

## Types of firm

**Firm:** business enterprise that produces and sells goods/services; it turns factor inputs into output

**For profit organisation:** a firm that aims to make profit

**Not-for-profit organisation:** firm that operate commercially but aims to improve social welfare & environmental goals; profits are reinvested for social purposes

**Private sector business:** firms owned by private investors rather than the state

**Public sector business:** organisation owned and controlled by the state, e.g. the NHS, the Police, the Armed Forces

## Separation of ownership from control of firm

The nature of the ownership of firms changes as firms grow:

**Sole Trader:** A business owned and operated by an individual who retains all profits.

**Partnership:** A business structure where two or more individuals own and manage the business together, sharing the profits. Commonly found in professional services such as lawyers and doctors.

**Private Limited Company:** A type of company whose shares are not publicly traded on a stock exchange. The ownership is limited to a specific number of shareholders, and shares are not available for public purchase.

**Public Limited Company:** A company whose shares are listed on a public stock exchange, allowing them to be bought and sold by the general public. Shareholders have voting rights, typically exercised at the Annual General Meeting (AGM), but they are not directly involved in day-to-day business operations.

There may be a **principal-agent problem** when the shareholders (the principals) have different objectives from the managers (the agents). This is a form of **information failure**

- Shareholder aim: to earn profit from dividends and increase their shareholder value (capital gain)
- Managers consider their own careers/job satisfaction; they may sacrifice short term profit from long term profit; profit-satisficing

## Small firms

- Most businesses in the UK are **small or medium-sized enterprises (SMEs)**
- Developments in e-commerce has enabled the creation of more small businesses, with a relatively small online presence

## Why some firms stay small

- Selling to a niche (very small, specialist) market (low PED or high YED for goods)
- May act as a supplier/subcontractor to larger businesses; produces a specific component in the overall production line
- Focus on good customer service/product differentiation/USP/quality/more personalised service/better communication with customers
- Enables more flexible response to changing market demand; allows more innovation
- Lack of resources/access to finance for expansion
- Low minimum efficient scale (link to economies of scale)
- Lack of motivation/'easy life' option/ keep as a family business
- To avoid higher business taxes
- Allows access to informal/local labour markets
- Operating within a competitive market structure i.e. monopolistic competition
- May still benefit from external economies of scale
- Avoids scrutiny from competition authorities e.g. the CMA
- May avoid being taken over
- Avoids internal diseconomies of scale

## Why some firms grow

Successful businesses typically grow because there is an increase in the market demand for the product they are selling

**Types of business growth**

**Internal growth:** also called *organic growth* – when a firm invests in new capacity to increase the business size

**External growth:** business grows by acquiring another business via merger or takeover

**Horizontal integration:** a merger between two firms in the same industry at the same stage of production

**Vertical integration:** a merger between two firms at different stages of production in the same industry

**Backwards vertical integration:** business buys one of its suppliers e.g. car maker buys up a tyre company

**Forwards vertical integration:** business supplying a good merges with one of its buyers, e.g. car maker buys up a car dealership

**Conglomerate merger:** merger between two firms producing unrelated products

**Lateral integration:** merger between two firms in industries that are somewhat related e.g. software company buying a games designer

**Friendly takeover:** Board of Directors of the target company recommend shareholders accept takeover bid

**Hostile takeover:** Board of Directors of target company recommend shareholders reject the bid; predator company has to buy 50% of shares in target company to take control

**Key constraints on business growth**

**Market size:** a firm will not grow if the demand is not there

**Access to finance:** a growing firm may need enough retained profit or a business loan to expand; the cost of finance may also affect its decision to grow

**The objectives of the business owners:** may not be profit-maximisers

**Regulation:** large firms may gain monopoly power which could be investigated by the competition authorities

- Increased control of markets/resources
- Increase control of sales/customer base
- Gain internal economies of scale
- Helps ensure business survival/takeover competitors
- For managerial reward
- Helps gain expertise
- Increased productive and dynamic efficiency
- Synergy
- Spreads risk; allows diversification

**Why some mergers & takeovers fail**

- High financial costs of during a takeover can leave a debt overhang
- Integrating different technology systems can be expensive/near impossible
- Share price may fall if fresh equity needs to be raised via a rights issue
- Clash of corporate cultures/personalities
- Loss of customers/poorer customer service
- Possible loss of skilled workers
- Businesses in competition to buy out a business may end up paying too much
- Bad/unlucky timing if the economic cycle changes course

**Why some firms de-merge**

**Demerger:** when a firm splits into separate firms

- To focus on its core business/core product
- To provide better quality service
- To become more specialised
- To reduce the risk of diseconomies of scale
- To raise money from the asset sale
- To avoid the attention of the competition authorities

Types of business objectives

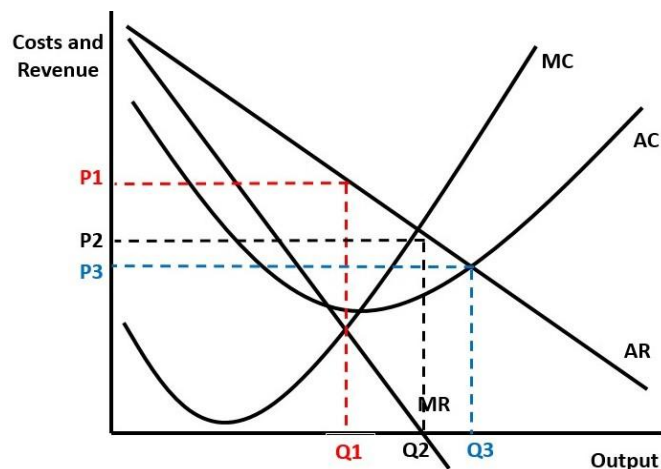
**Profit-maximisation:** firm aim to make the maximum profit possible (occurs where  $MC = MR$ ; this is also the loss-minimising condition)

**Revenue maximisation:** firm aims to maximise total revenue (occurs where  $MR = 0$ )

**Sales (volume) maximisation:** firm aims to have largest market share without running at a loss (occurs where  $AC = AR$ )

**Profit satisficing:** managers aim to make enough profit to satisfy the shareholders

Diagram showing different business objectives

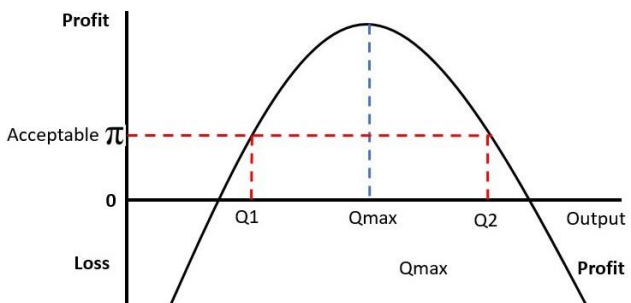


**Profit-maximisation** occurs at output  $Q_1$ , where  $MC=MR$

**Revenue maximisation** occurs at  $Q_2$ , where  $MR=0$

**Sales maximisation** occurs are  $Q_3$ , where  $AC=AR$

Profit satisficing



Managers can choose any output between  $Q_1$  and  $Q_2$ , depending on their objectives, because between these output levels, there is enough profit to satisfy the shareholders.

AR, MR and TR, for price-makers & price-takers

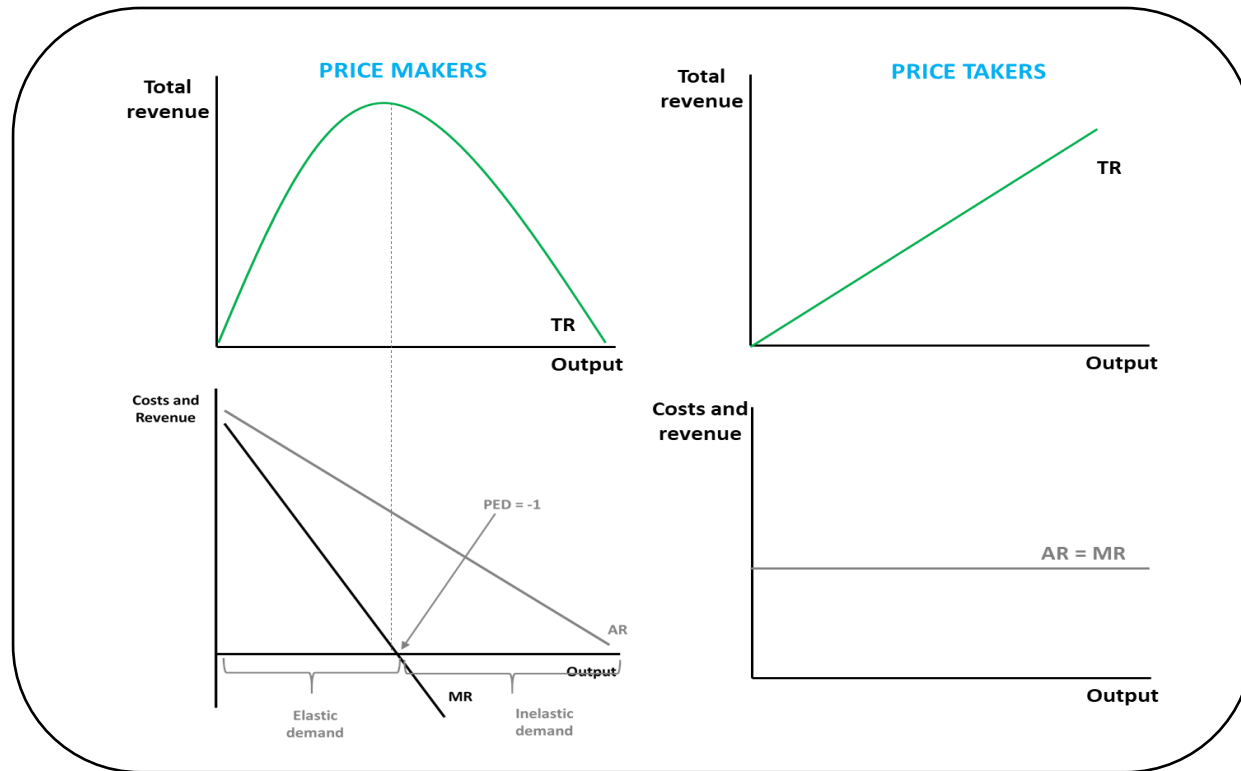
**Total revenue:** quantity sold x price;  $TR = Q \times P$

**Average revenue:** revenue per unit sold;  $AR = TR/Q$

**Marginal revenue:** the change in TR when one more unit is sold;  $MR = \text{change in TR/change in } Q$

**Price-maker:** a firm with some market power that can alter prices

**Price-taker:** a firm with no market power, selling at the market price only



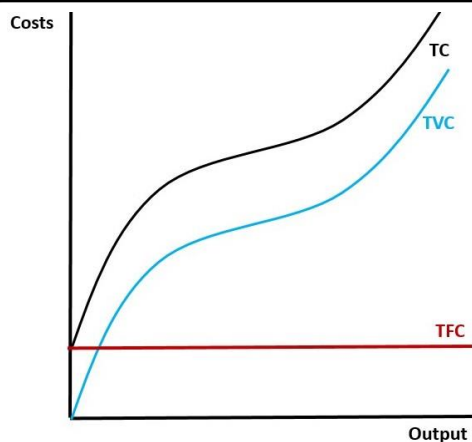
For **price makers:** Marginal Revenue (MR) is less than Average Revenue (AR), because to sell additional units, the price of **all** units needs to be lowered. TR is max when  $MR = 0$

For **price makers:** Marginal Revenue (MR) is equal to Average Revenue (AR), because every unit is sold at exactly the same price. TR is upwards sloping with constant gradient

### Short Run Costs

- Fixed costs:** costs that do not vary with output; the total costs incurred when output is zero
- Variable costs:** costs that vary directly with output
- Short-run:** the period of time in which at least one factor of production is fixed
- Long-run:** the period of time in which all factors of production are variable

#### Total costs in the short run

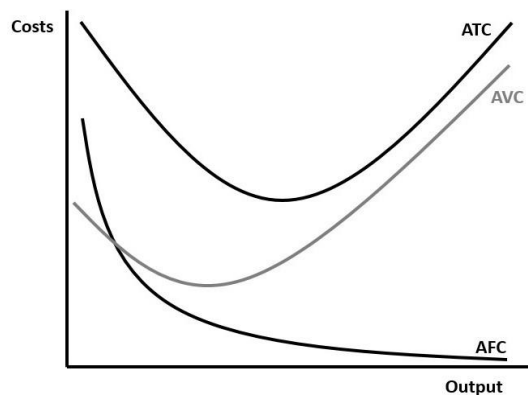


**Total fixed costs TFC** do not change with output  
**Total variable costs TVC** increase as output rises, but the relationship is not linear because of the *Law of Diminishing Returns*

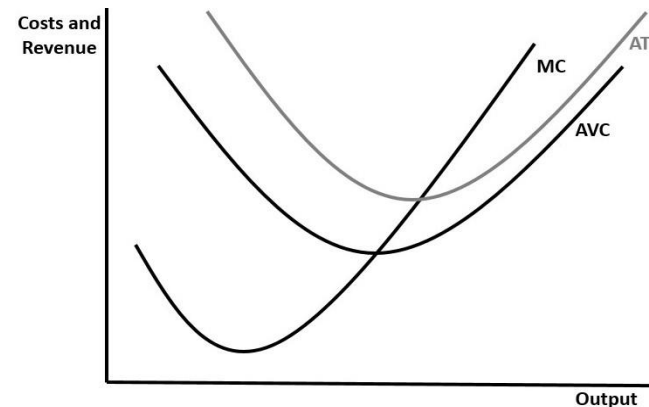
**Total costs  $TC = TFC + TVC$**

#### Average costs in the short run

- Average fixed costs  $AFC = TFC/Q$ ;** AFC decreases with output
- Average variable costs AVC** ; the curve is U-shaped, at lower outputs output rises faster than TVC; at higher outputs, TVC rise faster than output
- Average total costs  $ATC = AFC + AVC$**



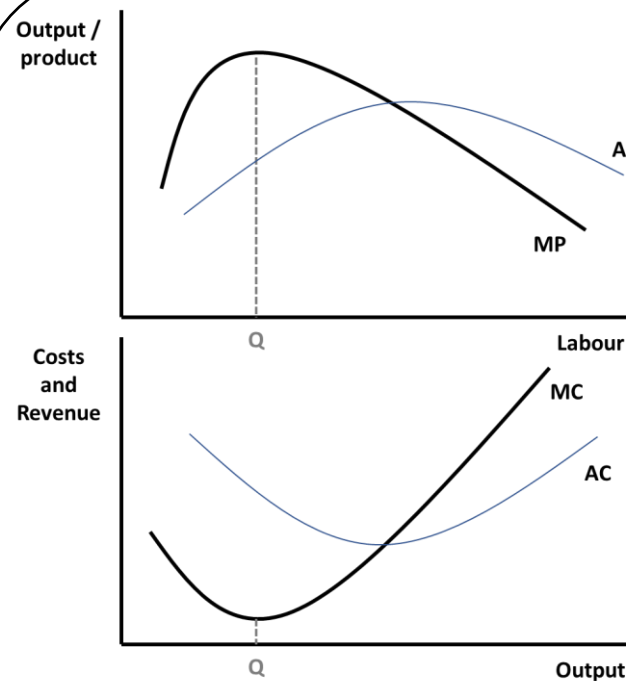
### Marginal costs



**Marginal cost MC** is the change in total costs when output increases by one unit.  
**MC = change in total costs/change in output**

- Marginal costs are variable costs; MC is the gradient of the TC

#### The relationship between AC and MC



**Short-run explanation: LAW OF DIMINISHING RETURNS** as extra variable factors are added to fixed factors, the fixed factors e.g. capital become increasingly scarce and marginal product falls (from Q), causing marginal cost to rise

MC always cuts AVC and AC curves at their minimum point.

- If you add more to the total than the current average, the average rises; if you add less to your total than the current average, the average falls

**Economies of scale**

In the long run, all factors of production are variable, so a firm can 'scale up'. There can be *cost advantages when operating at a larger scale* known as **economies of scale** or increasing returns to scale; EoS = falling long run average costs (LRAC)

**Internal v external economies of scale**

**Internal economies of scale** arise because of the growth in output of the firm itself as it expands its own operations; efficiencies in production are gained reducing LRAC.

**External economies of scale** arise from factors outside the firm because of the growth in the size of the industry or the business environment in which the firm operates, reducing LRAC for individual firms.

**Internal Economies of Scale**

**Technical EoS** = use of specialised equipment, automated manufacturing; law of increased dimensions e.g. containerisation,

**Purchasing EoS** = lower price per unit from bulk buying, larger firm can use its monopsony power

**Managerial EoS** = using specialist staff, a form of the division of labour, e.g. specialist production manager

**Financial EoS** = bigger firms are often less risky and can get bigger loans at lower interest rates than smaller firms

**Risk-bearing EoS** = larger firms can diversify to spread risk; makes business more resilient to changes in market conditions

**External Economies of Scale**

Sometimes called **agglomeration economies or clustering**

**Infrastructure:** industries cluster geographically to benefit from shared infrastructure, e.g. Media City in Salford; fishing industry in Grimsby

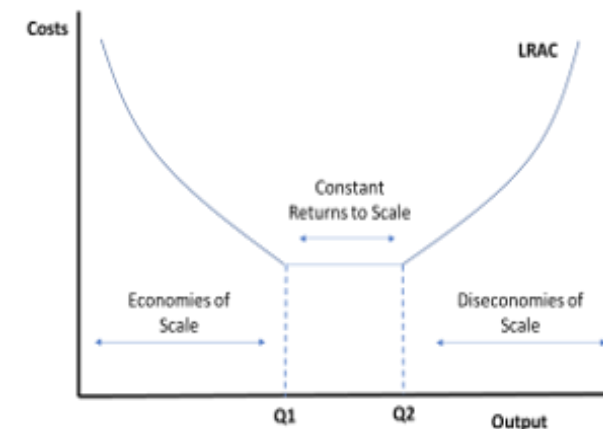
**Knowledge & labour pool:** in some regions there may be a strong knowledge sharing environment e.g. City of London, Cambridge Uni & Science Park

**Supplier networks:** clusters of related businesses can lead to a strong supplier network e.g. specialised components in automotive industry

**Long run average cost (LRAC) curve**

LRAC curve is drawn assuming there is an infinite number of plant sizes that a business can use:

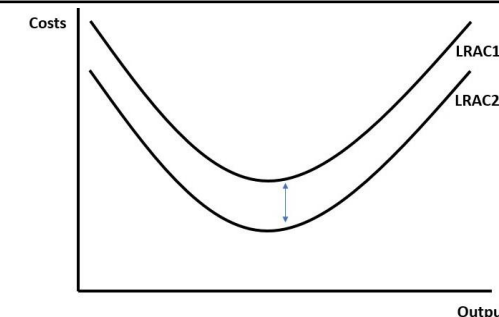
- If LRAC is falling when output is increasing, then the firm is experiencing **economies of scale**.
- Conversely, when LRAC eventually starts to rise then the firm experiences **diseconomies of scale**
- If LRAC is constant, the firm is experiencing **constant returns to scale**



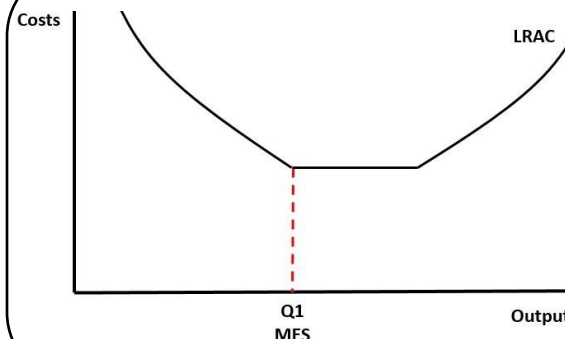
**External economies of scale; shift down in LRAC**

External EoS cause the firm's LRAC to shift down – lower average costs at every output level.

External diseconomies of scale would shift it up



**Minimum efficient scale (MES)**



MES: the lowest output Q1 where the firm is at the **lowest point on the LRAC**. The business achieves **productive efficiency**.

If the MES is low relative to total market output, then it is likely there will be a large number of small firms in the industry and vice versa

**Profit (TR-TC = profit)**

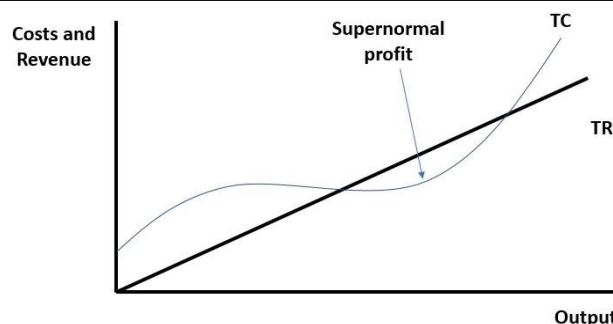
**Profit = total revenue (TR) - total costs (TC)**

**Normal profit:** the profit that the firm could make by using its resources in their next best use; it is the profit needed to keep the firm in business; it is effectively a cost of production. Normal profit is earned when TR=TC

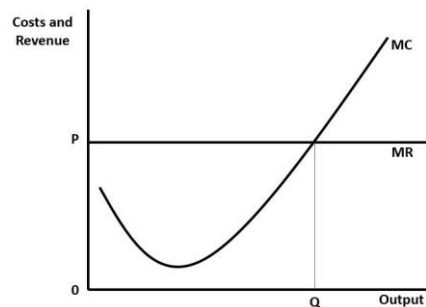
**Supernormal profit:** also called abnormal profit is any profit over and above normal profit

**Profit**

Supernormal profit exists when  $TR > TC$ ; it is maximised when the vertical difference between TR and TC is greatest



**Profit maximisation MC=MR**



Up to output Q,  $MR > MC$  so for each extra unit produced more is added to revenue (MR) than is added to costs (MC) so profit rises.  
 Beyond output Q,  $MR < MC$  so for each extra unit produced less is added to revenue (MR) than is added to costs (MC) so profit falls

A common simplifying assumption is that a firm will aim to maximise its profits. (This assumption can be broken down in evaluation).

**Profit-maximisation occurs at the out where  $MC=MR$ .**

**Shut down points**

If a firm is making losses it may decide to shut down. In the short run, it is assumed it will still have to pay its fixed costs.

The **firm will shut down in the short run** if:

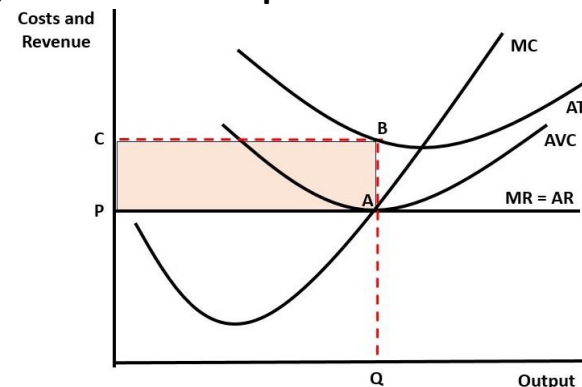
**Price per unit (AR) < average variable cost (AVC)** or when total revenue (TR) < total variable cost (TVC)

In the long run, all costs are variable, so the **firm will shut down in the long run** if:

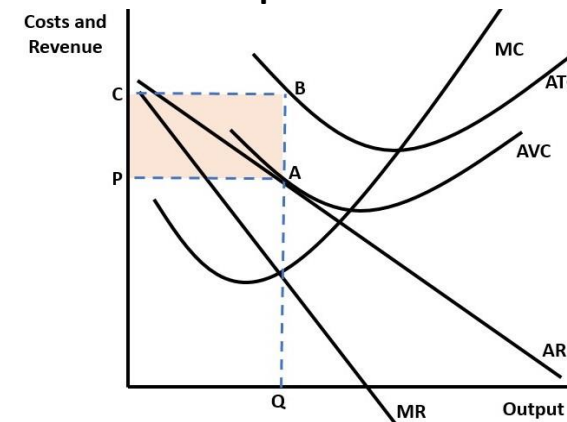
**Price per unit (AR) < average total cost (ATC)** or when total revenue (TR) < total cost (TC)

**Diagrams showing short run shut down points**

**For a price taker**



**For a price maker**



In both cases, the firm is minimising its losses by producing where  $MC=MR$ . Losses are area ABCP. Point A is the shut down point (where  $AVC = AR$ )  
 If there was any increase in variable costs and/or decrease in revenue, then the firm would shut down

**In the long run**, there is no distinction between variable and fixed costs because all costs are variable; the diagrams would be the same, but without the ATC curves drawn on AND the AVC curves would be labelled ATC

**Economic efficiency**

Efficiency is about a society making **optimal (best) use of our scarce resources** to help satisfy changing wants & needs.

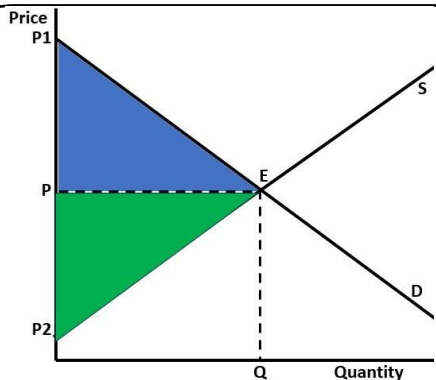
**Allocative efficiency**

**Allocative efficiency:** when no one can be made better off without making someone else worse off. Also known as Pareto efficiency/optimality

- Allocative efficiency occurs when the value that consumers place on a product (reflected in the price they are willing and able to pay) equals the marginal cost of factor resources used up in production.

Condition required for allocative efficiency in a market is that **price = marginal cost of supply (P = MC)**; on a diagram this is where **AR = MC**

**Allocative efficiency in a competitive market**



Up to output Q, the price consumers are willing to pay (shown by the demand curve) is higher than the cost of the scarce resources used to produce the good (shown by the supply curve), so it is efficient to allocate scarce resources to produce these units. For output units beyond Q this is no longer the case.

In a competitive market, social welfare (**consumer surplus + producer surplus**) is maximised at when the equilibrium quantity is produced

**Productive efficiency**

**Productive efficiency:** when a firm is producing goods or services at the lowest possible average cost, using the fewest possible resources.

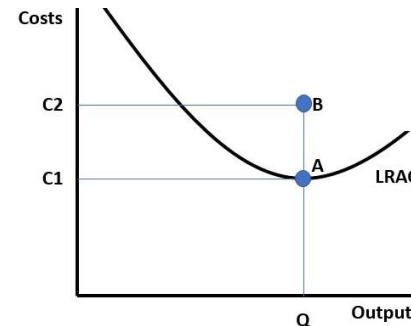
- Firm produces the maximum output with the given inputs, without any waste or inefficiencies.

Productive efficiency is achieved at an output that **minimises the unit cost (AC) of production**

**X-inefficiency**

**X-inefficiency:** when a firm is not operating at its optimal level of efficiency due to internal factors such as poor management, lack of motivation, and bureaucratic inefficiencies.

**Diagrams showing productive efficiency and X-inefficiency**



**Productive efficiency** is achieved at output Q because the firm is operating at its minimum LRAC (at A or cost per unit C1). If the firm faced average costs at C2 when its output was Q, it would be **X-inefficient**

**Dynamic efficiency**

**Dynamic efficiency:** achieving efficiency over time; it refers to ongoing **innovation** of products and production techniques and is all about long-term growth and development.

- Product innovation:** when companies invest in R&D and introduce new products or services to increase their competitive advantage, reduce costs, and improve the quality of their offerings.
- Process innovation:** the improvement of existing processes or the development of new ones to increase efficiency and productivity e.g. automation
- Creative destruction:** Schumpeter's concept that states that innovation and technological change lead to the replacement of old technologies and products with new ones, leading to economic growth and progress.

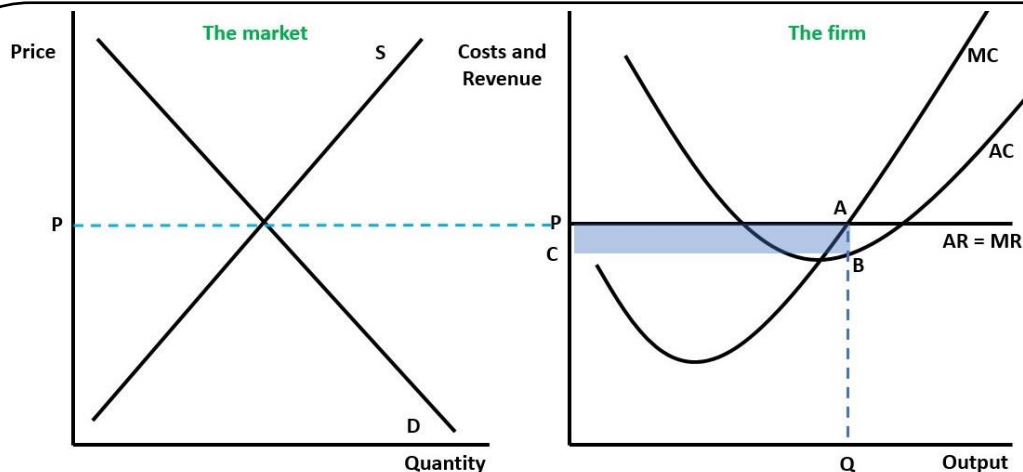
**Static v Dynamic efficiency**

- Static efficiency:** the optimal allocation of resources at a specific point in time; optimising existing resources and processes, focused on efficiency and cost reductions
- Dynamic efficiency:** efficiency over time i.e. the long-term allocation of resources and the potential for continuous improvement and adapting to changing conditions; emphasis is on innovation, adaptability, and continuous improvement.

**Characteristics of perfect competition**

- Large number of buyers and sellers (firms)
- Homogenous (identical) products
- Perfect information
- No barriers to entry or exit
- Firms are price takers - they cannot influence the market price; demand to the firm is perfectly elastic (horizontal) and  $P=AR=MR$
- Supernormal profit is competed away in the long run

**Perfect competition in the short run**



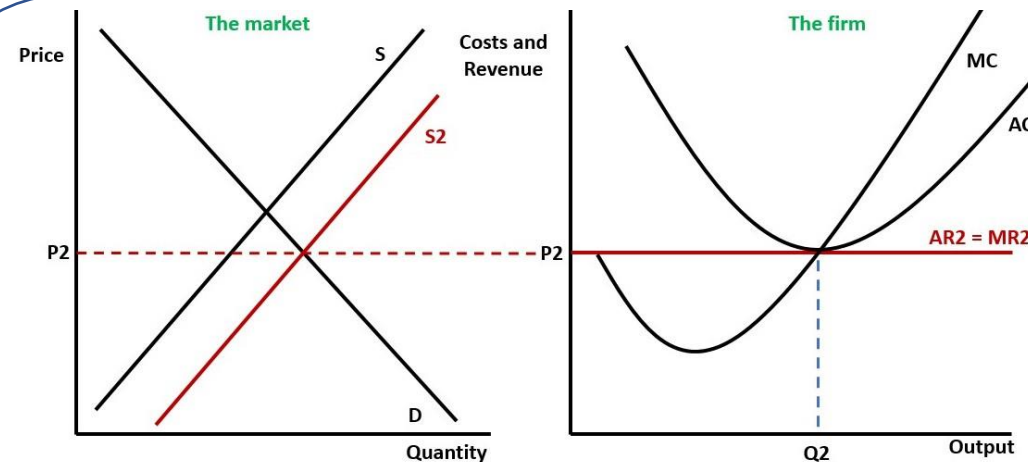
In perfect competition, the firm 'takes' the market price P. Assuming profit-maximisation, the firm will produce the output Q where **MC=MR**. At Q, AR is greater than AC, so profit per unit is AB. **Total supernormal profit is the shaded area ABCP.**

**Minimum losses in the short run**

If the firm faced higher costs, so  $AC > AR$  at the output where  $MC=MR$ , then the firm is making losses.

- The firm will shut down if its revenue does not cover its variable costs (if  $AR < AVC$ ) in the short run.
- The firm will stay open in the short run if  $AR > AVC$

**Perfect competition in the long run**



In the long run, because there are no barriers to entry, **new firms** will join the market to gain some of the supernormal profit. This causes the market supply curve to shift right and the **market price falls to P2**. The firm now has to take the new lower price P2: the profit-maximising output falls to Q2, where the firm is making **normal profit only**.

**All supernormal profit is competed away** by the entrance of the new firms. *If the firm had been making losses in the short run, some firms would leave the market & market supply shifts left; the market price would rise until the long run equilibrium is restored.*

**Perfect competition & efficiency**

**Allocative efficiency ( $P=MC$ ):** firms are allocatively efficient in both the short and long run; as a price taker  $P=MR$  so when  $MC=MR$ ,  $P=MC$

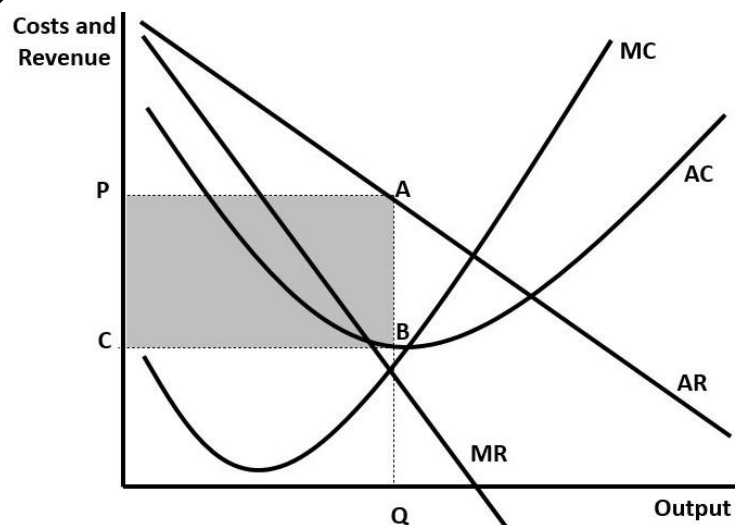
**Productive efficiency (min LRAC):** in the long run, the firm will produce where the long run AC curve is at its minimum, so firms are productively efficient

**Dynamic efficiency;** we assume firms make homogenous goods so there is little scope for innovation and differentiated to try to establish some market power. *However, it is worth noting that in the real world, firms in competitive markets often are very entrepreneurial and innovative, but these markets may not fully meet the theoretical criteria for perfect competition*

**Characteristics of monopoly**

- Single seller
- Unique products (with no/few substitutes)
- High barriers to entry
- Firms are price makers - they can set the market price though are constrained by demand – a higher price means a lower quantity demanded. Demand slopes downwards to the right  $D = AR$ , but  $MR$  is twice as steep because to sell more the firm has to reduce the price
- Supernormal profit can be earned in the long because barriers to entry are high

**Monopoly in the short run**



Assuming profit-maximisation, the firm will produce the output  $Q$  where  $MC=MR$ . It can charge price  $P$  according to the demand curve. At  $Q$ ,  $AR$  is greater than  $AC$ , so profit per unit is  $AB$ . **Total supernormal profit is the shaded area  $ABCP$**

**Minimum losses in the short run**

- If the monopolist faced higher costs, so  $AC > AR$  at the output where  $MC=MR$ , then the firm is making losses.
- The firm will shut down if its revenue does not cover its variable costs (if  $AR < AVC$ ) in the short run.
  - The firm will stay open in the short run if  $AR > AVC$

**Monopoly in the long run**

In the long run, because there are high barriers to entry, **no new firms** can join the market so the **monopolist can earn the supernormal profits in the long run.**

**The diagram for the long run is the same as for the short run.**  
If the firm had been making losses in the short run, it would have to shut down in the long run unless demand increases (boosting revenue) or the firm is able to cut its costs.

**Monopoly v monopoly power**

In theory, there is **one supplier** in a monopoly, but a firm that has more than 25% of a market can wield **monopoly power**

**Natural Monopoly**

**Natural monopoly:** a single firm can efficiently serve the entire market due to significant **economies of scale** e.g. utilities, transportation networks

- High fixed costs relative to variable costs and **declining average costs**
- High minimum efficient scale

Natural monopolies can benefit consumers by providing services at lower costs than multiple competing firms would achieve, but they require regulation to prevent potential abuse of market power.

**Monopoly and efficiency**

**Allocative efficiency ( $P=MC$ ):** a monopoly is NOT allocatively efficient in either the short nor long run;  $P > MC$ .

**Productive efficiency (min LRAC):** the monopoly is NOT productively efficient – it produces to the left of the minimum  $AC$

**Dynamic efficiency;** the monopoly has supernormal profits it can reinvest in the business – it can use the profits for R&D and product and process innovation. The monopoly can therefore be dynamically efficient.  
A monopoly that does not innovate may lose its market dominance and the barriers to entry in the market may weaken

**Barriers to entry**

**Barriers to entry:** factors that make it difficult or impossible for firms to enter an industry and compete with existing firms.

**Natural barriers:** the nature of the industry makes it efficient for one or a small number of large firms to operate in the industry

**Legal barriers:** laws and regulations make it difficult for firms to join the industry.

**Strategic/artificial barriers:** barriers put in place by firms already in the industry to prevent an increase in competition. These can be anti-competitive and may be illegal.

*Barriers to entry are important because they help determine how competitive a market is likely to be. The higher the barriers to entry, the more likely there will be less competition and more market concentration*

**Types of barriers to entry**

**Natural barriers** include: high capital start-up costs or high sunk costs; high economies of scale (as for natural monopoly); geographical barriers

**Legal barriers** include: patents, copyrights & trademarks; licencing; public franchises; import controls

**Strategic barriers** include: ownership or control of the factors of production needed (via vertical integration); control of the technology needed; limit pricing, predatory pricing; marketing barriers e.g. brand proliferation; advertising barriers that create brand loyalty; other anti-competitive practices

**Limit pricing & predatory pricing**

**Limit pricing:** the monopolist cuts its price and increases output so it is making normal profit only ( $AC=AR = P$ ), then a new firm with potentially higher AC will not be able to compete.

**Predatory pricing:** the monopolist cuts its price and increases output so it is running at a loss; a new firm with potentially higher AC will not be able to compete. *Once the threat of competition is gone, it puts its prices up again.*

**Barriers to exit:** Make it difficult or impossible for firms to cease production and leave an industry

**Examples** include: asset write-offs, closure costs and lost reputation

*If barriers to exit are high, this can act as a deterrent to enter an industry i.e. the barrier to exit = a barrier to entry*

**Monopsony**

**Monopsony:** a single buyer

**Buying power:** a firm or group of firms have a dominant position as the buyer of a product/service

*Firms can use their buying power to get better prices from their suppliers, helping to reduce costs*

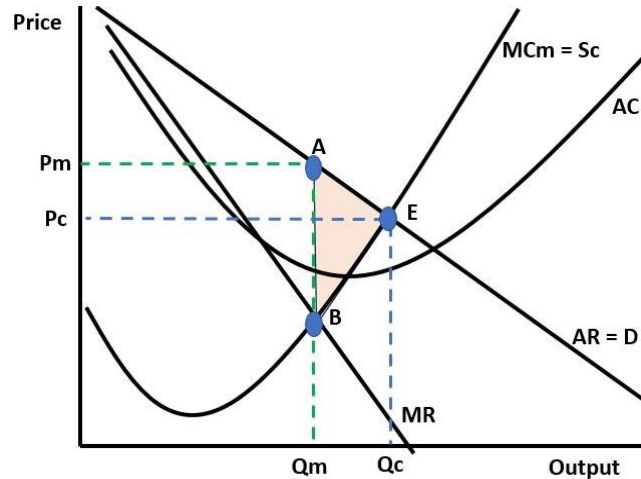
**Benefits of monopsony power**

- Firms can gain purchasing economies of scale reducing long run average costs
- Lower costs help increase supernormal profits
- Better returns to shareholders
- Extra profit may be re-invested to improve dynamic efficiency
- Consumers may gain from lower prices (as costs are lower); increase in the consumer surplus
- Better value for money, e.g. NHS can buy drugs more cheaply and give more treatments

**Problems with monopsony power**

- Business use their buying power to squeeze lower prices from suppliers
- Some suppliers may have to leave that industry if they make losses, causing job loss; future supply chains may be less reliable
- If supplying firms leave, consumers may end up with less choice and/or higher prices
- Monopsony employers can use their labour market power to depress wages and negatively affect the real incomes of their workers

## Monopoly v competitive market



The monopoly produces where  $MC=MR$ ; it chooses output  $Q_m$  and charges price  $P_m$ . If the market was competitive, the equilibrium is where  $D = Sc$  at price  $P_c$  and quantity  $Q_c$ . To maximise its profits the monopoly restricts output and raises its price.

This creates a net welfare loss of ABE because the monopoly is not allocatively efficient. The units of output between  $Q_m$  and  $Q_c$  are all valued more highly by consumers than the marginal cost of producing them.

## Monopoly costs v costs in competition

In the analysis above, there is a big **underlying assumption** that  $MCM = Sc$  i.e. that the cost structure faced by the monopoly is the same as the collective one for all the firms when the industry is competitive.

**This may not be the case** if the monopoly can gain **economies of scale**. If  $Sc$  lies to the left of  $MCM$  due to higher costs because of smaller scale production by the competing firms, the monopoly price could be lower and its output higher than under perfect competition.

For a **natural monopoly**, the most productively efficient scale is the largest; it makes sense to gain the economies of scale, but the monopoly may need regulation or be nationalised to prevent profiteering from high pricing strategies.

## Disadvantages of monopoly

**Higher prices:** prices are higher in monopoly than under competition  
**Loss of allocative efficiency** ( $P > MC$ ); net welfare loss compared to competition

**Inequality:** may worsen because higher prices may affect those on lower-incomes harder (regressive)

**X-inefficiencies:** e.g. wasteful marketing spending because of the absence of market competition

**Diseconomies of scale:** may cause a loss of productive efficiency in the long run

**Lack of choice for consumers:** lower consumer welfare

**Monopsony power:** firms with market power can often use this to apply pressure on their suppliers to reduce prices

**Supernormal profit:** this may not be reinvested in the business but distributed to shareholders and/or used to increase CEO/manager pay

## Advantages of monopoly

**Supernormal profit:** can be used to fund extra capital investment & research projects that spark innovation; dynamic efficiency.

**Economies of scale:** monopoly may have much lower costs than if industry was made up of smaller firms; this is especially the case for a natural monopoly.

**Increase international competitiveness:** a domestic monopoly with economies of scale can compete more successfully on price and cost in international markets.

**Regulation:** laws and industry regulators can ensure monopolies do not exploit consumers with excessive prices and that they maintain quality

**Enables price discrimination:** can help some lower-income families. Indeed, some services might be provided free to consumers.

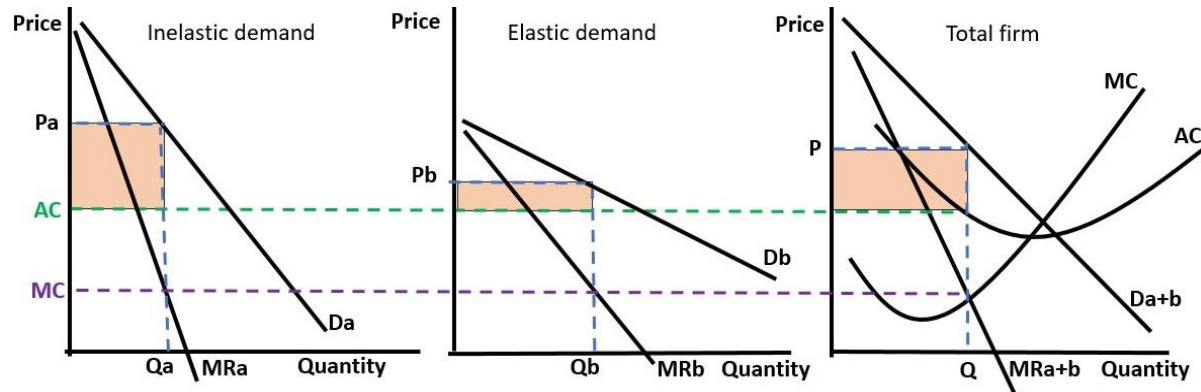
Price discrimination

**Price discrimination** is charging different prices to different groups of consumers for an identical good or service for reasons *other than differences in cost*.

Price discrimination is possible when

- there are high barriers to entry & firms have some monopoly power
- the market can be split into two or more distinct groups of consumers, which have different PEDs
- there is no market seepage (consumers cannot buy in one sub-market and sell in another); the cost of keeping the markets separate should be low

Price discrimination diagram



The price discriminating firm's costs are determined in the whole market. MC and AC are set at this level in each sub-market.

**Inelastic demand:** the firm sets  $MC=MR_a$ , it chooses output  $Q_a$  and can charge price  $P_a$  in this sub-market.

**Elastic demand:** the firm sets  $MC=MR_b$ , it chooses output  $Q_b$  and can charge price  $P_b$  in this sub-market.

The **combined profit area** of the two submarkets should exceed the profit in the whole market to make the price discrimination worth it.

Benefits of price discrimination

- Firm makes greater supernormal profits
- Firm **extracts some of the consumer surplus** to add to its profits
- Profits could be used to re-invest in the firm and increase dynamic efficiency; firm may use profit for R&D and innovation
- Firm may use profit to improve the quality of its good/service
- Firm may use extra profit to cross-subsidise loss-making services; extra profit could turn a loss-making firm into a profit maker ensuring the good/service continues to be supplied
- Some consumers in the 'elastic demand' sub-market may be able to afford the good at the lower price  $P_b$
- Firm's market is greater as it absorbs some lower-income consumers
- It can help firm's use spare capacity (price can be lower at times when there is high capacity and high when there is no spare capacity)
- May enable a firm to break into a new market at home or abroad and make it more competitive

Costs of price discrimination

- Consumers in the 'inelastic demand' sub-market pay a higher price
- There is a loss of consumer welfare (the firm extracts some of the consumer surplus); i.e. consumer exploitation
- Price discrimination may also firms to use predatory pricing tactics
- Can reinforce monopoly power
- Firms may not use the extra supernormal profit to improve the businesses; e.g. profits may be distributed to shareholders only

Perfect price discrimination

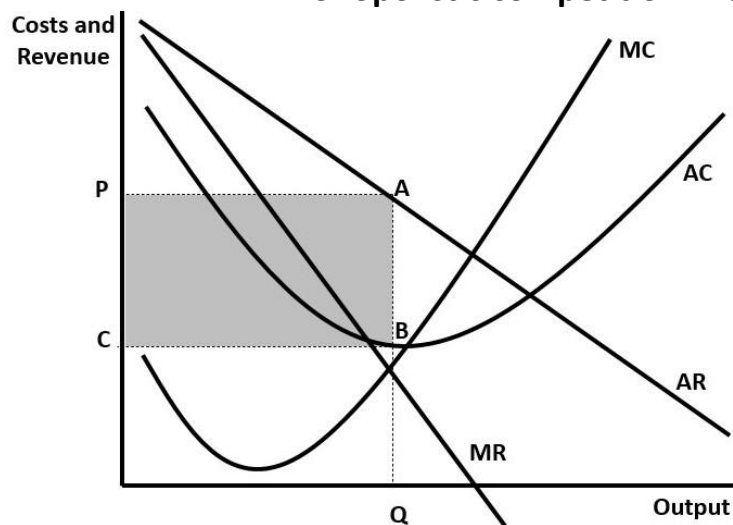
Firm charges each consumers exactly what they are prepared to pay extracting all the consumer surplus to boost its supernormal profits

Characteristics of monopolistic competition

- Large number of buyers and sellers (firms)
- Differentiated products
- Low barriers to entry or exit
- Firms are price makers - they can influence the market price because products are not identical; demand to the firm slopes downwards to the right and MR is twice as steep as AR
- Supernormal profit is competed away in the long run

*It is important to remember that the emphasis in monopolistic competition is on competition; the low barriers to entry enable firms to join easily and compete in the market*

Monopolistic competition in the short run



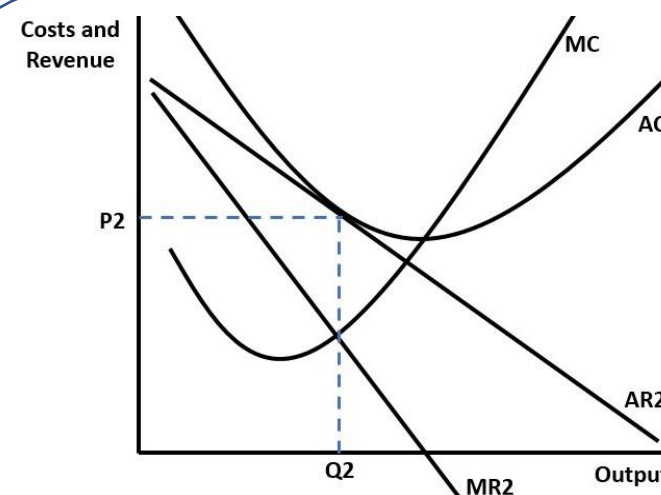
Assuming profit-maximisation, the firm will produce the output Q where  $MC=MR$ . It can charge price P according to the demand curve. At Q, AR is greater than AC, so profit per unit is AB. **Total supernormal profit is the shaded area ABCP**

Minimum losses in the short run

If the firm faced higher costs, so  $AC > AR$  at the output where  $MC=MR$ , then the firm is making losses.

- The firm will shut down if its revenue does not cover its variable costs (if  $AR < AVC$ ) in the short run.
- The firm will stay open in the short run if  $AR > AVC$

Monopolistic competition in the long run



In the long run, because there are low barriers to entry, some **new firms** will join the market attracted by the supernormal profit. Some consumers will switch to the new firm's product and demand for the existing firm will shift inwards to AR2.

The existing firm's new the profit-maximising output is at  $MC=MR2$ . Output falls to Q2 and the price it charges falls to P2; At Q2  $AC=AR2$  so the firm is making **normal profit only**.

**All supernormal profit is competed away** by the entrance of the new firms

*If the firm had been making losses in the short run, some firms would leave the market & demand for the existing firm's product would increase*

Monopolistic competition & efficiency

**Allocative efficiency ( $P > MC$ ):** firms are not allocatively efficient in either the short nor the long run

**Productive efficiency (min LRAC):** in the long run, the firm is not producing where the long run AC curve is at its minimum, so firms are not productively efficient

**Dynamic efficiency;** supernormal profit is competed away in the long run making it more difficult for firms to be dynamically efficient

*One benefit to consumers is there is **product differentiation** – consumers have more choice than in perfect competition; firms are expected to advertise and aim to create brand loyalty (if they succeed the barriers to entry become stronger.*

**Characteristics of oligopoly**

- Dominated by a small number of large sellers (firms)
- High concentration ratio
- Most likely differentiated products
- Barriers to entry or exit
- Firms are price makers - they can influence the market price because products are not identical; demand to the firm slopes downwards to the right and MR is twice as steep as AR
- Supernormal profit is possible in the long run

**Concentration ratio**

The **concentration ratio** measures the combined market share of a leading cluster of businesses in a clearly defined market e.g. the five-firm concentration ratio is the sum of the market shares of the largest five firms as a %. (If the 5-firm CR is 60%+ this indicates an oligopoly)

**Interdependence of firms**

Firm in oligopoly are interdependent. They have to consider how the action of one firm affects other firms. A firm's decision to change price, output, how it competes...can impact quickly on other firms. Firms try to anticipate their rivals' decisions; there is uncertainty

**Competition v collusion**

**Competitive oligopoly** – the firms compete

- Price war
- Stable/sticky/rigid prices & non-price competition

**Collusive oligopoly** – the firms act as a monopoly and make agreements together on pricing and output

- Tacit/informal; unspoken, hard to detect; may be due to **price leadership**
- Overt/formal/cartel; usually illegal; firms can face considerable consequences if caught

**Price war (Competitive oligopoly)**

Firms may engage in a price war (try to undercut each other's prices) to increase their market share.

**Gainers in a price war**

Consumers: lower prices, higher consumer surplus  
 Surviving firms: gain market share and increase longer term profit  
 Firms: may be able to use their monopsony power to depress the prices they pay to suppliers to cut costs and stop profit falling

**Losers in price war**

Consumers: loss of choice if firm is forced to leave  
 Firms: lose profit in the short run  
 Firms: weakest firms may have to leave  
 Shareholders: may lose profit  
 Suppliers: may lose profit if they cannot charge such high prices

**Stable prices (Competitive oligopoly)**

Oligopolistic firms may decide not to compete using price, but instead use **non-price competition** methods such as product differentiation, advertising and marketing, product innovation, loyalty schemes, customer service, special offers, free gifts etc.

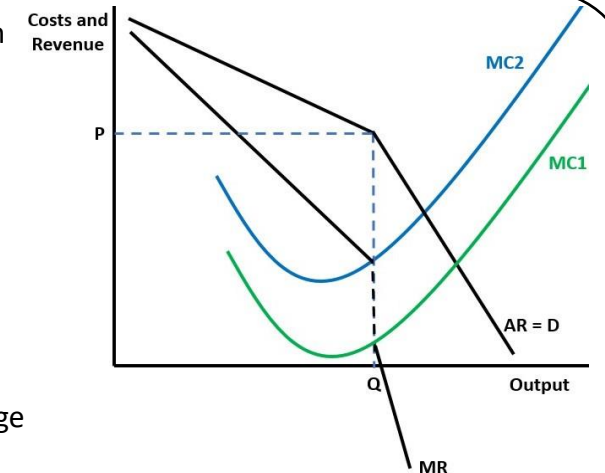
The **kinked demand curve** shows why prices may not adjust when the firm's costs change.

**EXTENSION: Kinked demand curve – explaining stable prices**

The firm believes that if it raises price from P, others will not follow so its demand is elastic, but if it cuts its price, others will, so demand is inelastic.

This creates a kink in the D=AR curve; the MR curve will therefore have a disjointed section.

Normally if a firm's costs rise, the firm reduces output and increases price to maximise profits. Here the firm's costs can vary between MC1 and MC2 with no change in price; prices are sticky at P.



**Collusive oligopoly**

**Collusion:** collective agreement between firms which restrict competition

**Overt collusion:** firms openly fix prices, output etc.

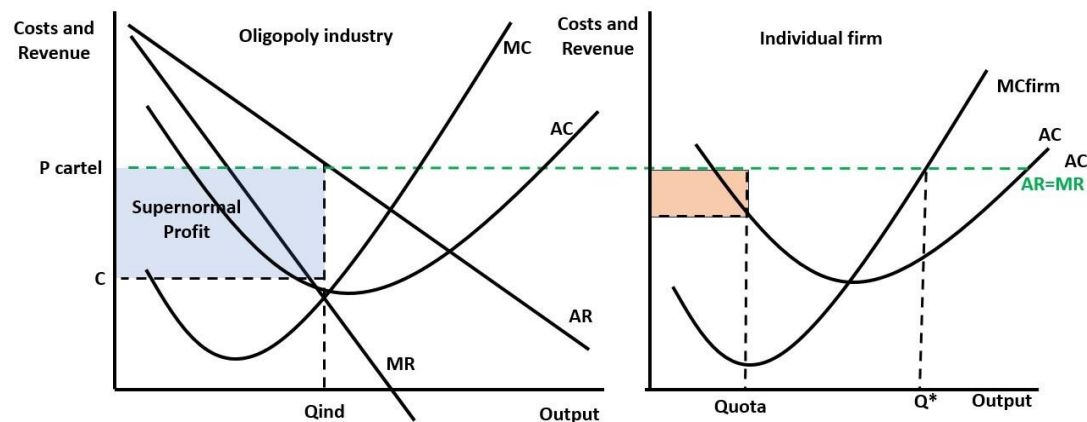
**Tacit collusion:** 'behind the scenes' agreements

**Price leadership:** firms adjust their prices in line with the actions of the market leader

Collusion is usually illegal and can result in big fines and prison sentences.

**Whistleblowing:** a firm involved in cartel behaviour has an incentive to reveal the anti-competitive practices; it may avoid fines imposed on other firms

**Cartel diagram**



- The colluding oligopolists act as a monopoly to maximise their joint profits; the industry as a whole makes maximum monopoly profits at price  $P_{cartel}$ .
- To maintain this price and profits each firm is given an **output quota** so their joint output does not exceed  $Q_{ind}$ .
- All firms are '**price takers**' at the cartel price  $P_{cartel} = AR = MR$ , the price they have agreed
- The individual firm sets its output at the Quota, but this is not its profit-maximising output (which is  $Q^*$  where its  $MC = MR$ ); it has an incentive to produce more and break the cartel agreement

**Conditions for an effective cartel**

- Fewer, larger firms involved makes it easy to make an agreement
- High barriers to entry so cartel price cannot be undercut
- Strong branding so consumers stick with goods when price is high
- Easy to monitor each firms' output to ensure adherence to quotas
- Easier when demand is not volatile which could affect quotas chosen
- Easier if firms have similar cost structures (a very efficient firm could be reluctant to join a cartel)
- Demand is price elastic; setting a high cartel price does not impact demand much
- Easier if there is a dominant firm leading the group
- Weak industry regulators and competition authorities

**Why cartel behaviour is often unstable**

- There is an incentive for a firm to 'cheat' (and increase output, which would bring the cartel price down) if there is no credible threat or risk
- Supernormal profits may attract new firms if barriers to entry are not high enough destabilising the agreement
- If market demand falls, there may be over-capacity putting downward pressure on the price
- Regulatory and competition authorities use the law to break them up
- There is an incentive to whistle-blow

**Costs and benefits of collusive behaviour**

**Costs**

Damages consumer welfare (higher price)  
Absence of competition reduces efficiency  
Reinforces monopoly power

**Benefits**

Industry standards can increase some social welfare  
Could help offset monopsony power by suppliers in cooperatives  
Profits may be used to improve dynamic efficiency

## Game theory

**Game theory** can be used to model the behaviour of firms in oligopoly. It is about interdependence and strategy

**Pay-off matrix:** a table showing the possible outcomes of a game for the players depending on the strategies chosen

**Duopoly:** an industry with two firms

## Pricing game

		Firm Y	
		£2	£1.80
Firm X	£2	10,10	5,12
	£1.80	12,5	8,8

Each firm has to choose between charging high price £2 or low price £1.80

- If they both choose £2, their profits will be £10m for Firm X and £10m for firm Y (Top left)
- If they both choose £1.80, their profits will be £8m for Firm X and £8m for firm Y (Bottom right)
- If Firm X prices at £2 and Firm Y prices at £1.80, Firm X gets £5m profits and Firm Y gets £12m (Top right)
- If Firm X prices at £1.80 and Firm Y prices at £2, Firm X gets £12m profits and Firm Y gets £5m (Bottom left)

**Strategy:**

- If Firm Y prices at £2, firm X has to choose between price of £2 (would give £10m profit) or £1.80 (would give £12m), so it prefers £1.80
- If Firm Y prices at £1.80, firm X has to choose between prices of £2 (would give £5m profit) or £1.80 (would give £8m), so it prefers £1.80
- By the same logic, Firm Y will also choose £1.80.

The **Nash Equilibrium** is (8,8), with both charging the lower price, but this is not the best outcome, (10,10) which could be achieved if they collude

Game theory can help explain the benefits of collusion (higher profits) and why collusive behaviour can be unstable (there will be a tendency towards the Nash Equilibrium); it helps analyse interdependent behaviour in oligopoly industries

Game theory can be used when firms are considering whether to produce a high or low output; whether to install new technology or not etc..

**First mover advantage:** games are not always played simultaneously by the players; one may move first giving it an advantage (or sometimes a disadvantage)

**Pricing strategies to increase market power to increase profits**

**Predatory pricing:** firm sets its price below average variable cost to force out a rival or prevent a new entrant (illegal)

**Limit pricing:** firm sets its price low enough to deter new entrants ( $AR=AC$ )

**Price discrimination:** firm charges a different price for the same good in different sub-markets

*The goal for firms is to increase their profits; they may take a short term hit for a longer term gain*

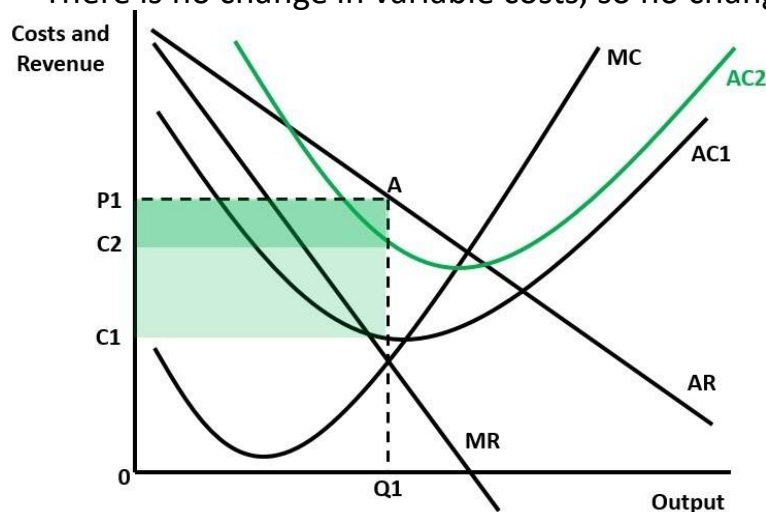
**Non-pricing strategies to increase market power to increase profits**

- Branding/loyalty
- Advertising
- New product development
- New production methods
- Product service quality & differentiation
- Mergers/takeovers
- Collusion

*Many of these can act as a barrier to entry or give a firm a competitive edge. Some may increase costs in the short term, but increase demand and revenue in the long term*

**Rise in fixed costs**

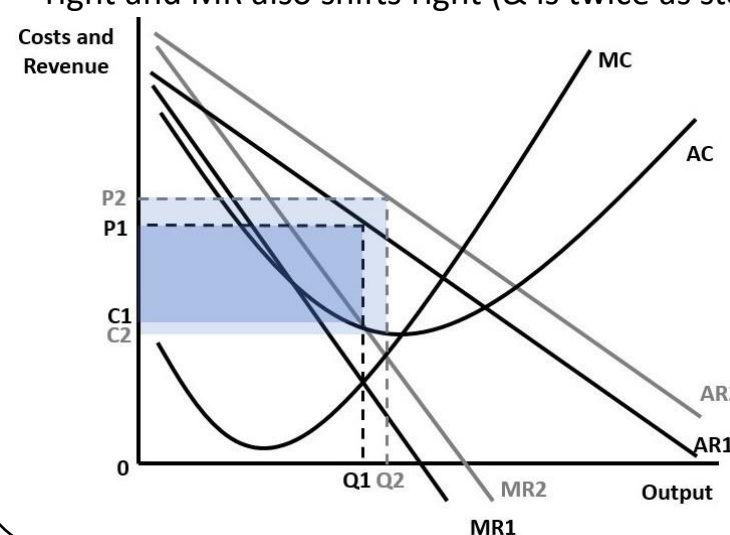
A rise in fixed costs increases the total costs of a firm. ATC curve shifts up. There is no change in variable costs, so no change in MC.



Original price is P1 and output Q1 to maximise profit (MC=MR).  
 Supernormal profits = area 0Q1 x C1P1.  
 The rise in fixed costs shifts AC up from AC1 to AC2.  
 The profit-max output and price is unchanged, but supernormal profit falls to 0Q1 x C2P1

**Rise in revenue**

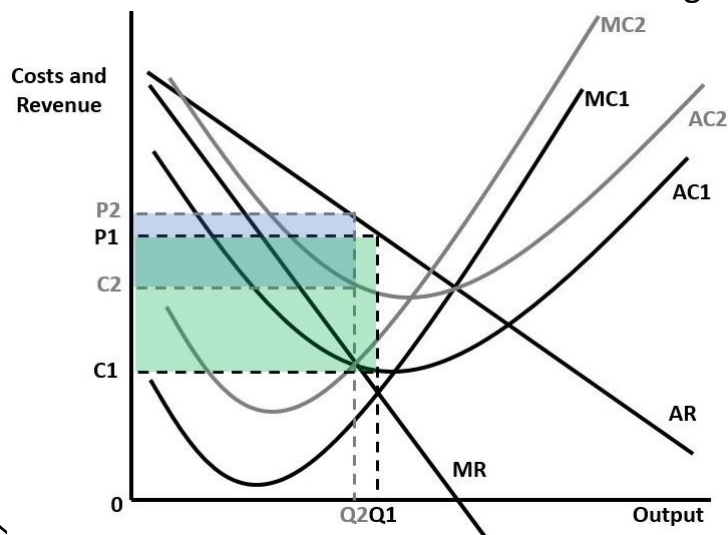
A rise in sales or demand increases the total revenue of a firm. AR shifts right and MR also shifts right (& is twice as steep as the new AR).



Original price is P1 and output Q1 to maximise profit (MC=MR)  
 Supernormal profits = area 0Q1 x C1P1  
 The increase in demand shifts AR1 out to AR2 and MR1 out to MR2.  
 The new profit-max output and price are Q2 and P2, and supernormal profit rises to 0Q2 x C2P2

**Rise in variable costs**

A rise in variable costs increases the total costs of a firm. ATC curve shifts up. There is also an increase in MC because marginal costs are always variable.



Original price is P1 and output Q1 to maximise profit (MC=MR)  
 Supernormal profits = area 0Q1 x C1P1  
 The rise in variable costs shifts up AC1 to AC2 and MC1 up to MC2  
 The new profit-max output and price are Q2 and P2 and supernormal profit falls to 0Q2 x C2P2

**Falling fixed and variable costs and fall in revenue**

The analysis in the diagrams can be reversed for changes in the opposite direction:

**Fall in fixed costs** = AC shifts down

- No change in profit maximising output and price
- Increase in supernormal profits

**Fall in variable costs** = AC and MC shift down

- Profit maximising output increases, profit maximising price falls
- Increase in supernormal profits

**Decrease in revenue** = AR and MR shift inwards

- Profit maximising output falls, profit maximising price falls
- Decrease in supernormal profits

*TIP: It is always worth thinking about the most likely outcome if costs rise and revenue fall, then a fall in profit seems likely, check your diagram shows this! (and vice versa)*

Traditional theory of the firm

	Perfect competition	Monopolistic competition	Oligopoly	Monopoly
Number & size of firms	Many small	Many small	Small number of large firms	One firm
Product	Homogenous	Differentiated	Either	Either
Barriers to entry	None	Low	High	Very high
Long run supernormal profit	No	No	Yes	Yes

Most competitive
Least competitive

Traditional theory of the firm implies that as the number of firms in the industry gets smaller, there will be less competition, higher barriers to entry and potentially higher prices for consumers. Baumol's **contestable market** theory challenges this

Contestable market terms

**Contestable market:** where a new market entrant has equal access to all production techniques available to the incumbents and where entry decisions can be reversed without cost.

**Barriers to entry:** anything that blocks potential entrants from entering a market profitably.

**Barriers to exit:** costs associated with leaving an industry.

**Sunk costs:** sunk costs are costs that cannot be recovered (in whole or in part) if a business decides to leave an industry.

**Hit-and-run entry:** when a business enters an industry to take advantage of temporarily high (supernormal) market profits.

**Limit pricing:** firm sets its price low enough to deter new entrants (AR=AC).

**Non-price competition:** competing with product differentiation, quality, brand advertising, product design and packaging, customer service, and the provision of complementary products or services but not price.

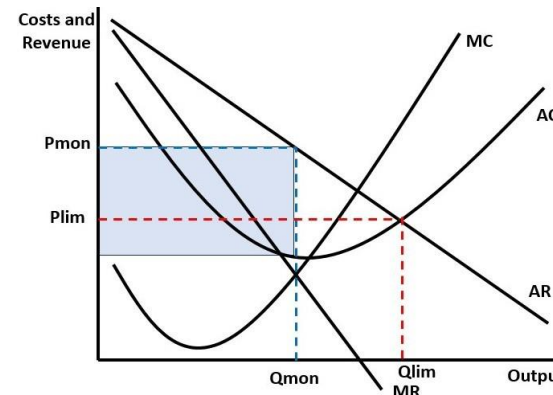
Characteristics of contestable markets

- Low barriers to entry & exit and no sunk costs
- Equal access to technology – existing firms do not have an advantage
- No collusion
- Weak brand loyalty

*It does not matter how many firms are in the industry, but there must be free/easy entry and exit into and out of the industry*

How contestable markets work

- Existing or incumbent firms (i.e. firms already in the industry) are under constant **threat of competition** as there are no/low barriers to entry and exit
- If this threat of potential competition is **credible**, firms (even a monopoly) will have to behave more competitively or new firms will join to try and compete for a share of the supernormal profits
- Existing firms might choose **limit pricing** over profit maximisation
- They may also focus on **non-price competition**
- New entrant(s) might go for **sales growth max** – in a bid to establish a market foothold; entry can also be 'hit-and-run' from a challenger firm



Under threat of competition, the monopoly may limit price; it increases output from  $Q_{mon}$  to  $Q_{lim}$  and cuts its price from  $P_{mon}$  to  $P_{lim}$ ; its supernormal profits (shaded) become normal profit only; it may reverse this if the threat of entry disappears

Contestable markets & efficiency

Contestable markets can bring benefits of competitive markets:

- **Lower prices** (improved allocative efficiency)
- **Incentives for firms to cut costs** (improved x-efficiency)
- **Incentives for firms to innovate** (dynamic efficiency)
- **Scope for economies of scale** (large firms can exist!)

**Labour demand**

Demand for labour is **derived demand** – it is linked to the demand for final goods/services.

Firms will demand more labour at lower wages than at higher wages; the labour demand curve slopes downwards to the right.

**Shifts in labour demand**

- Firms demand labour; if demand for their output increases, their demand for labour is likely to increase too
- If workers are *more productive*, the demand for labour increases
- Demand for labour can be affected by the price of substitute resources e.g. if *capital* becomes more expensive, firms will demand more labour

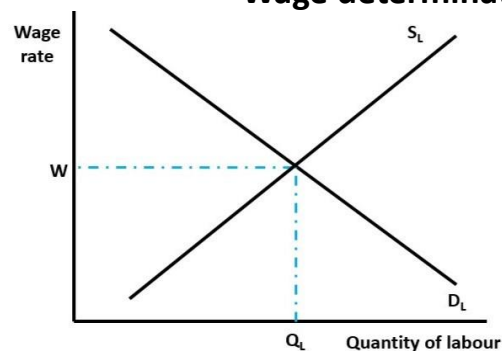
**Labour supply**

The supply of labour is greater at higher wages than lower wages; the labour supply curve slopes upwards to the right.

**Shifts in labour supply**

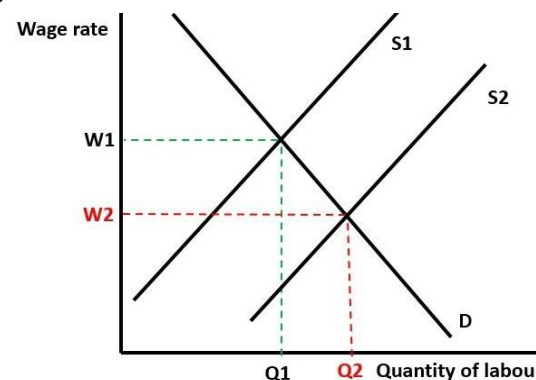
- Changes in the non-monetary/non-pecuniary benefits of work
- Changes in working conditions
- Changes in taxation and welfare benefits
- Changes in the wages of different occupations
- The occupational and geographical mobility of labour
- The role of trade unions and professional bodies
- Net immigration

**Wage determination in competitive markets**

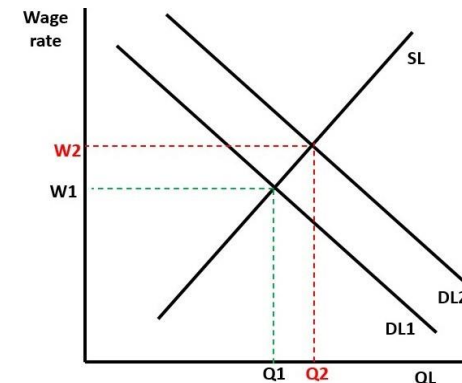


The wage is determined by the interaction of labour demand and labour supply. If labour demand or labour supply shifts, the market will adjust to the new equilibrium wage and employment

**Shifts in labour demand and supply**



Labour supply shifts right from S1 to S2; there is an excess supply at original wage W1; the wage starts to fall and firms employ more workers (extension in labour demand) until the new equilibrium at Q2 and wage W2 is reached.



Labour demand shifts right from DL1 to DL2; there is an excess demand at original wage W1; the wage starts to rise and more workers extend their labour supply until the new equilibrium at Q2 and wage W2 is reached.

**Wage elasticity of demand**

**Wage elasticity of demand:** the responsiveness of quantity of labour demanded to a change in the wage rate.

**WED = % change in Q of labour demanded / % change in wage**

**WED depends on:** % of total costs that are labour costs; the ease and cost of factor substitution, the PED of the final product and the time period etc.

**Wage elasticity of supply**

**Wage elasticity of supply:** the responsiveness of quantity of labour supplied to a change in the wage rate.

**WES = % change in Q of labour supplied / % change in wage**

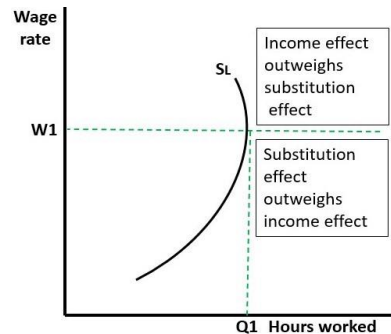
**WES depends on:** nature of skills and qualifications required to work in an industry, the vocational nature of work, the time period, the occupational and geographical mobility of labour.

### Backward bending individual labour supply

An individual worker's labour supply curve may bend backwards; It is assumed that hours worked (earning a wage) is a substitute for leisure. **The substitution effect of a wage change:** as the wage rises, the worker prefers hours worked to leisure because the opportunity cost of taking leisure is higher (and vice versa for a wage fall)

**The real income effect of a wage change:** as the wage rises, a worker may hit their target income and choose to work fewer hours (and vice versa) If the real income effect is greater than the substitution effect then the labour supply may bend back – it is usually assumed this only happens at higher wages.

### Backward bending labour supply diagram



Only an individual's labour supply can slope backwards: It is more likely to slope backwards for those on high incomes, for those who can adjust their hours of work, for those who are not primary income earners & for those who do not like their job.

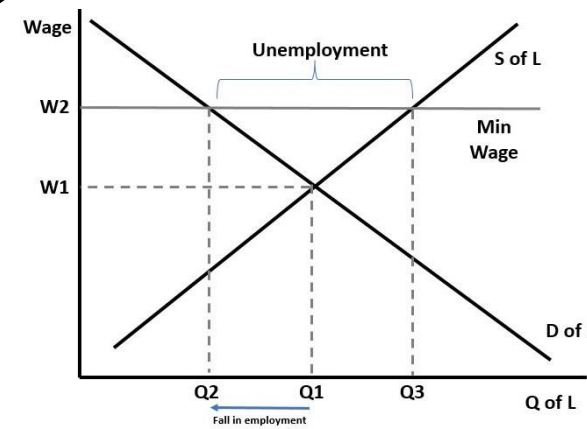
### Wage setting in the public sector

Through public sector wage setting, a **government** can impact the labour market. For example, if wage rates are increased in the public sector relative to those in the private sector, then private sector businesses may be forced to increase wages to retain workers.

Governments can also freeze **public sector pay** or increase it at a rate below inflation (real pay cut) to put downward pressure on inflation or to reduce government borrowing.

Public sector workers who are unhappy with a real pay cut may take **industrial action**, e.g. Junior doctor strike 2023-24

### National minimum wage



The NMW is a legally imposed price floor in labour markets. To have an impact in a labour market it must be above the market equilibrium. Initially the wage rate is  $W_1$  and  $Q_1$  is the quantity of labour. After the NMW, the wage rises to  $W_2$ , but the demand for labour falls to  $Q_2$ ; there is a fall in employment of  $Q_1Q_2$

The NMW attracts more workers into the labour market – there is an extension along the labour supply; The overall impact is some real wage unemployment of  $Q_2Q_3$

### Benefits of a NMW

- Fairer pay, less discrimination; less poverty, less worker exploitation
- May not cause unemployment if the economy is growing, if better pay boosts productivity or if it increases spending by lower paid (with a high MPC) in the economy (higher AD increases the demand for labour)
- Helps reduce income inequality
- Incentivises more workers to search for work & join labour market
- Lower costs of welfare for government

### Costs of a NMW

- May cause real wage unemployment
- Only covers employees; self-employed in the gig economy may be paid less
- Increases costs to businesses; may speed up automation causing technological unemployment
- Could become inflationary if other workers try to maintain pay differentials with lower paid workers
- Less international competitiveness (adds to business costs)
- Does not tackle many aspects of poverty reduction

Wage differentials

**Wage differential:** the difference in wages between workers with different skills in the same industry, or between workers with comparable skills in different industries or localities.

**Compensating wage differentials:** a reward for risk-taking, working in poor conditions and during unsocial hours.

**Reward for human capital:** differentials compensate workers for (opportunity and direct) costs of human capital acquisition.

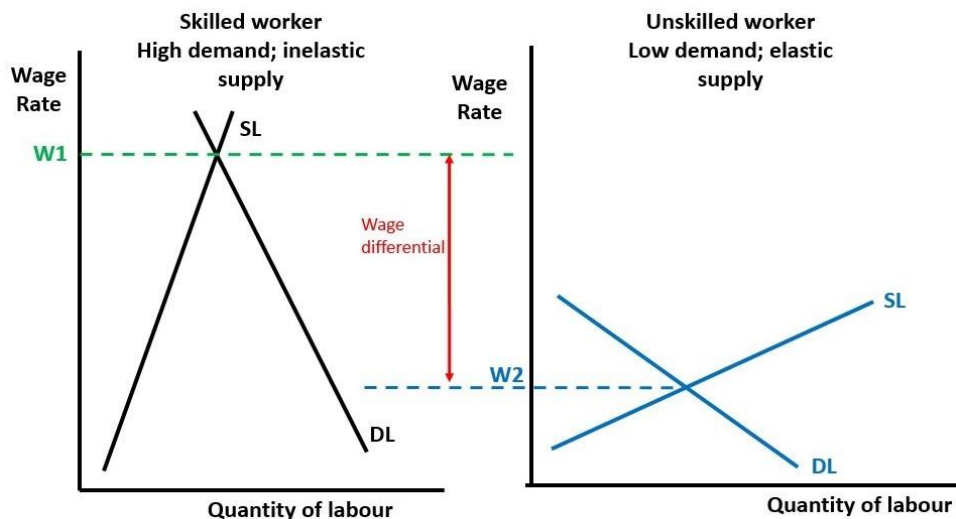
**Differences in labour productivity and revenue creation:** workers whose efficiency is high and generate revenue for a firm often have higher pay.

**Trade unions' collective bargaining power:** used to achieve a mark-up on wages compared to non-union members

**Artificial barriers to labour supply:** such as professional exams, migration controls

**Employer discrimination:** employers may perceive older workers as less able to learn new tasks, less flexible, and less ambitious & pay lower wages

Diagram showing wage differentials



Pay gaps

**Pay gap:** the difference in earnings between different groups of people e.g. women, ethnic minorities earning less

**Gender pay gap:** the difference between average hourly earnings (excluding overtime) of men and women as a proportion of average hourly earnings (excluding overtime) of men's earnings

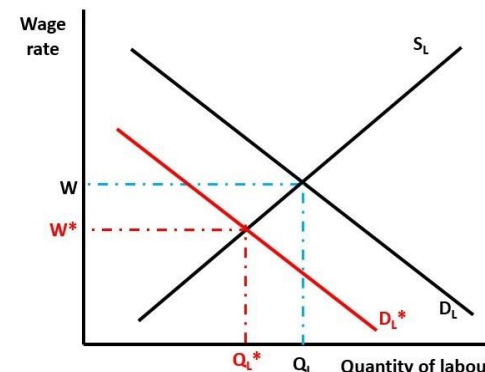
**Other pay gaps:** there can be disparities in income based on factors such as race and ethnicity, and disability

**Discrimination:** due to gender, race, age, sexual orientation, socioeconomic groups

Causes of pay gaps:

- Discrimination
- Occupational segregation
- Educational and occupational choices
- Work experience and seniority
- Negotiation and salary transparency
- Unconscious bias
- Parental and caregiving responsibilities
- Lack of workplace flexibility and inclusion

Discrimination diagram



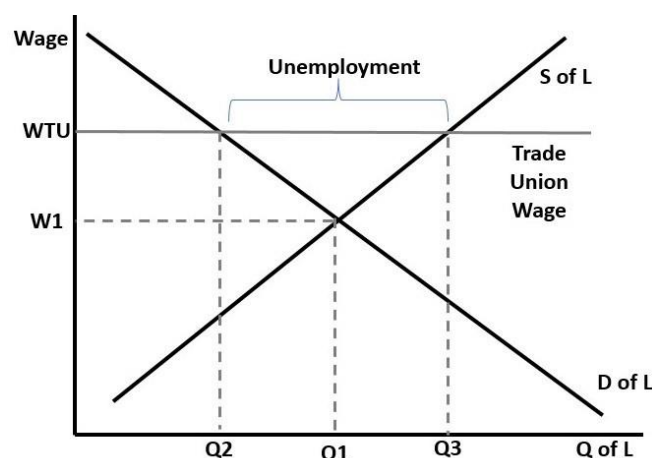
- DL is the labour demand curve without discrimination or unconscious bias; the wage is W
- With discrimination, employers 'assume' the group is less productive and so the demand is less at DL\* reducing the wages for the group to W\*

### Trade unions

**Trade union:** an organised group of employees who work together to represent and protect the rights of workers, usually by using collective bargaining techniques.

**Trade unions aim** to gain better wages, protect jobs, improve non-monetary aspects of jobs e.g. pension rights, protect against unfair dismissal, ensure health and safety at work, counterbalance any monopsony power etc.

### Trade union wage effect



If the trade union gains a wage above the market equilibrium, the wage for its members rises to WTU, but it may cause some real wage unemployment of Q2Q3. The gap between wages of TU members and non-members = the **trade union wage premium**

### Factors influencing trade union power

- Macroeconomic climate
- Public support and sympathy
- Union density
- TU legislation
- Financial consequences of industrial action
- Globalisation (MNCs can outsource to other parts of the world)

### Benefits of costs of trade unions

#### Arguments for TUs:

Better wages and working conditions  
 Trade union wage premium = higher wages  
 Lower wage inequality  
 Ensure real wages are not eroded  
 Counterbalances monopsony power of employers  
 Can improve industrial relations if union works well with management

#### Arguments against TUs:

Reduces employment flexibility  
 Prevents efficient working of labour markets  
 Adds to business costs if wage is higher with no improvement in productivity  
 Reduces profits of companies  
 Can delay introduction of new technology

### Monopsony employers

Some employers have **monopsony (buying) power** in some labour markets, e.g. the government is the main employer health care workers.

*Just as a monopoly can increase its profits by reducing output and raising the price in a product market, a monopsonist can depress wages and restrict employment in a labour market to make more profit from employing workers.*

- A trade union can push wages AND employment up in a monopsony labour market because it is effectively making it more competitive
- The introduction of a minimum wage also can achieve this in a monopsony. TUs and the NMW can act as a way of **counterbalancing monopsony power** and achieving fairer pay and less exploitation of workers, though if the wage rise is rapid it can still cause unemployment

### Factors making it easier for a trade union to gain a pay increase with no job loss

- Labour is a small percentage of total costs
- Impossible or difficult to substitute labour with other factors of production
- Demand for the final product is price inelastic (costs can be passed on by firm to consumers) and/or increasing
- Trade unions control the supply of labour (closed shops)
- Firm is already making substantial profits
- Pay claim is accompanied by a productivity rise (labour demand may shift right too)

**Competitive labour market**

For a labour market to be competitive it has:

- Many buyers (employers) and sellers (workers)
- Perfect information
- Homogeneous labour
- Mobility of labour
- No monopsony power

Wages are determined by the interaction of demand and supply; the market will adjust to changes in the conditions of labour demand and supply.

**Non-competitive labour markets**

Most labour markets are not competitive because of:

- Monopsony employer
- Barriers to entry
- Information asymmetry between employer and workers
- NMW
- Trade unions & collective bargaining
- Lack of labour mobility (geographical & occupational)
- Discrimination
- Employment laws/regulations

**Policies to increase labour mobility**

**Geographical mobility** is the ability of labour to move around an area, region or country in order to work.

**Policies to improve geographical mobility:** regional policy, investment in transport infrastructure, addressing difference in house prices etc.

**Occupational mobility** is the ability of labour to switch between different occupations. Occupational mobility is affected by the level of transferable skills and educational requirements of jobs etc.

**Policies to improve occupational mobility:** more & better education and training, investment in schools and universities etc.

**Policies to reduce discrimination**

**Anti-discrimination laws and regulations:** enforce and strengthen existing anti-discrimination laws that prohibit discrimination (the Equal Pay Act)

**Affirmative action / diversity initiatives** by employers

**Access to quality education and training:** provide opportunities for individuals from marginalised groups to acquire the skills needed to access higher-paying jobs. Reform entry to universities.

**The gig economy**

**Gig economy:** businesses that operate digital platforms/apps – which allow individuals to undertake jobs, or ‘gigs’, for end-user e.g. Uber and Deliveroo. The gig economy has grown with the rise of technology and the increased demand for flexible work arrangements, including **zero hours contracts**. It benefits employers who can offer lower wages and reduce their costs. It offers workers more flexible hours, but there is less employment protection and fewer employment benefits; a lack of job security.

**Labour Migration**

**Labour migration:** cross-border migration of people from one country to another

**Immigration:** people entering a country to live/work/study

**Emigration:** people leaving a country to live/work/study

**Benefits of net immigration:** more skilled workers & higher productivity; increase in labour supply (LRAS shifts out); can drive innovation and entrepreneurship; migrants can add to AD; positive multiplier effects; fill skills gaps; remittances sent home may be used to buy exports; higher tax revenue.

**Costs of net immigration:** welfare costs and greater demand for public services; possible displacement of some domestic workers; social tensions; higher demand for housing raising house prices and rents; risk of poverty and exploitation for migrants.

**Aims of Competition Policy**

- **Promote competition** for the benefit of consumers
  - Consumers get lower prices and better quality
  - The most innovative, consumer-focused companies are the ones that survive; promotes dynamic efficiency
- Investigate (potential) **mergers** to ensure that the outcome won't reduce consumer welfare
- Investigate entire markets if there are problems for consumers, especially in **concentrated markets**
- Initiate action against companies involved in **cartels** or other illegal anti-competitive practices e.g. bid-rigging, collusion, predatory pricing
- Encourage **market liberalisation** e.g. deregulation, to improve contestability, make markets work more efficiently
- Analyse "**state aid**" measures to make sure it is fair and doesn't distort competition
- **Protect consumers** from "unfair" trading practices
- Encourage the government and regulators to promote competition

**Competition Policy in the UK: Regulation**

Overseen by the independent **Competition and Markets Authority (CMA)** and supported by a range of regulators, e.g. OFCOM, OFWAT, FCA, OFGEM etc.

The role of the CMA & the regulators is:

- Monitor & regulate prices via price caps
- Set standards for services/performance
- Ensure competition/contestability increases; reduce barriers to entry
- Correct market failure by acting as a 'surrogate competitor' to bring prices and profits to those similar to a competitive market
- Arbitrate between producers' and consumers' interests

**Competition policy in UK**

Approach is pragmatic – **case-by-case** regulation

- Tax incentives/grants to attract FDI and promote small business activity
- Deregulation/privatisation/competitive tendering
- Trade liberalisation
- Break-up monopolies (though may lose economies of scale)
- Nationalise; impose marginal cost pricing on natural monopolies
- Local sourcing and employment laws to reduce monopsony power
- Regulations and laws (e.g. Competition Act)
- Block/approve mergers

**Price regulation**

UK uses an **RPI-x formula** for pricing

- If business costs rise at RPI, then profits will fall incentivising greater productive efficiency
- For some industries, an RPI+k formula is used; encourages more investment
- RIIO = revenue = incentives, innovation and outputs

**Advantages of price regulation:** reduces monopoly power, less consumer exploitation; greater efficiency, helps control inflation

**Disadvantages of price regulation:** possible job loss, distorts price mechanism, there may be information failure & regulatory capture; lower profits may mean less investment

**Profit regulation**

**Profit regulation** considers the size of firms and evaluates a 'reasonable' rate of return from the capital base; more common in USA. If profit exceeds this rate, the regulator imposes price cuts or a one-off (windfall) tax.

**Advantages:** prevents profiteering; less consumer exploitation

**Disadvantages:** discourages profits; encourages 'cost padding'; no efficiency incentive' scope for regulatory failure

**Policy interventions**

Interventions can be evaluated by considering their impact on price, profit, efficiency, quality/performance, choice, jobs, the environment, R&D, investment etc.

**Regulatory failure**

**Key reasons why regulation may fail:**

- **Regulatory capture:** a form of **government failure**; it happens when a government agency operates in favour of producers rather than consumers. Also known as a form of political capture or "cronyism."
- **Asymmetric information/information gap:** the industry may have more information than its regulators and use this to reduce regulation
- **Inadequate resources** for the regulators
- **Insufficient power** given to the regulators

**Government intervention: nationalisation**

**Nationalisation:** the transfer of ownership of assets/businesses from the private sector to the state (public) sector. Reasons for nationalisation include:

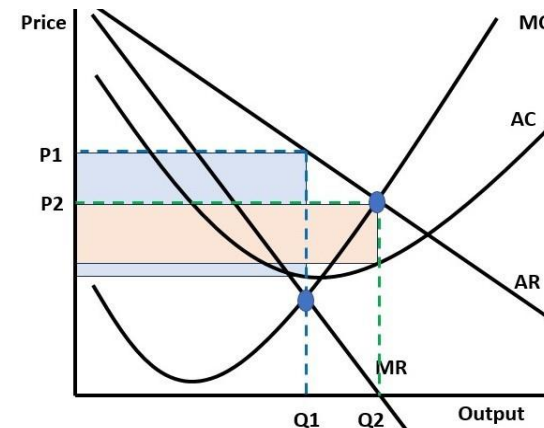
- Improve health & safety standards
- National interest / strategic industries
- Improve equality (of opportunity)
- "Too big to fail" i.e. collapse / failure would be too risky for the economy
- To gain economies of scale (productive efficiency)
- To increase allocative efficiency (MC pricing)
- May take externalities into account in decision-making
- Better industrial relations

**Examples of industries** that have been nationalised include public utilities such as water, energy, rail, though these are all currently privatised in the UK.

**Arguments against nationalisation**

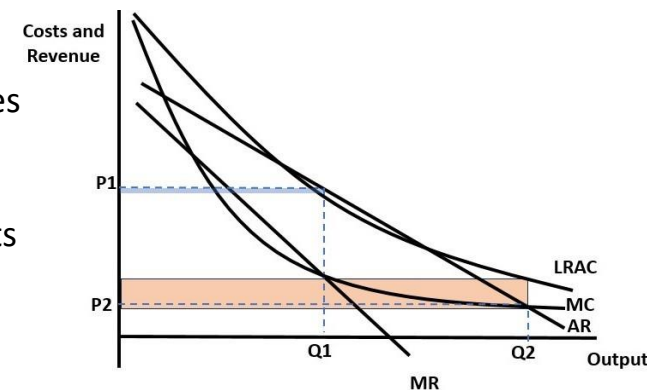
- Diseconomies of scale
- Lack of competition (higher prices, less choice)
- Lack of incentives to minimise costs (X-inefficiency)
- Lack of supernormal profit (less innovation, less dynamic inefficiency?)
- Risk of moral hazard (e.g. bail outs for banks post-GFC)
- Taxpayers 'fund' any losses
- Regulation of privatised industries may work better than full nationalisation

**How marginal cost pricing works**



Private monopoly charges P1 and produces Q1 (at MC=MR); supernormal profit shaded blue  
 Nationalised monopoly sets P=MC; price falls to P2 and output increases to Q2, but supernormal profits are lower (pink shaded)

Natural monopoly has falling LRAC and MC curves. If private, it charges P1 and produces Q1 (at MC=MR); supernormal profit shaded blue  
 Nationalised natural monopoly sets P=MC; price falls to P2 and output increases to Q2, but minimum losses are shaded pink



**Privatisation**

**Privatisation:** the transfer of ownership of assets / businesses from the state (public) sector to the private sector. It can be 'partial' or full. Forms of privatisation include:

- Contracting out/outsourcing
- Public Private Partnerships (PPPs)
- Private Finance Initiative (PFI)
- Competitive tendering

**Advantages of privatisation**

- Profit motive can lead to improved efficiency and more focus on consumer needs, which supports long-term growth
- Can lead to greater competition and in turn innovation
- Potential for lower prices, higher quality and more choice for consumers
- Potential for less bureaucracy
- Investment decisions are market-led
- May disperse share ownership; businesses have to deliver shareholder value
- Short term boost to government finances
- May create firms that can become global competitors

**Disadvantages of privatisation**

- Government can lose an important revenue source
- May lead to privatised natural monopolies which struggle to survive
- Risk of private monopolies exploiting consumers, and needing (expensive and often ineffectual) regulation
- May be a short-term focus because shareholders are focused on dividends
- Essential public services should arguably not be run for profit
- Externalities may be ignored in decision-making
- May be unclear whether objective is more competition or more profit

**Deregulation**

**Deregulation of industries:** reducing or removing government-imposed restrictions and regulations on businesses, with the aim of promoting competition, efficiency, and innovation

**Advantages include** increased competition, lower prices and better services for consumers, improved allocative efficiency; more innovation, improved dynamic efficiency; more economic growth, increased capital investment, new jobs, improved long run aggregate supply (LRAS); greater consumer choice, new companies can enter the market and existing companies can expand their offerings; contestability can lead to an improvement in economic welfare

**Disadvantages include:** reduced safety and quality as companies may prioritise profits; increased inequality, large companies may dominate the market and small businesses may struggle to compete; reduced consumer protection; environmental costs, negative externalities, such as pollution, and social problems, such as job losses, as companies may not be held accountable for their actions.

**State ownership v private ownership**

- Ownership of a business (state or private) is probably less significant than the extent to which an industry is genuinely contestable
- Quality of regulation is also important – a regulator can act as a surrogate consumer
- Distinguish between network (natural monopoly) and final mile service (can be more competitive) e.g. water & telecoms
- Try not to assume that the private sector is always more efficient & innovative than the state

- Does more competition always lead to benefits for consumers? Are there examples of where less competition might be better?
- Who gains and who loses from rising contestability?
- Why might competition authorities not always "get it right"?
- What are the best methods that competition authorities can use to improve consumer welfare in different markets?
- What is the impact of privatisation on markets, consumer welfare, equality and the wider economy?
- What factors might a government consider when thinking about nationalising an industry/firm?