ratio**, meaning just a few firms hold most of the power.

- This is measured using something like a **5-firm concentration ratio**, which shows how much of the market the top five companies' control.
- The **higher the ratio**, the **more concentrated** the market is.

💡 **Example**: In the US **smartphone market**, Apple and Samsung together dominate over 80% of sales. The remaining companies fight for the rest.

5.1.5 Oligopoly

Characteristics of oligopoly

🥊 **3. Interdependence Between Firms**

In an oligopoly, firms **watch each other like hawks** 🦅.

- Every decision (price change, advertising campaign, product launch) affects the others.
- This leads to **strategic thinking** and even **game theory** (a tool used to predict rival behaviour, like a game of chess).
- Think of petrol stations: if one cuts prices, the others usually follow. They're all deeply **interconnected.**

🎨 **4. Product Differentiation**

Even when products look the same, brands **try hard to stand out**. This is called **differentiation**.

- Products are often **branded** so customers feel they're getting something special.
- Even **petrol**, which is pretty much the same everywhere, is branded to seem different (e.g. "Ultimate Clean Fuel!").
- Consumers **believe** these brands are different, and often stay **loyal** to them.

💡 Example: Coke vs Pepsi. Same fizzy drink, different branding, loyal fans.

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N-firm concentration ratio

📐 **What is a concentration ratio?**

A **concentration ratio** tells us what percentage of total market sales is owned by the largest firms in an industry. It could be a **4-firm**, **10-firm**, or **20-firm** ratio – depending on how many firms we're looking at.

👀 **What does the number tell us?**

A **5-firm concentration ratio** of **60% or more** suggests that the market is an **oligopoly** – a few big players dominating.
🥤 **Example**: In the UK **soft drinks market**, Coca-Cola, Pepsi, and a few others take up most of the shelf space – a classic oligopoly.

A **1-firm concentration ratio** of **100%** would mean one firm controls the entire market – this is a **pure monopoly**.
💧 **Example**: If only one company supplied tap water to every household in a country, that's a monopoly.

🛑 **What counts as a monopoly?**

In the UK, the **Competition and Markets Authority (CMA)** says a firm with **more than 25% market share** could be considered a **monopoly**.

This doesn't mean the firm is illegal, but it does mean the government might step in if that firm tries to get even bigger – for example, through a **merger** or **acquisition** that would give it too much power.

🛒 **Example**: If Amazon wanted to buy another major online retailer and that deal pushed its market share above 25%, the CMA might block it to protect competition.

5.1.5 Oligopoly

N-firm concentration ratio

Worked Example:

The table below shows the total revenue earned by various streaming platforms in the UK over a 3-month period. Use this data to calculate the **five-firm concentration ratio (CR5)**.

Streaming Platform	Revenue (£ million)
FlickFlix	210
ShowBox	160
BingeNow	90
StreamIt	120
PixelPlay	70
CineZone	45
WatchMe	25
ChillTV	35
VidRush	20
Others	15
Total	**790**

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N-firm concentration ratio

Worked Example:

Answer:

Step 1: Identify the top five platforms by revenue

Let's find the five platforms with the highest revenue:

1. **FlickFlix** – £210 million
2. **ShowBox** – £160 million
3. **StreamIt** – £120 million
4. **BingeNow** – £90 million
5. **PixelPlay** – £70 million

Add them up:

$$210 + 160 + 120 + 90 + 70 = 650\ million$$

📊 **Step 2: Work Out the Percentage of Total Sales**

To calculate the concentration ratio, we divide the combined revenue of the top five platforms by the total market revenue and multiply by 100:

$$\frac{650}{790} \times 100 = 82.28\%$$

Final Answer:

The **five-firm concentration ratio (CR5)** is **82.28%**.

That means the top 5 streaming platforms take up over **82**% of the market. That's quite a concentrated market , hints at **oligopoly** behaviour. It would be hard for a new streaming platform to enter and compete unless they offer something unique (or have very deep pockets).

Want to imagine it? Out of every £1 spent in streaming platforms, about **82p** goes to one of those top 5 big names.

5.1.5 Oligopoly

Reasons for collusive and non-collusive behaviour

In **oligopoly markets**, only a few firms dominate. Think of the streaming industry , Netflix, Disney+, Amazon Prime, and a few others. Because there are so few players, what one firm does can seriously affect the others.

🔒 **Collusive Behaviour (They Work Together):**

This happens when firms **cooperate** instead of compete. They may secretly agree to **fix prices**, limit supply, or split the market to reduce competition. This kind of behaviour **reduces choice** and **raises prices** for consumers.

Example: Imagine three pizza chains in a town secretly agree to all charge £10 for a margherita pizza. No discounts. No undercutting. That's collusion.

- ✅ Helps them **maximise industry profit**
- ✅ **Reduces uncertainty** (no surprise discounts from competitors)
- ❌ But it's **illegal** in most countries (like the UK)
- ❌ Carries **risks** — one firm might break the deal and cut prices
- ❌ Can be investigated and fined by regulators (like the CMA in the UK)

💥 **Non-Collusive Behaviour (They Compete Hard):**

Here, firms **compete independently**. They may try to grab more market share through:

- Lower prices
- Better advertising
- More innovative products

Example: Think about Uber vs Bolt , always fighting for customers with promotions and offers. That's non-collusive rivalry.

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Reasons for collusive and non-collusive behaviour

💡 Why Do Firms Collude? (And When It Works Best)

Reason	Why it encourages collusion
Few competitors	Easier to keep track of each other and agree quietly on prices or output.
Weak regulation	If regulators aren't watching closely, firms might take the chance to break the rules.
Similar costs	If all firms face the same costs (e.g. electricity providers using the same infrastructure), they're easier to align.
High barriers to entry	It's hard for new players to join the market, so existing firms feel "safe" colluding.
Similar products & prices	If everyone's offering the same service (like broadband), there's less need to undercut prices.

🧠 Final Thought:

Firms in an oligopoly can either **fight each other** or **team up in secret**. When they compete, customers win. When they collude, customers pay more. That's why regulators keep a close eye on industries like airlines, energy, telecoms, and even chocolate makers!

5.1.5 Oligopoly

Types of collusion

Collusion happens when firms in an oligopoly (a market with just a few big players) work together instead of competing. It's like a secret team-up that helps them act like a **monopoly** , meaning they can set prices higher and make life harder for customers.

There are **two main types** of collusion: **overt** and **tacit**.

1 Overt Collusion – The Obvious Kind

This is when companies **explicitly agree** to stop competing and start cooperating. It's **usually illegal**.

Think of it like a group of ice cream trucks all agreeing to charge £4 a scoop, no matter where you go in town 🍦

🔒 A cartel is the most extreme version

A **cartel** is a formal group of firms that collude. They make a proper agreement to do things like:

- **Set prices together** (price fixing)
- **Divide up the market** so each business sticks to its own turf

This agreement is often written down in a **formal document**, and there can be **fines** for anyone in the group who breaks the rules.

🧠 Example: A group of tech repair shops could form a cartel and all agree to charge £80 for screen repairs, even if one of them would normally do it for £50.

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Types of collusion

🤔 **Why Do Cartels Break?**

Here's the juicy bit , **cartels are hard to maintain**.

Firms get tempted to **cheat** and secretly lower prices to steal customers from their "partners." Nobody wants to be the last one to break the deal. It's like playing Monopoly and agreeing not to buy any more properties , until one person secretly grabs Mayfair. 🎲

The more successful the cartel is (i.e. high prices, good profits), the **more tempting it is to cheat** and grab an even bigger slice of the pie.

👀 **What if Collusion is Too Risky?**

Because **collusion is illegal** in many places (especially overt collusion), some firms might **go for tacit collusion** instead quiet cooperation without paperwork.

2️⃣ **Tacit Collusion – The Silent Agreement**

Tacit collusion is sneakier. Firms **don't talk to each other** or sign anything, but they all seem to follow the same behaviour , like they've got an unspoken understanding.

Imagine your local cafés. One raises the price of coffee to £3, and within days, the others match it without ever meeting.

a) The most common type: Price leadership

This is when the biggest or most powerful firm sets the price, and others just copy.

5.1.5 Oligopoly

Types of collusion

b) Barometric Firm Leadership

Here, a firm becomes the industry's "weather forecaster." It doesn't dominate, but it's really good at **predicting market trends,** and others trust its lead.

Example: A smaller telecom company raises prices just before costs rise. Other companies see this and think, "Wow, they must know something," and follow suit.

Why it's hard to stop tacit collusion:

- Firms aren't breaking any obvious rules (no emails or deals)
- **Regulators** (like the CMA in the UK) struggle to prove wrongdoing
- It has **similar effects** as overt collusion:
    - Higher prices
    - Less competition
    - Still kind of bad for consumers

🚨 **Remember:**

While it might seem smart for businesses, **collusion is bad for consumers**. It leads to:

- Higher prices 💰
- Less choice 🤷‍♀️
- Lower quality 🛠️

And that's why regulators like the **CMA** (Competition and Markets Authority) keep an eye out.

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5.1.5 Oligopoly

Interdependence and uncertainty in oligopoly

Game theory is like the ultimate strategy game used by businesses to make smart decisions when they know other businesses are also making moves. It's all about **strategy**, **interdependence**, and **thinking ahead** – especially in markets like oligopolies where a few big players rule the game.

The Prisoners' Dilemma (Classic Game Theory Example)

Maya and Luca are arrested after being caught near the scene of a museum art heist. The police are *pretty sure* they're guilty, but they don't have enough evidence to convict them unless one of them confesses.

- They're **interrogated separately**
- They've **agreed to stay silent**... but the police are offering a **deal**

The Payoff Matrix

	Luca stays silent	**Luca confesses**
Maya stays silent	2 years/ 2 years	8 years / 1 year
Maya confesses	1 year / 8 years	4 years / 4 years

- If both **stay quiet**, they each get **2 years** – the best outcome for both.
- If one confesses and the other doesn't, the one who confesses **gets off lightly (1 year)** while the other gets slammed with **8 years**.
- If both confess, they each get **4 years**.

So, what do they do? **They both confess** – because they're scared of getting betrayed. That's the **dominant strategy** – the option that's safest regardless of what the other person does.

Firms act in a similar way when making business decisions.

5.1.5 Oligopoly

Interdependence and uncertainty in oligopoly

Real-World Example: Game Theory in Action

Let's use **Netflix** and **Disney+**.

They're deciding whether to invest heavily in **original content** (expensive shows/movies) or just **license existing content** (cheaper but less exciting).

The £ amount represents the likely profits.

	Disney+ Licenses	**Disney+ Invests**
Netflix Licenses	£2bn / £2bn	£1bn / £3bn
Netflix Invests	£3bn / £1bn	£1.5bn / £1.5bn

- If both **license**, they each get **£2bn profit** – a chill but safe choice.
- If one invests while the other licenses, the investor **wins big**.
- If both invest, profits drop because costs are so high.

Firms often end up **investing anyway**, fearing they'll fall behind. The result? Higher costs, lower profits, but they stay competitive.

How Firms Use Game Theory

Firms use game theory to:

- Set **pricing strategies** (e.g. should Google increase cloud service prices?)
- Decide on **advertising spend** (e.g. Pepsi vs. Coca-Cola)
- Launch **new products** (e.g. PlayStation vs. Xbox)
- Choose **partnerships** (e.g. airlines forming alliances)

They basically ask:

"If I do this... what will my rival do?"

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5.1.5 Oligopoly

The difference between cooperation and collusion

✅ **Cooperation (The Legal Kind)**

Cooperation is when **rival businesses work together** but in a way that's completely **legal**. They might share ideas, tools, factories, or expertise to reach a shared goal, and **they follow the law** while doing it.

Why cooperate?
Because teamwork can help them:

- Cut costs (hello, shared resources)
- Make better products
- Reach more customers

This kind of team-up doesn't break **antitrust laws** (rules that stop businesses from becoming too powerful or unfair).

🛠 **Example:**
Imagine LEGO and a car company like Ferrari teaming up to make model car kits. They're not trying to control the toy or car market instead they're just combining creativity and brand power for mutual benefit.

👫 **Types of cooperation include:**

- **Joint ventures:** Two companies start a shared project (e.g., Apple and Goldman Sachs teaming up for the Apple Card)
- **Strategic alliances:** Firms stay independent but work closely on something specific like Netflix partnering with Samsung to optimise streaming on smart TVs

💡 Result? More **innovation**, **choice**, and possibly even **lower prices** for customers.

5.1.5 Oligopoly

The difference between cooperation and collusion

🚫 **Collusion (The Sneaky, Illegal Kind)**

Now, this is where things get shady.

Collusion is when competing businesses make **secret or illegal agreements** to:

- Fix prices
- Limit how much they produce
- Divide the market (e.g., "you take the north, we'll take the south")

This kind of behaviour is meant to **reduce competition** and **boost profits**, often at the **expense of consumers**.

💥 Why is it bad?

- Customers end up paying more
- There's less choice
- It messes with the idea of fair market competition

🏴 **Example:**
If two supermarkets agree to keep bread at £2.50 even though one could sell it for £2.00; that's **collusion**. It's like pretending to be rivals but secretly working together to cheat the customer.

⚖️ That's why regulators (like the Competition and Markets Authority in the UK) are always on the lookout. Their job is to **monitor** and **stop** this kind of anti-competitive behaviour to protect what's called **consumer surplus,** basically, the benefit people get from paying less than they're willing to.

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5.1.5 Oligopoly

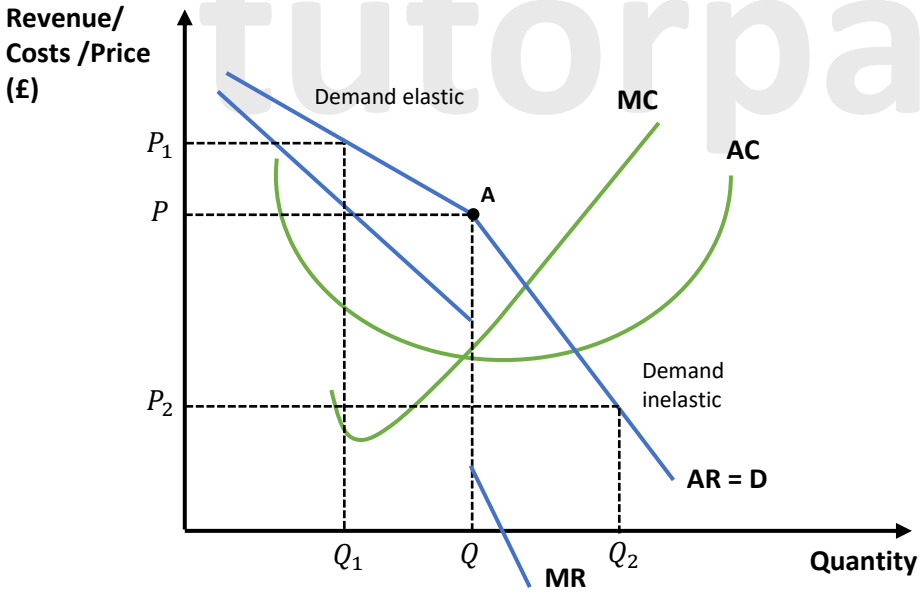
The kinked demand curve model

In an **oligopoly** (a market with only a few big firms like Apple, Samsung, and Huawei), prices often stay surprisingly stable. Why? That's where the **kinked demand curve** steps in to explain.

This model shows us that firms in an oligopoly are **very cautious** about changing prices because they're always watching each other like players in a chess match.

🧩 What's the Kink?

Here the demand curve (which shows how much people buy at different prices) has a sharp bend or **"kink"** in it at the current price level **P**. That kink splits the curve into two parts:



5.1.5 Oligopoly

The kinked demand curve model

1. Elastic Section – Above Price P (Don't raise the price)

- If a firm decides to raise its price (from **P to P_1**), rival firms will probably **not** do the same.
- Customers will run to competitors with cheaper prices.
- Result? The firm **loses a chunk of sales** and total revenue drops.
- This section is called **elastic** because even a small price increase causes a **big drop** in demand.

📦 **Example**: Imagine a pizza place raises its price by £2 while others keep theirs the same. People will just order from the cheaper shop next door.

2. Inelastic Section – Below Price P (Don't lower the price either!)

- If a firm lowers its price (to **P_2**), rivals will quickly match it to stay in the game.
- The result? Prices go down for everyone, but **nobody gains customers,** they all just make less money.
- This part is **inelastic**, because the drop in price doesn't lead to a big jump in sales.

📉 **Example**: If phone companies all cut their prices by £50, customers won't switch because the price is the same everywhere and everyone just earns less.

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The kinked demand curve model

🧠 **The Kink Leads to Price Rigidity**

- This whole situation leads to **price rigidity,** a fancy way of saying: prices tend to stick around one level.
- Firms are afraid to change prices because it either causes them to lose customers or lose profits.
- This fear is due to **mutual interdependence;** everyone's decisions are connected.

🤝 **So, What Do Firms Do Instead?**

Since changing prices is risky, firms focus on **non-price competition**. That means they compete in ways other than price:

- Offering better customer service
- Investing in branding and advertising
- Launching new product features

🧪 **Example**: Think of how Coke and Pepsi rarely change prices but they're always dropping new flavours, running ads, and sponsoring concerts!

5.1.5 Oligopoly

The kinked demand curve model

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Reasons for non-price competition

In markets where just a few big players dominate (called *oligopolies*), companies often avoid price wars. Instead of endlessly slashing prices to beat competitors, which hurts everyone's profits, they get creative and compete in other ways. This is called **non-price competition**.

1. Price Leadership (Follow the Leader!)

In some industries, there's a dominant firm aka the **price leader**. Smaller firms don't want to rock the boat, so they just copy the leader's price.

Example: When Apple sets the price for a new iPhone, smaller tech brands may follow suit, keeping prices in a similar range. Instead of lowering prices, these companies compete with features like longer battery life or better cameras.

2. Price Agreements (Let's Not Compete Too Hard)

Sometimes firms *unofficially* agree to keep prices steady especially in markets like airlines or energy. This isn't exactly illegal, but it skirts the line.

To keep customers happy despite high prices, they focus on perks like frequent flyer points or customer service.

Example: Train companies might charge similar prices but compete with better Wi-Fi, quieter carriages, or comfy seats.

3. Price Wars (Everyone Loses)

This happens when firms keep cutting prices to steal customers from each other. It sounds good for buyers, but it can end up being bad for everyone as profits drop, and quality might suffer.

5.1.5 Oligopoly

Reasons for non-price competition

To avoid this chaos, firms turn to non-price tricks like catchy branding or loyalty apps.

Example: Burger chains might keep prices the same but battle over who has the best vegan option or funniest ad campaign.

4. Barriers to Entry (Keeping Newbies Out)

Barriers to entry are things that make it hard for new businesses to enter a market. One-way big firms raise these barriers is by pouring money into advertising and building strong brand loyalty.

When a new company tries to join the market, customers already trust the big names, making it tough to compete, even with lower prices.

Example: A new soda brand might be cheaper than Coca-Cola, but it's hard to convince people to switch from something they've loved for years.

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5.1.5 Oligopoly

Advantages and disadvantages of oligopoly

👍 **Advantages of Oligopoly**

1. Super Profits Can Boost Innovation
Firms in oligopolies often make **supernormal profits** (profits above the normal level). This means they have money to spend on research, development, and cool new ideas. This creates **dynamic efficiency**, which means long-term improvements in products and services.

🧠 *Example:* Tech giants like Apple or Samsung invest millions into developing the next-gen smartphones and wearable devices.

2. Strong Protection Encourages Innovation
When businesses feel safe from copycats (thanks to strong intellectual property laws or high entry costs), they're more likely to take risks and invent something new.

🧠 *Example:* Pharmaceutical firms develop new medicines more confidently when they know their patents will protect their discoveries.

3. Good for Government Revenue
Those big profits? They mean bigger corporate tax payments, which governments can use for public services like schools and hospitals.

🧠 *Example:* A successful mobile provider that dominates the market contributes more tax money than a dozen tiny startups.

4. Better Industry Standards
Big firms might collaborate (legally) to raise the bar for everyone. This can mean safer products, greener technology, or better customer service without repeating the same research over and over.

🧠 *Example:* Car manufacturers working together on electric vehicle safety standards helps everyone build safer cars faster.

5.1.5 Oligopoly

Advantages and disadvantages of oligopoly

👎 **Disadvantages of Oligopoly**

1. Less Competition = Higher Prices
In an oligopoly, companies may charge higher prices and earn bigger profits than in a competitive market. This can lead to a **misallocation of resources** which basically means we don't get the best use of our money or goods.

🧠 *Example:* If only three phone companies control the market, they might all charge more, even if the service quality isn't great.

2. Collusion Hurts Consumers
Sometimes firms secretly **collude (**they agree to keep prices high or limit production). This reduces **consumer welfare** because shoppers pay more and get less.

🧠 *Example:* If all coffee shop chains agree not to lower prices, your £4 latte stays pricey even if coffee beans become cheaper.

3. Hard for New Firms to Join
Oligopolies can create high **barriers to entry**, making it tough for new businesses to compete. With fewer challengers, efficiency may fall, and costs can rise.

🧠 *Example:* In the airline industry, it's tough for a new airline to join because of the massive startup costs and strong brand loyalty toward big players.

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5.1.6 Monopoly and monopoly power

Characteristics of monopoly

A **monopoly** is a type of market where one firm **rules the market**. There's **just one seller**, and they pretty much control the whole market. Let's see what makes monopolies so powerful (and sometimes controversial):

1 Single Seller = All the Power

In a monopoly, there's **only one firm** providing a particular good or service. That means no competition.

- 🧠 **Example**: Think of Royal Mail in the past , it was the only legal postal service in the UK for years.

2 No Close Substitutes

You can't easily switch to another product because **nothing else is quite the same**.

- 🧠 **Example**: If you need electricity and there's only one energy provider in your region, you're stuck with them. There's no "alternative" to plug into.

3 Market Power to Set Prices

Monopolies are **price makers**. Since there's no competition, they can **charge what they want** and control how much they produce.

- This lets them earn **supernormal profit** (profit way above the normal level) especially in the **short run**.
- And since competitors can't easily enter the market, they **keep earning these profits long-term**.

5.1.6 Monopoly and monopoly power

Characteristics of monopoly

4 High Barriers to Entry

It's **very hard for new firms to join** a monopolised industry. Why? Because the big firm can stop them in their tracks.

- These **barriers to entry** can be:
  - Costly (e.g. massive start-up costs),
  - Legal (e.g. patents),
  - Strategic (e.g. buying out smaller rivals).

🧠 **Example**: If a major tech company sees a small app gaining users, it might just **buy them out** before they become a threat.

5 Legal Monopoly (UK-specific)

In the UK, a firm is considered a **legal monopoly** if it controls **more than 25% of the market**.

- The **Competition and Markets Authority (CMA)** keeps an eye on this.
- Their job is to **stop unfair takeovers** or mergers that could give one company too much power.
- 🧠 **Example**: If Amazon tried to buy a large UK delivery service, the CMA would step in to see if it gives them too much control.

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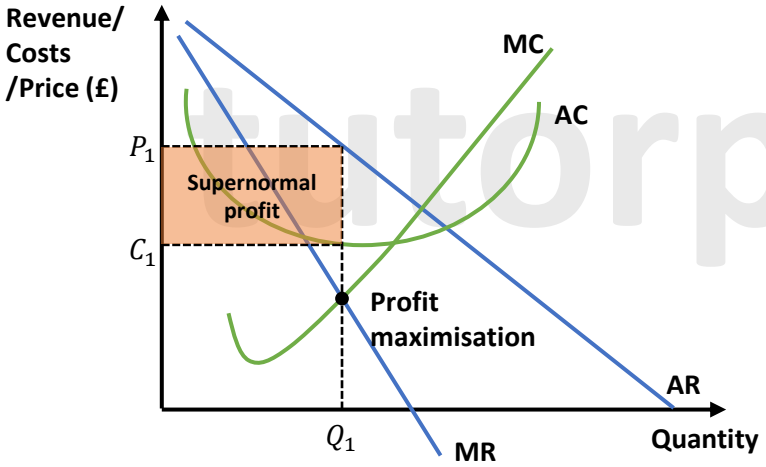
Profit maximising equilibrium

In a monopoly, the firm is the *only* seller in the market – so its **demand curve** is the same as the **industry's demand curve**. Because it faces downward-sloping demand (meaning it has to lower the price to sell more), the monopolist is a **price maker**.

To **maximise profit**, a monopolist produces at the point where:

👉 **Marginal Cost (MC) = Marginal Revenue (MR)**

This is the "sweet spot" where producing one more unit neither adds to nor subtracts from total profit.



Let's break it down with the graph:

- The firm produces **Q1 units** of output
- It charges a price of **P1**
- The area shaded in orange represents **supernormal profit** – this is any profit above the normal level (i.e. the profit that covers more than just the basic costs).

5.1.6 Monopoly and monopoly power

Profit maximising equilibrium

Why can monopolies keep earning more?

Because **there's no competition**, new firms can't just enter the market and take a share of those juicy profits. This lack of **freedom to enter or exit** the market is what makes monopolies different from, say, perfectly competitive markets.

Even though the monopolist rules the market, consumers still have the choice to buy or not. So while the firm has pricing power, it still needs to find a balance: price too high, and people might walk away.

🧠 **Example**: Think of a local train company that's the only provider for a rural route. It sets its own prices, but if they get too high, people might just start driving instead. So while the company has power, it still faces some demand constraints.

5.1.6 Monopoly and monopoly power

Advantages and disadvantages of monopoly

A **monopoly** is when one firm dominates a market with little to no competition. This can bring both advantages and disadvantages to different people involved, like the firm itself, employees, customers, and suppliers.

The Firm

Benefits:

- **Market Power**: Monopolies can set prices without competition, leading to higher profits.
- **Supernormal profits** (profits above normal levels) give firms extra cash to spend on things like research, product innovation (e.g., developing new tech like smart fridges or AI software), and expanding globally.
- With fewer competitors, firms can **enjoy economies of scale** , basically, making more goods for less money per unit.
- **Price discrimination** (charging different prices to different groups) can help squeeze out even more revenue.
- **Global competitiveness** improves as the firm becomes financially stronger and can operate in international markets.

Costs:

- With no pressure from rivals, there's **less incentive to be efficient** or cut costs.
- **Regulatory Scrutiny**: Monopolies may face government intervention to prevent abuse of power.
- Resources may be **misallocated** , meaning the firm produces too much or too little of something because the price doesn't reflect the true value (P > MC).
- Without competition, **innovation might slow down** or become less customer-focused.

5.1.6 Monopoly and monopoly power

Advantages and disadvantages of monopoly

Employees

Benefits:

- Big profits can mean **higher wages** and **job security** , especially if the company is doing well (e.g., a monopoly tech firm like Microsoft in its early days).
- **Training and Development**: Monopolies may invest in employee development programs.

Costs:

- Since there's usually only one employer in the market, **employees have fewer options** to move to another firm.

Consumers

Benefits:

- Monopoly profits might go into **better products** (e.g., new phone features).
- **Consistent Service**: Monopolies can provide uniform services across regions.
- **Cross-subsidisation** could mean cheaper prices for certain groups, like off-peak travel fares or student discounts.
- If firms pass on their lower production costs, **prices might drop** for some consumers.

Costs:

- **Higher prices** are likely because there are **no close substitutes**, so firms can charge more.
- **Limited Choices**: Consumers have fewer alternatives for products or services.
- Cross-subsidisation can backfire - some people **pay more** to cover costs for others (e.g., business class travellers paying more so economy tickets are cheaper).

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5.1.6 Monopoly and monopoly power

Advantages and disadvantages of monopoly

- **Consumer surplus** (the difference between what a customer is willing to pay and what they actually pay) falls, meaning consumers get less "value" from their purchase.

Suppliers

Benefits:

- Monopolies often buy in bulk or operate nationwide, giving suppliers **steady demand and larger contracts**.
- **Long-Term Partnerships**: Monopolies may establish enduring relationships with suppliers.

Costs:

- Monopolies can have **monopsony power** , meaning they're the only buyer and can **dictate prices** to suppliers. This can lead to **lower profit margins** for the suppliers, which might not be sustainable long-term.
- **Dependency Risk**: Suppliers may become overly reliant on a single buyer.

5.1.6 Monopoly and monopoly power

Continue to the next page…

5.1.7 Price Discrimination

Price discrimination is when a business charges **different prices for the same product or service**, depending on who the customer is. Sounds sneaky? It's actually a common way to **boost revenue** by charging people based on how much they're willing to pay.

There are different "degrees" (or types) of price discrimination, but let's zoom in on one...

🧠 **What is Third-Degree Price Discrimination?**

This happens when a company splits customers into groups and **charges each group a different price** for the **same product or service**.

For example:

- A cinema charges **students less** than adults for the same movie ticket 🎬
- Train fares go up during peak hours when office workers commute, and drop during off-peak hours when students travel 🚆

Companies do this by dividing customers based on things like **age, income, location, or even the time of day**.

5.1.7 Price Discrimination

✅ **What Must Happen for Third-Degree Price Discrimination to Work:**

For a business to successfully charge different prices to different types of customers (while selling the same product), three key conditions need to be met:

1. The firm must have market power.

In simple terms, the business needs to have **control over the price** it charges. This usually happens when there aren't many competitors, or the product is unique enough that customers can't just switch to an alternative. If there are loads of cheaper substitutes, price discrimination becomes nearly impossible.

Example: A private tutor in a small town with no rivals can charge different rates to working professionals and school students.

2. There must be different types of consumers – with different price sensitivities.

Some customers are **willing to pay more**, while others will only buy if the price is lower. The business needs to be able to **identify and separate** these groups based on things like age, location, income, or usage.

Example: A theme park might charge families less (who are price-sensitive) and tourists more (who are less sensitive). 📊

3. The business must be able to prevent resale.

To make this work, firms need to **stop customers in the cheaper group from reselling** the product or service to those in the more expensive group. Otherwise, everyone would just buy from the cheapest source! There has to be some way to **keep the markets separate**.

Example: A student cinema ticket usually requires a student ID. That way, someone who paid less can't just hand it off to a non-student.

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5.1.7 Price Discrimination

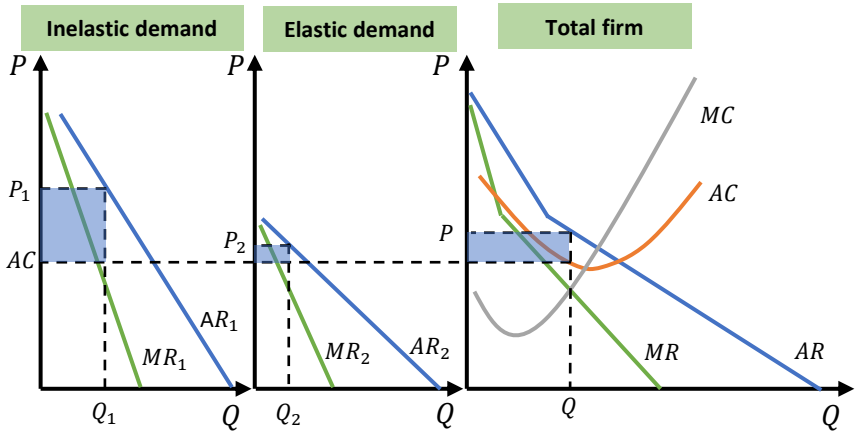
Remember third-degree price discrimination is when a company charges **different prices** to **different groups of people** for **the same product or service**, based on how sensitive each group is to price.

💡 **Real-Life Example: The Gym**

Imagine a local gym offers these membership plans:

- 👨💼 **Busy Professionals (Inelastic Demand):**
  These folks go to the gym after work or during lunch. They don't care much about price because they're short on time and need convenience.
  The gym charges them **£50/month**.
- 👨🎓 **Students (Elastic Demand):**
  Students have more time and are always hunting for a bargain. If the price is too high, they'll skip the gym or go to a cheaper one.
  The gym charges them a discounted **£25/month**.

➡️ Both groups use the **same gym**, **same equipment**, and **same showers**, but they're charged different prices because they value the service differently.



5.1.7 Price Discrimination

📊 **What's Happening in the Diagram?**

The gym finds the **profit-maximising output** where **MC = MR**.

This point is **shared across both sub-markets**:

- **Busy professionals** and **students**.
- The firm uses this to set different prices for each.
- The **average cost (AC)** is the same for both, helping calculate **total profit** from both groups.

1. Inelastic Demand (Busy Professionals)

- Price (P_1) is **high** (£50).
- Quantity of users is **lower** (Q_1), because not everyone is willing to pay that price.
- But each user brings in **lots of profit (blue box).**

2. Elastic Demand (Students)

- Price (P_2) is **low** (£25).
- Quantity is **higher** (Q_2), because more students will sign up at a lower price.
- Profit per person is lower, but overall, it's still worthwhile

3. Total Gym Profits

The gym adds together the profits from both groups (Q_1 + Q_2). Since it matches price to willingness to pay, the **total profit is higher** than if it charged one flat fee for everyone.

5.1.7 Price Discrimination

Costs and benefits to consumers and producers

👨‍👩‍👧 **Consumers**

🔴 **Some lose out (especially those who are price inelastic)**
If you're in a group that's less sensitive to price (maybe you really need the product or have a higher income), you might end up paying **more** than others. This means your **consumer surplus** (the benefit you get from paying less than what you're willing to pay) goes down.
Example: Last-minute business flyers paying £400 for a flight that someone else got for £80.

🟢 **Others benefit (those who are more price-sensitive)**
On the flip side, more price-conscious buyers (like students or early birds) can get lower prices. This increases their **consumer surplus**. It can also lead to **cross-subsidisation** , the higher prices from one group help cover the lower prices for another.

🏭 **Producers (Businesses)**

🟢 **They make more money**
Firms can **boost total revenue** by charging each group the highest price they're willing to pay , this leads to higher profits **if costs stay the same**.

🔵 **Producer surplus increases**
Producer surplus is the difference between what a firm receives and the minimum it would've accepted. Charging more to inelastic groups and less to elastic ones increases the producer surplus **at the expense of consumer surplus**.

5.1.7 Price Discrimination

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5.1.8 The dynamics of competition and competitive market processes

Short and Long-run benefits of competition

Competition between businesses isn't just good for keeping things exciting, it also comes with real benefits for consumers, companies, and the whole economy.

🔄 **In the Short Run...**

Firms Might Make Supernormal Profits
Supernormal profits are when a firm earns way more than just covering its costs. This extra cash can be reinvested into the business like upgrading equipment or developing cool new products to increase customer choice and satisfaction.

🧠 *Example:* A new gaming company goes viral, makes a ton of money, and uses the profits to create a better game engine.

📈 **In the Long Run...**

- **Firms Get More Efficient**
  Over time, competitive pressure pushes firms to become **productively efficient** (producing at the lowest cost) and **allocatively efficient** (making what people actually want).
  🧠 *Example:* A food delivery service keeps improving its app and logistics to stay ahead of the competition.

- **More Innovation**
  When lots of firms fight to win over customers, they often invest in innovation, new features, better quality, or smarter technology to stand out.

- **Better Quality + More Choice**
  A competitive market means loads of options for consumers. Plus, companies have to work harder to offer higher quality to keep customers loyal.
  🧠 *Example:* Think of smartphones, there are tons of choices with different features, prices, and designs.

5.1.8 The dynamics of competition and competitive market processes

Short and Long-run benefits of competition

🏷️ **Price Isn't Everything: Non-Price Competition**

Firms don't just compete on price; they also try to win customers in other ways. This is called **non-price competition**. It can include:

- **Improving Products:**
  Firms update and improve their products with the latest tech or features.
  🧠 *Example:* A fitness app adds new workout videos and AI coaching to stand out.

- **Cutting Costs:**
  By reducing costs, firms can offer better value without necessarily lowering prices.
  🧠 *Example:* A clothing brand switches to more efficient factories to save on production.

- **Improving Customer Service:**
  Especially in services like banking, friendly and helpful staff can be a game-changer.
  🧠 *Example:* A bank offering 24/7 live chat and quick responses earns customer loyalty.

⚠️ **The Dark Side: If Competition Disappears...**

Without enough competition, big firms can become too powerful; this is called **monopoly power**. That's when one or a few firms dominate the market. This can lead to:

- **Higher Prices:**
  Fewer choices mean firms can charge more, and consumers are stuck paying it.
  🧠 *Example:* If there's only one broadband provider in town, they might charge way more than in a city with multiple options.

5.1.8 The dynamics of competition and competitive market processes

The process of creative destruction

Creative destruction might sound dramatic (and it kind of is), but it's actually a key part of how markets grow and improve. The term was made famous by economist **Joseph Schumpeter**, who used it to describe how **innovation** pushes the economy forward even if that means some old businesses get left behind.

🚀 **What Is Creative Destruction?**

Creative destruction happens when **new technologies, ideas, or ways of doing business** replace the old. It's a bit like upgrading your phone; your new one works better and faster, but the old model is now outdated and forgotten.

🧠 **Definition:** It's the process where new innovations "destroy" older business models to create better ones.

🏢 **Why It Happens**

- If a firm has **monopoly power** (meaning it dominates the market), and it's making **huge profits**, it attracts new challengers.
- These challengers want a slice of the pie, so they start innovating to compete.
- This leads to a burst of **creativity, competition, and new ideas**.
- In the process, **barriers to entry (**the things that normally stop new firms from entering a market) get overcome.

5.1.8 The dynamics of competition and competitive market processes

The process of creative destruction

⚙️ **The Innovation Race**

- Firms are always trying to be better, faster, and more efficient to win customers.
- This leads to **advancements in technology,** think better apps, smarter delivery systems, or greener cars.
- But here's the kicker: if a firm doesn't keep up, it risks becoming irrelevant and might even disappear completely.

📉 **Fail to innovate = Exit the market.**

🚖 **Real-World Example: Uber vs. Taxis**

Let's take taxis.

For decades, traditional taxis ruled the streets. But then **Uber** showed up with a simple app that let you order a ride, track your driver, and pay automatically; no cash, no phone calls, no fuss.

Uber didn't invent cars or drivers, but it **revolutionised the way we access transport**. Many traditional taxi services struggled to keep up with this new digital convenience. Some adapted, others didn't and in some places, old-style taxi firms have vanished or shrunk dramatically.

📉 **Uber innovated. Some taxi companies didn't. That's creative destruction.**

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5.1.9 Contestable and non-contestable markets

A **contestable market** is like an open stage at a talent show , even if only one performer is up there now, **anyone else could jump in at any time** if they think they can shine and make some money.

More seriously:

A **contestable market** is one where **new businesses can easily enter or leave**, and it doesn't cost much (or anything) to do so.

The key thing? It's **not** about how many businesses are actually in the market , it's about the **threat** that new ones **could** enter at any moment. That keeps everyone on their toes.

Characteristics of contestable markets

1. 🚪 Easy Entry & Exit (No Barriers)

- Firms can hop in and out of the market with little to no effort.
- There are **no sunk costs** , these are costs you can't get back (like spending millions on a special machine you'll never use again).

🎮 *Example:* Starting a YouTube channel is pretty contestable, no big startup costs, and you can quit anytime.

2. 📚 Perfect Information

- Everyone has access to the same info, no secrets.
- If a firm is making loads of profit (called **abnormal profit**), others will notice and want in.
- There are **no patents or private info** that block new firms.

💡 *Example:* Anyone can learn to bake cookies. There's no secret cookie monopoly.

5.1.9 Contestable and non-contestable markets

Characteristics of contestable markets

3. ⚖️ Level Playing Field

- New firms don't start at a disadvantage.
- They have access to the **same tools, technology, and knowledge** as the big players.

☕ *Example:* If you open a bubble tea shop with the same ingredients and machines as others, you can compete right away.

4. 💰 Short-Term Profit Chasers

- We assume firms are in it for the quick wins 💸 , they want to jump in, make money, and get out without teaming up with others (no collusion).
  ➡️ This means no sneaky behind-the-scenes price fixing.

🛵 *Example:* A food truck shows up at a festival, makes bank while it's busy, then disappears the next day.

5. 💔 Low Brand Loyalty

- Consumers aren't glued to one brand , if something better pops up, they'll switch.

😋 *Example:* People easily switch food delivery apps (like Uber Eats, Deliveroo, etc.) if they offer a better deal or promo.

💭 Why Do Contestable Markets Matter?

Even if there aren't many firms in the market, the **threat of competition** keeps existing businesses honest , they're less likely to overcharge or slack off, because they know someone could swoop in at any time.

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5.1.9 Contestable and non-contestable markets

What happens in a contestable market? (Implications)

In a **contestable market** (where new firms can easily join or leave), businesses behave very differently compared to markets with high barriers.

Why? Because they know new rivals could pop in at any time and steal their customers. So, to avoid attracting that kind of attention, they often **tone things down** a bit...

🚪 1. New Firms Will Enter if They Smell Profit

In a contestable market, if one firm is making big money (**supernormal profit**), other firms will want a piece of the action. 💸

- These new firms will **enter the market**, take a share of the profits, and stick around **until the profits disappear**.
- This could even **force the original firm out of business** if they don't respond smartly.

🔧 To defend themselves, the original firm might use **limit pricing;** setting prices low enough that new firms say, "meh, not worth it," and stay out.

💷 2. Firms Can Only Make Normal Profits

In a **perfectly contestable market**, firms won't be able to charge high prices and rake in profits forever.

- They'll end up earning only **normal profit** (just enough to stay in business).
- This happens because if they charged any more, other firms would rush in and undercut them.

💡 **Normal profit** = revenue just covers all costs (including opportunity costs), so no extra profit left lying around.

5.1.9 Contestable and non-contestable markets

What happens in a contestable market? (Implications)

⚙️ 3. Firms Must Be Super Efficient

In a contestable market, firms need to be:

- **Productively efficient**: This means making goods at the **lowest possible cost**. If not, new firms can enter and offer lower prices and steal customers. 🏃
- **Allocatively efficient**: This means producing the right amount of stuff society actually wants; where the **value to the customer = the cost to make it**.

Here's how it works:

- At normal profit, **Average Revenue = Average Cost (AR = AC)**
- If firms are producing at their lowest cost, then **Average Cost = Marginal Cost (AC = MC)**
- So, we end up with: **AR = AC = MC**

✅ This is the economic sweet spot; customers are happy, and society gets what it needs at the right price.

🍔 Example Time

Let's say a burger joint is making tons of money. If it's in a contestable market:

- Another burger place opens across the street with similar buns and cheaper fries.
- The first place must either lower prices (limit pricing), improve quality, or become more efficient , or risk being booted out.
- Eventually, both places just make normal profits and run efficiently to survive.

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5.1.9 Contestable and non-contestable markets

Types of barrier to entry and exit

What are Barriers to Entry?

These are obstacles that make it **hard or expensive** for new businesses to join a market and compete with the big players already there.

What are Barriers to Exit?

These are the things that make it **difficult for a business to leave a market**, even if they're losing money , like being stuck at a party you regret going to.

🧱 **Common Barriers to Entry**

⚖️ **1. Legal Barriers**

- Laws and government rules can stop new firms from joining the market.
- These include **patents**, **copyrights**, or needing a special **license**.

🧠 **Example:** You can't just start your own taxi company without getting a license , same with TV broadcasting or selling medication.

📉 **2. Economies of Scale**

- Big firms can produce more, for less.
- New firms can't compete because their **costs per unit** are higher, so their prices would have to be higher too , which no customer wants.

🧠 **Example:** Amazon can deliver faster and cheaper than most small online shops.

5.1.9 Contestable and non-contestable markets

Types of barrier to entry and exit

💸 **3. Pricing Tactics by Big Firms**

Existing firms (called **incumbents**) may use pricing tricks to scare off new rivals:

- **Predatory pricing**: Selling products so cheaply that new firms can't survive.
- **Limit pricing**: Setting prices just low enough to keep new firms from even trying.
- They might also act shady , like **refusing to supply stores** that work with competitors.

🧠 **Example:** A big coffee chain drops prices near a new café to run it out of business.

🏭 **4. High Start-Up Costs**

- Some industries need a **lot of money upfront** just to get started. These are called **capital costs**.
- There are also **sunk costs**, which are things you spend money on but can't recover (like a custom-made machine).

🧠 **Example:** Starting a car manufacturing business isn't cheap. You need buildings, robots, staff, and way more.

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Types of barrier to entry and exit

🏃 **Barriers to Exit – Why It's Hard to Leave**

Sometimes, it's just as hard to shut down a business as it is to start one.

Barriers to exit include:

- The **cost of writing off equipment** you can't sell,
- **Breaking leases** on buildings or contracts,
- **Making employees redundant** (which often involves big payouts).

🧠 **Example:** A company with a big warehouse and 200 employees can't just walk away without losing lots of money and dealing with legal and ethical issues.

5.1.9 Contestable and non-contestable markets

Sunk costs

⛔ **What Are Sunk Costs?**

Sunk costs are expenses a business **can't get back**, no matter what. Think of them as money down the drain , once it's spent, it's gone forever.

🧠 **Examples of sunk costs:**

- Buying super specific machines that no one else wants
- Spending a fortune on a big advertising campaign
- Investing in research or branding that can't be sold or reused

🚪 **Why Sunk Costs Make It Hard to Leave**

When a company has put a lot of money into things it can't recover, it becomes **harder to leave the market** , even if business isn't going well. That's what we call a **barrier to exit**.

🚪 **What This Means for Market Contestability**

Contestability is all about how easy it is for new businesses to enter (and exit) a market.

- If **sunk costs are low**, new firms can jump in and try their luck without much risk.
  ➡️ The market is **more contestable** = more competition = good for consumers.
- If **sunk costs are high**, firms will think twice before entering. Why risk a bunch of money you can't get back?
  ➡️ The market is **less contestable** = less competition = bad for consumers.

🧠 **Reality Check:**

There's **no such thing** as a *perfectly contestable* market in real life. Why? Because there's **always** some sunk cost , even if it's just time or branding.

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5.1.9 Contestable and non-contestable markets

Hit-and-run competition

Hit and run competition is like a quick money grab in the business world.

🧠 **Definition:** It's when a company jumps into a market just long enough to make some quick profits and then leaves just as fast; before things get too competitive or risky.

💰 **Why Do Firms Do This?**

These businesses are chasing **supernormal profit**, which means profits that are much higher than normal because there isn't much competition… yet.

So, when a market looks easy and profitable, new firms sneak in, grab their slice of the pie, and leave before established companies react and the profits disappear.

🚪 **Real-Life Example: Pop-up Phone Accessory Shops**

Imagine a new iPhone model launches, and suddenly dozens of tiny phone case shops pop up online or in shopping centres. These sellers make a ton of money quickly because demand is sky-high and competition is low at first.

But as big retailers and Amazon listings catch up and prices drop, these pop-up sellers close up shop and disappear. That's classic **hit and run** behaviour.

5.1.9 Contestable and non-contestable markets

Hit-and-run competition

🏃 **Summary**

- Firms enter a market quickly to make **fast profits**
- They **exit** just as quickly once the profit opportunity is gone
- Common in markets with **low barriers to entry** (meaning it's cheap and easy to start up)
- It helps keep big firms on their toes.

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Types of efficiencies

Efficiency is all about how well we use our scarce resources (like time, money, labour) to get the best possible results. Economists use different types of efficiency to judge how well the market is doing this.

Static efficiency is all about how well resources are being used at a specific moment in time (think of it as a snapshot of how efficient a business or economy is right now). It doesn't worry about the future, just whether things are running smoothly at that exact point.

There are two types of static efficiency:

1. ✅ Allocative Efficiency

Allocative efficiency happens when we're using our resources to produce the *right things;* the goods and services people actually want.
It's achieved when **P = MC** (Price = Marginal Cost) or when **AR (Average revenue) = MC**.

👉 Example: If it costs £2 to make a sandwich and people are willing to pay exactly £2 for it, then the value to society equals the cost - allocative efficiency.

This means we're not overproducing or underproducing.

2. 🏭 Productive Efficiency

Productive efficiency is all about making things in the *cheapest way possible*. It's when goods are produced at the **lowest point on the Average Cost (AC) curve**, where **MC = AC**.
This means a firm is using the fewest resources to make the most output and there is no wastage of scarce resources.

👉 Example: If a bakery can bake 100 cupcakes at the lowest average cost of £1 per cupcake, they're being productively efficient. But if they bake the same number at £1.50 each, they're wasting money (and cupcakes).

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Types of efficiencies

🔁 Dynamic Efficiency

This is about *efficiency over time*. It's not just about doing things well now but also *investing* in better ways of doing things in the future. Think research, innovation, and new tech.

👉 Example: A phone company reinvests profits to develop a new, faster processor. That's dynamic efficiency in action.

Markets that encourage competition and allow firms to make supernormal profits often promote dynamic efficiency, because firms have both the **means** and the **motivation** to keep improving.

😵‍💫 X-Inefficiency

X-inefficiency is when a firm gets lazy and doesn't cut costs the way it could. Maybe it has no competition, or it's just poorly managed. This is a type of *productive inefficiency*.

👉 Example: Let's say a company could make 150 laptops at £7.50 each but instead makes them for £8.50. That extra £1 is money wasted; they're X-inefficient.

It's like a student who could easily finish an assignment in 2 hours but takes 4 hours because they keep scrolling TikTok, not using time (or resources) efficiently.

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Types of efficiencies

⚡**In summary:**

Type	What it means	When it happens
Allocative Efficiency	Making the stuff people want	**P = MC**
Productive Efficiency	Making stuff at the lowest cost	**MC = AC** (bottom of AC curve)
Dynamic Efficiency	Getting better over time through innovation	In competitive markets with investment
X-Inefficiency	Wasting resources by being lazy or uncompetitive	Firms not producing on AC curve

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Efficiency/inefficiency in different market structures

As you know, market structures help us understand how competitive a market is, how resources are used, and whether consumers or producers benefit more.

What is a Market Structure?

It's the setup of a market; who's selling, who's buying, and what's being sold.

Key features include:

- **Barriers to entry/exit** – Is it easy for new firms to join, or do costs, laws, or strong brands keep them out?
- **Type of product** – Are products the same (like sugar) or different (like smartphones)?
- **Number of buyers** – Are there just a few buyers or millions?
- **Firm size and number** – Are there many small businesses or just a few big ones?
- **Level of competition** – Is it a tough battle or a quiet market?

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Efficiency/inefficiency in different market structures

⚖️ **Market Structures: From Perfect to Imperfect**

We usually group market structures into two main categories:

✅ **Perfect Competition**

- Super efficient – **allocatively and productively efficient** in the long run

❌ **Imperfect Competition**

These markets are a bit messier and less efficient. They include:

Monopolistic Competition

- Not fully efficient, but competition still pushes prices and quality

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Efficiency/inefficiency in different market structures

Oligopoly

- Efficiency depends on the level of competition within the oligopoly

Monopoly

- Often **inefficient** – prices are high, output is low
- But may be **dynamically efficient** if profits are reinvested in innovation

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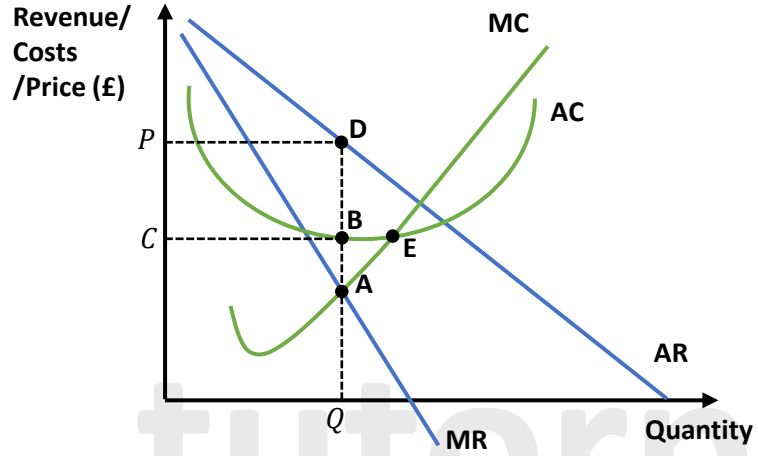
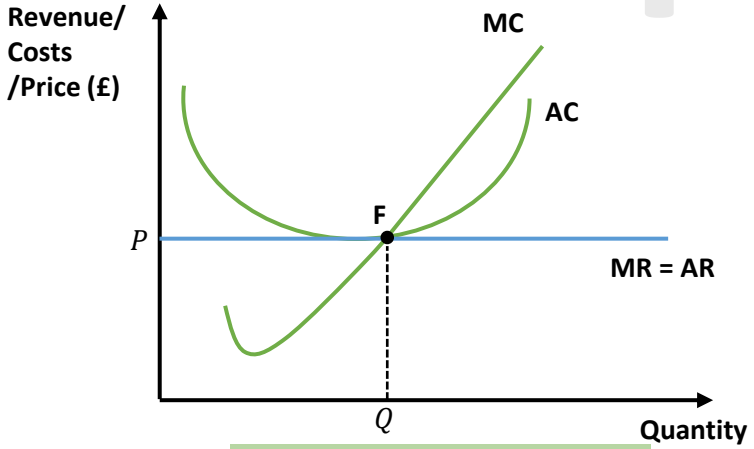
Efficiency/inefficiency in different market structures



Imperfect competition



Perfect competition

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Efficiency/inefficiency in different market structures

Imperfectly Competitive Market – What the Diagram Tells Us

Imagine big coffee chains , they've got power, brand loyalty, and set their own prices. This is an **imperfect market** (like monopoly or oligopoly).

- These firms still aim for **profit maximisation**, so they also produce where **MC = MR** (we'll call this point **A**).
- However, they are **not productively efficient**, because **AC > MC** , meaning they're not producing at the lowest average cost. The most efficient point would be where **MC = AC** (point **E**).
- They are also **not allocatively efficient**, because **price (P or AR) > MC** , which means they're underproducing from society's point of view. Allocative efficiency would happen if **AR = MC**.
- But, since they make **supernormal profit** (extra money after covering all costs), they can reinvest in new tech, cool marketing, or better service , so they're more likely to be **dynamically efficient**.

Perfectly Competitive Market – What the Diagram Shows

In a perfectly competitive market, think farmers at a fruit market , everyone's selling identical apples, no one can control the price, and buyers have tons of choice.

- **Profit maximisation** happens where **marginal cost (MC) = marginal revenue (MR)** , this is where the firm is making as much profit as it can without losing customers. (Let's call this point **F** on the graph).
- The firm is **productively efficient** at this point too because **MC = average cost (AC)** , it's producing at the lowest possible cost per unit.
- It's also **allocatively efficient**, where **price (P) = MC**, which means society is getting the exact amount of the good that it wants.
- But… firms in perfect competition usually only make **normal profit** (just enough to stay in business), so there's not much left for investing in new tech or better products. That's why **dynamic efficiency** is unlikely.

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5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Influences on dynamic efficiency

Dynamic efficiency is all about how well a firm improves over time getting better at what they do by reinvesting profits in smart ways.

By putting money into research, training people, and upgrading tools, businesses can reduce long-term costs and stay ahead of the game.

🔬 **1. Research and Development (R&D)**

- R&D means developing new products or improving old ones. It helps firms understand what customers want and stay relevant.
- 🧪 *Example:* Dyson investing in cordless vacuum tech to meet demand for lightweight, efficient cleaning tools.

🧠 **2. Human Capital**

- This refers to the skills, knowledge, and motivation of workers. When firms invest in staff training and education, productivity increases; people work smarter and better.
- 🖼️ *Example:* Microsoft runs internal learning platforms to upskill its workforce and spark innovation.

🛠️ **3. Capital Investment**

- This includes spending on equipment, tools, or technology. Better tools = faster and cheaper production.
- 🤖 *Example:* A pizza chain using automated dough rollers to speed up prep and cut costs over time.

5.1.10 Market structure, static efficiency, dynamic efficiency and resource allocation

Continue to the next page...

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5.1.11 Consumer and producer surplus

The distinction between consumer and producer surplus

Consumer surplus is the little bonus consumers get when they pay less than they were willing to spend.

Example: You're ready to shell out £50 for a new video game, but the store's running a sale, and it costs only £40. Boom, You've saved £10. That's your consumer surplus.

- **Consumer surplus is the difference between the price the consumer is willing to pay and the price they actually pay.**

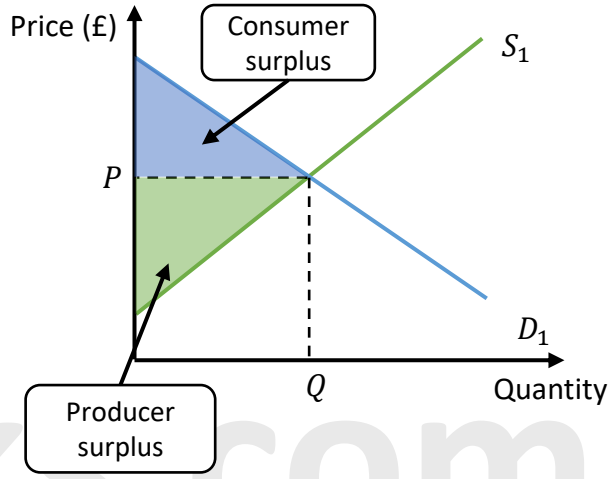
Producer surplus is the extra cash producers earn when they sell for more than their minimum price.

Example: A farmer is happy to sell apples for £2 a kilogram, but a high demand means they can sell for £3/kg. That extra £1 per kilogram is their producer surplus.

- **Producer surplus is the difference between the price the supplier is willing to produce their product at and the price they actually produce at.**

5.1.11 Consumer and producer surplus

The distinction between consumer and producer surplus



What does the diagram say?

- The **consumer surplus** is the shaded area above the equilibrium price (P) and under the demand curve.
- The **producer surplus** is the shaded area below the equilibrium price and above the supply curve.

Why does equilibrium matter?

- At **equilibrium**, the market runs smoothly, and both consumer and producer surpluses are **maximised**. This sweet spot creates the **social/community surplus**, which benefits everyone.
- If the market is out of balance (**disequilibrium**), these surpluses shrink, and everyone's less happy.

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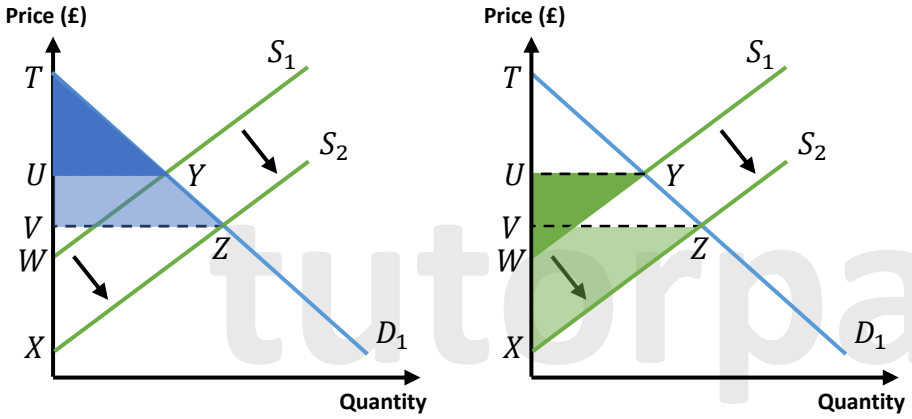
How changes in supply and demand might affect consumer and producer surplus

When the supply or demand of a product changes, it has a ripple effect on both consumers and producers.

An increase in supply



What Happens Before the Supply Change?

- **Consumer surplus** is shown as **UYT**.
- **Producer surplus** is shown as **UYW**.
- Together, these form the **social surplus** (the total benefit to society), represented by **TYW**.

5.1.11 Consumer and producer surplus

How changes in supply and demand might affect consumer and producer surplus

What Happens After the Supply Increases?

- When supply grows from **S_1 to S_2**, it pushes the price down, benefiting consumers.
- **Consumer surplus** expands to **VZT** because they're paying less and buying more.
- **Producer surplus** shifts to **VZX** as they sell more, even though the price per unit is lower.
- **Social surplus** grows to **TZX**, meaning the entire market benefits from this increased efficiency.

The Bottom Line

- Both **consumer surplus** and **producer surplus** get bigger when supply increases, creating a win-win situation for everyone. Lower prices and higher quantities leave consumers happier and producers selling more overall.

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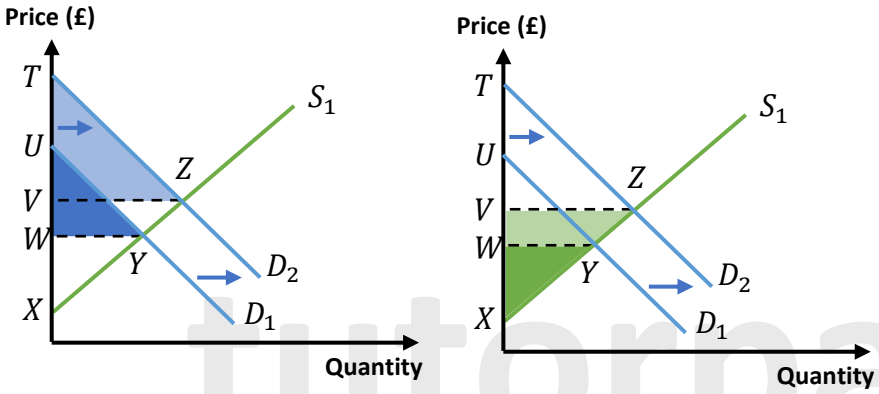
5.1.11 Consumer and producer surplus

How changes in supply and demand might affect consumer and producer surplus

An increase in demand



Before the Demand Increase

- **Consumer surplus** was the area **WYU**.
- **Producer surplus** was the area **WYX**.
- Combined, the total market benefit, or **social surplus**, was **UYX**.

5.1.11 Consumer and producer surplus

How changes in supply and demand might affect consumer and producer surplus

After Demand Rises

- Demand shifts from **D_1 to D_2**, meaning more people want the product.
- **Consumer surplus** expands to **VZT**, as consumers are still willing to pay for more despite higher prices.
- **Producer surplus** grows to **VZX**, thanks to higher prices and more sales.
- The total benefit (social surplus) now covers the entire area of **TZX**.

What It All Means

- With more demand, both producers and consumers gain more overall. Producers enjoy bigger profits, and consumers still find value in the product.

Tip: For multiple-choice questions on surplus, highlight the original area, mark the new area, and show the increase or decrease. Annotate the diagram for clarity.

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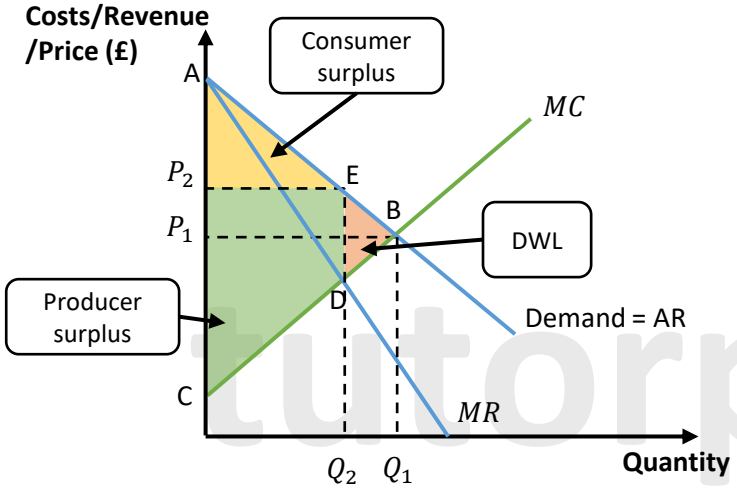
5.1.11 Consumer and producer surplus

Consumer and producer surplus in a monopoly

When we compare a monopoly (a market with one dominant seller) to a perfectly competitive market (lots of sellers, lots of competition), we often look at how **efficient** each market is especially when it comes to prices, output, and benefits to consumers and producers.



What is Consumer Surplus?

Consumer surplus is the extra satisfaction people get when they pay less for a product than they were willing to. In competitive markets, prices tend to be lower (P_1), so, consumers enjoy more surplus (P_1BA). This is because in a competitive environment price is set where **AR=MC** (allocative efficiency).

But in a **monopoly**, prices are usually higher (P_2), and output is lower (Q_2) because there's no pressure from rival firms. This is because monopolists produce at the profit max level, where **MC=MR**. This leads to a **loss in consumer surplus** shown as the yellow triangle $\boldsymbol{P_2EA}$ in the diagram.

📉 Example: Imagine a cinema with no competitors. They can charge £12 a ticket instead of £8 and offer fewer screenings. That's a loss in consumer surplus as people pay more and get less choice.

5.1.11 Consumer and producer surplus

Consumer and producer surplus in a monopoly

What is Producer Surplus?

Producer surplus is the difference between what a firm is paid and the minimum they would accept to produce something. In monopolies, firms charge higher prices (P_2 instead of P_1) and sell less (Q_2 instead of Q_1), which can actually **increase their producer surplus**.

This is shown in the diagram by the green triangle P_2EDC, and some of that is "stolen" from the consumer surplus.

What About the Welfare Loss?

Not all the consumer surplus gets turned into producer surplus. The bit that **disappears** altogether, the red triangle **BDE** is called **deadweight loss** (DWL). This is the total loss of economic efficiency because output is reduced and people who wanted to buy the product at a fairer price can't.

👎 It's like people who would've gone to the cinema for £8 just stay home instead because it's now £12.

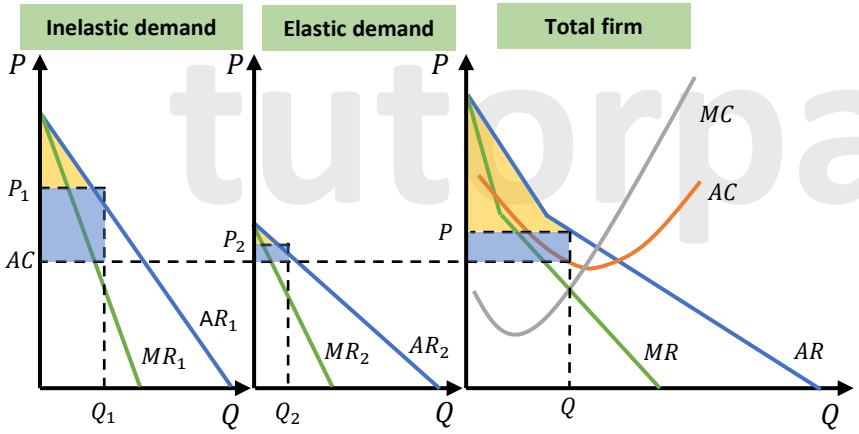
5.1.11 Consumer and producer surplus

Price Discrimination in a Monopoly

Let's imagine you and your friend both buy the same cinema ticket, but you get charged £8 and they pay £12. That's **price discrimination.**

Price discrimination happens when a **monopoly** (a firm with no competition) charges **different prices to different customers for the exact same product,** not because it's more expensive to provide, but simply to make more money.

Example:
An airline charging business travellers more than holiday-goers for the same flight.



💰 Why Do Monopolies Do This?

Because it boosts their **profits** (blue box)**.** By squeezing more out of customers who are willing to pay more (like business travellers) and still selling to price-sensitive ones (like students), monopolies increase their **producer surplus (**that's the extra profit they earn above what it costs them to supply the product).

5.1.11 Consumer and producer surplus

Price Discrimination in a Monopoly

⚠️ But There's a Downside…

This isn't always great for consumers. Price discrimination often means:

- **Less consumer surplus** (yellow box) - you pay closer to your maximum willingness to pay.
- **Less fairness**, since people are charged different amounts for the same thing.

💥 Deadweight Loss

Deadweight loss is the value that disappears from the economy because the market isn't operating efficiently. In a monopoly:

- **Prices go up** (because they produce for max profit (MR=MC))
- **Output goes down**
  And that means some people who would've bought the product at a lower price can't anymore.

This missed opportunity, where buyers and sellers could've both gained, is the **deadweight loss.**

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Please see the ‘5.2 Perfect competition, imperfectly competitive markets and monopoly Worked Examples’ pack for exam style questions.

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