AQA A Level Economics

Your notes

6. The Labour Market

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Factors Influencing the Demand for Labour

Your notes

The Demand for Labour is a Derived Demand

- The **labour market** is composed of **sellers of labour** (households) and **buyers of labour** (firms)
  - **Workers supply** their labour, and **firms demand** labour
- The demand for labour is a **derived demand**
  - This means that **it depends on the demand for goods and services**
    - If demand for goods and services increases, then demand for labour will increase, and vice versa
    - E.g As the demand for technology devices increases, technology firms require more skilled labour to design, manufacture and market the products

Marginal Productivity Theory & the Demand for Labour

- **Wage rates** are determined by the contribution of labour to the firm
  - Demand for labour depends on:
    - The **Marginal Physical Product of Labour (MPP_L)**
    - The **Marginal Revenue Product of Labour (MRP_L)**
- The **Marginal Physical Product of Labour (MPP_L)** is the **extra output** produced when an **additional unit of labour** is employed
  - This is also known as **law of diminishing marginal returns for labour**
  - As more workers are employed, their marginal product will eventually begin to **decline**
  - **MPP_L =** Change in **total output** divided by **change in quantity of labour**
- The **Marginal Revenue Product of Labour (MRP_L)** is the **extra revenue** earned when an **additional unit of labour** is employed
  - If output is sold in a **perfectly competitive** market, then **marginal revenue** is equal to price charged
  - $MRP_L = MPP_L$ X Price

Using the MRP of Labour to make a hiring decision

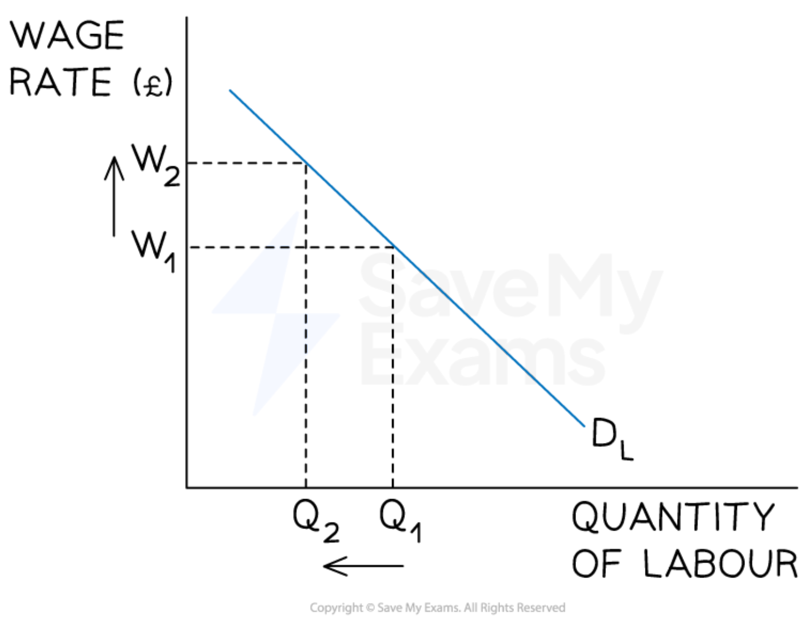
Your notes

- If the **extra output** produced when one additional labour unit is employed, is **5 units** and selling **price of each unit is £15**
    - **MRP_L = 5 x £15 = £75**
- Firms will only hire an additional unit of labour if the cost of hiring is equal to or less than the **wage rate**
- Therefore, an extra worker needs to cost equal to or less than £75 to hire, according to **marginal productivity theory of wages**

The Demand Curve for Labour

- According to the **Marginal Productivity theory,** there is an inverse relationship between **wage rate** and the **quantity of labour demanded**

Diagram: Market Demand Curve for Labour



As wages rise, the quantity demanded of labour falls

Diagram analysis

- The **market demand curve for labour (D_L)** is the sum of all individual firms **MRP_L curves**
- It shows that firms **demand more** labour as the wage rate decreases, which results in a downward sloping demand curve
    - If the wage rate increases **(W_1 to W_2)**, then demand for labour falls **(Q_1 to Q_2)**

Factors that Shift the Demand Curve for Labour

Your notes

- If the wage rate is the only factor that changes, there will be a movement along the demand curve for labour
- However, a range of factors can shift the entire demand curve for labour to the left or right
  - When the demand curve for labour shifts to the **left,** it indicates that **fewer workers** are employed at each wage rate
  - When the demand curve for labour shifts to the **right,** it indicates that **more workers** are employed at each wage rate

Factors that Shift the Demand for Labour

The price of the product being produced	**The demand for the final product**
▪ If the **selling price** of the product **increases**, then the firm will be incentivised to supply more, and the firm's **demand for labour** will increase ▪ The demand for labour will shift right	▪ As demand for labour is a **derived demand**, when an economy is booming, **demand for most goods and services will be high** - and the demand for labour will be **high** ▪ The demand for labour curve will shift right ▪ Conversely, when an economy is in a **recession**, demand for most goods and services will be lower - and the **demand for labour will be lower** ▪ The demand for labour curve will shift left
The ability to substitute capital (machinery) for labour	**The productivity of labour**
▪ Firms will constantly evaluate if it will be possible and **more cost effective** to switch production from using labour to capital (machinery) ▪ If it is more cost effective, then **demand for labour will fall** ▪ The demand for labour curve will shift left	▪ If the **productivity** of labour increases (possibly through training) this will lower **average costs and** firms will likely demand more labour ▪ The demand for labour curve will shift right

Determinants of the Elasticity of Demand for Labour

Your notes

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

Factors that Influence PED of Labour

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

Your notes

Factors Influencing the Supply of Labour

Monetary Considerations that Influence the Supply of Labour

- The **occupational choices** of workers are influenced by a range of **monetary and non-monetary factors,** which are often held in balance when making decisions about **where to work**
- Monetary factors are **financial payments** that workers receive for their labour

The Monetary Factors that Influence Occupational Choices

Factor	Explanation
Wages	▪ An agreed amount of **money/hour** and is calculated directly from the number of hours worked ▪ E.g. If a student works in a restaurant for 6 hours, 5 days a week and he/she gets paid \$10/hour, the **weekly wage** is \$300 (6×5×\$10)
Salary	▪ Employment contracts often state the agreed-upon **annual salary** the employee will receive ▪ This is then divided by 12 and **paid monthly** (in the USA it is divided by 24 and paid every 2 weeks) ▪ The hours worked monthly may vary but the pay received is **always the same**
Commission	▪ Often used as payment to sales people ▪ It is typically a **percentage of the value of the transaction** involved e.g. estate agents receive 3-7% of the selling price of any property they sell ▪ This can **motivate employees** to maximise sales
Bonus	▪ Money paid in **addition to a salary** and is usually single annual payment ▪ Often paid when the company earns high levels of profits, or as a **reward** for exceptional worker performance

Piece rate pay	▪ A **fixed amount** paid to the employee for **each completed item** produced e.g. 25 Rupees paid to workers in India for each pair of socks they produce
Performance related pay (PRP)	▪ Payment based on how well the **worker performs** ▪ Workers doing exactly the **same job** may receive **different compensation** based on **different outcomes** they achieve
Share options	▪ Payment through the issuing of shares in the company the employee works for ▪ This is usually in addition to a monthly salary ▪ The **monetary value** of the shares provided to the employee can be calculated on any given day as: **number of shares x share price**
Fringe benefits	▪ Benefits provided in **addition to the normal salary** ▪ They can be significant in influencing occupational choices ▪ Includes benefits such as such as **childcare,** free lunches, gym membership, **company car**

Non-monetary Considerations that Influence the Supply of Labour

- Non monetary factors can prove to be **powerful motivators** in convincing **households to supply their labour** to the market

1. **Length of training or level of education required:** The longer the time period required to study or train for a job, the fewer the number of people who seek employment in that occupation, e.g. it usually takes seven years to become a lawyer

2. **Job security:** Employment contracts in different industries have different time periods attached to them. Some contracts are one to four years in length, so they provide high security, e.g financial sector contracts. Others have a short notice period, and the employee can be dismissed with a very short notice period, e.g. 30 days

3. **Job satisfaction:** Finding fulfilment in a job role and enjoying work is a significant part of generating job satisfaction. Workers will often change their jobs or careers so as to improve their job satisfaction

Your notes

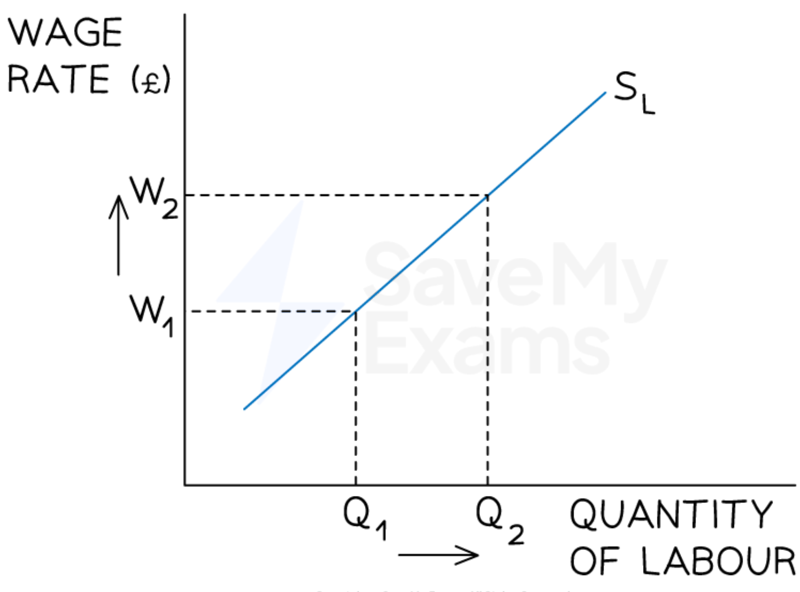
4. **Career prospects:** Jobs with a defined pathway for promotion (and salary increases) are often more desirable
5. **Level of challenge:** Many workers step into an occupation due to the challenge of the role, e.g. firefighters
6. **Status:** Some jobs carry a higher level of recognition in society which workers find appealing, e.g doctors, surgeons and lawyers
7. **Work/life balance**: Households will be ore likely to offer their labour if they know they will maintain a healthy work/life balance. The rise of 'work from home; and hybrid working has increased labour supply in some markets

Your notes

The Supply Curve for Labour

- The **supply curve** for labour (S_L) shows the relationship between the **wage rate** and **number of workers** willing to work in an occupation
    - The S_L shows that more labour supplied as the wage rate increases, which results in an **upward sloping supply curve**

Diagram: Market Supply Curve for Labour



There is a positive relationship between supply of labour and wage rate

Diagram analysis

- The hourly **wage rate** increases from **W_1 to W_2**
  - There is an incentive for workers to supply more labour from **H_1 to H_2**
- There is a **positive relationship** between market supply of labour and wage rate
  - The higher the wage rate, the higher the supply of labour in that occupation (and vice versa)

Factors that Shift the Supply Curve for Labour

- There are **numerous factors** that influence the amount of labour supplied to a **particular industry**
  - The supply curve is the **market supply of labour**, not the individual supply of labour

Factors Influencing the Supply of Labour

Training period	Wages in other occupations	Changes in migration policy
▪ **Long training periods** (and their costs) act as a barrier to entry and **exclude many households** from offering labour in certain markets	▪ **Comparative wage rates** in substitute labour markets strongly influence the supply of labour; e.g. it is getting harder to recruit economics teachers as the **private sector** offers **higher wages** for their skills	▪ Policies that increase the [popover id="qJhTWXok-ejO4dOy" label="**net migration rate** "] increase the supply of labour to certain industries, e.g. in 2022, 36% of Singapore's labour force were migrants
Income tax levels	**Working conditions**	**Trade union power**
At a certain level, **income taxes become a disincentive to households** offering their labour. The assumption is that **as income tax increases, labour supply decreases** - and vice versa	The working conditions & non-wage benefits can act as strong incentive in certain industries e.g. tech companies are well known for their **laid-back work environment & wide range of benefits** e.g. on-site childcare & restaurants	**Trade unions** can increase the supply of labour to certain industries as **workers consider the benefits** of belonging to the union e.g higher wages & a safer working environment

Your notes

Level of welfare benefits	Social trends	
▪ The **higher** the level of **welfare benefits**, the **lower the incentive** for low-skilled labour to offer their labour, and vice versa	▪ Social trends include any **major changes within society** and can influence the supply of labour to certain industries e.g. work from home during Covid resulted in **significant changes to the labour market** and not all workers returned to work when economies opened up again	

Your notes

Determining Wage Rates: Competitive Labour Markets

Your notes

Wage Rates in Perfectively Competitive Labour Markets

- In a **perfectly competitive labour market,** relative wage rates are determined at the point where D_L = S_L
- There is an assumption in **perfect competition** that all workers possess identical skills and receive the same wage rate
  - In reality, workers have diverse skill sets and different motivational factors drive them
- An **excess demand** of labour leads to a **shortage** of workers in a particular occupation, causing **wages tend to increase**
  - This causes a **rise in wages and is** an incentive to workers to enter the labour market for that occupation
    - This **increases the supply of labor (S_L)**
- An **excess supply** of labour leads to a **surplus** of workers in a particular industry, which causes **wages to decrease**
  - This **fall in wages** cause some workers exit the labour market for that occupation
- The equilibrium for labour adjusts where
  - There is **no excess supply** of labour
  - There is **no excess demand** for labour

Examiner Tips and Tricks

In the same way that perfectively competitive markets do not actually exist in reality (though some industries get close!), labour markets are never perfectively competitive. One of the reasons for this is the existence of asymmetric information. Workers and employers do not always know if there is a shortage or excess of labour, or they may not fully realise what the precise wage rate should be.

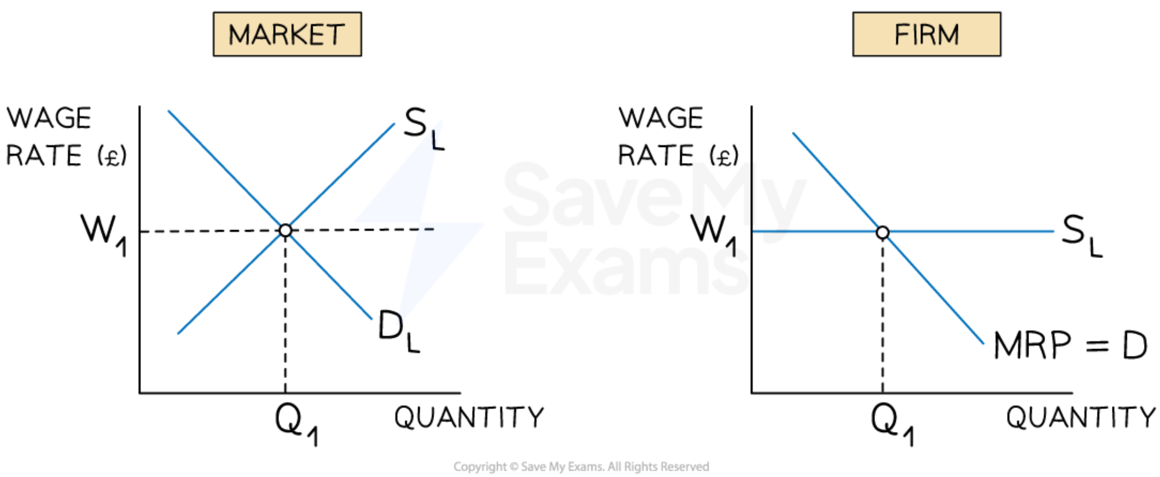
Labour markets are inherently imperfect.

Wage Determination in a Perfectly Competitive Labour Market

Your notes

- **Perfectly competitively** firms are **price takers** in the labour market, as they have to accept the **wage rate** that workers are being paid in the industry
- The **labour market** is a type of **factor market**
  - Factor markets follow exactly the same rules as product markets
  - They are affected by changes to **price, demand and supply**
  - They are affected by the **price elasticity of demand and supply**

Diagram: Wage Determination in a Perfectly Competitive Labour Market



In the labour market for perfectly competitive firms, the wage rate is set by the industry wage rate

Diagram analysis

Market

- Labour market equilibrium occurs in the industry where **demand for labour (D_L)** = **supply of labour (S_L)**
- The equilibrium **wage is W_1**

Individual firm

- The supply of labour for the individual firm is considered to be **perfectly elastic,** as workers have to accept the market wage **(W_1)**
  - If the firm offers a **lower wage**, it will struggle to recruit workers

- If the firm offers a **higher wage,** it will paying above the market rate and a large number of workers will apply to work there
- The S_L is also the **average cost of labour** (AC_L) or the **marginal cost of labour** (MC_L)

- Labour market equilibrium for individual firms in perfect competition occurs when demand for labour (D_L) or **MRP_L** is equal to the **supply of labour (S_L)**
  - The equilibrium **wage is W_1** and the **quantity of labour is Q_1**

Your notes

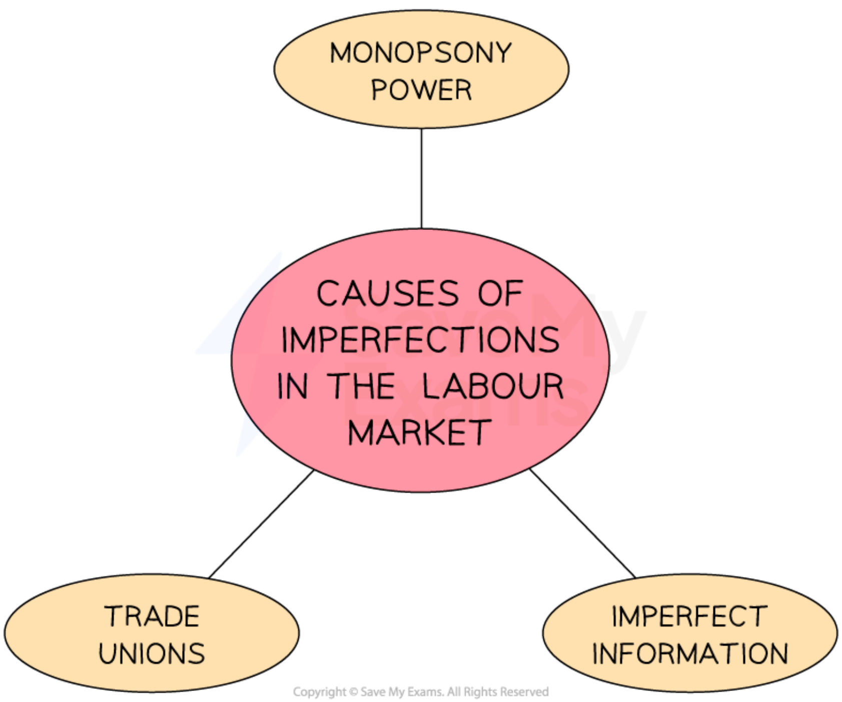
Your notes

Determining Wage Rates: Imperfectly Competitive Labour Markets

The Factors that Contribute to Imperfections in a Labour Market

- A perfectly competitive labour market is a theoretical construct
- **All labour markets face some level of imperfection**

Diagram: Reasons for Imperfections in the Labour Market



Imperfections cause wages to differ from what they would be in a perfectly competitive equilibrium

- In reality, labour market wages are not always determined according to the **Marginal Revenue Product (MRP) theory**
- Firms and workers have some **degree of influence** over wage setting
- The less competition in the labour market, the more power employers have in **setting wages**

Explaining the Imperfections in the Labour Market

Your notes

Imperfection	Explanation
Monopsony	▪ **A monopsony** occurs when there is a **single employer of labour** in a market, giving the employer considerable labour market power to **set wages and employment** ▪ **This suppresses wages in the relevant market and may lead to industrial action and ongoing labour issues in the industry** ▪ E.g. The **NHS** is the main employer of doctors and nurses in the UK and due to a lack of competition for their labour, the government has been able to suppress their wages for many years
Trade union	▪ **A trade union** is an organisation that represents people who work in a particular industry to protect their rights through **collective bargaining** ▪ Trade union activity can cause wages to be set above a competitive market equilibrium rate ▪ E.g. The **British Medical Association (BMA)** is the UK trade union for doctors and is negotiating for better pay (2023/24)
Imperfect information	▪ **Imperfect information** in the labour market occurs when employees or employers do not have the same level of information about employment, skills, or wages to make informed decisions ▪ It can lead to **wage discrimination** or mismatches between skills and job requirements ▪ Depending on the type of imperfection, **wage levels may end up being higher or lower** than they would be if the infromation was perfectly accessible

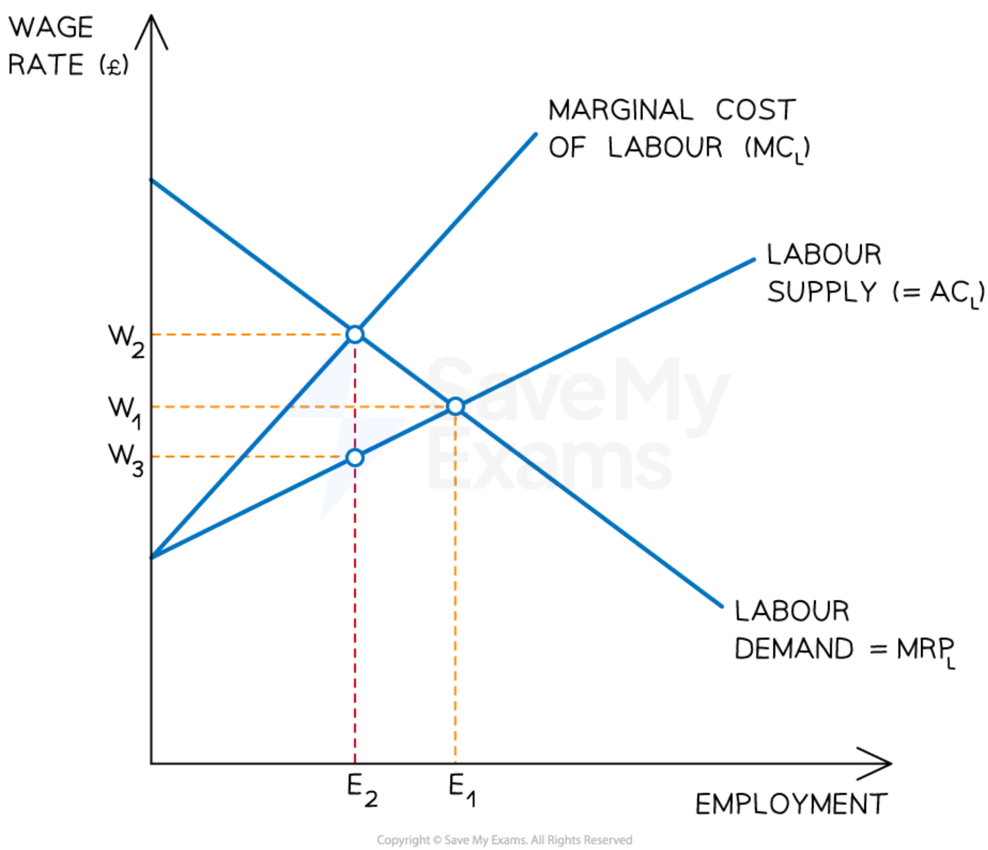
How Monopsony Power Impacts Relative Wage Rates & Employment Levels

- In a monopsony labour market, there is **only one buyer of labour** and wages are the same for all workers
- This is often a single large employer, which gives them **significant market power**
- The employer has the ability to influence both the **wage rate** and **the level of employment**

Your notes

- The **average cost of labour (AC_L)** or supply of labour, determines the wage rate at which workers are paid
- The **marginal cost of labour (MC_L)** is greater than **AC_L** because **the** monopsonist has to increase the wage rate for **all workers** when hiring just **one extra worker**
- The MC_L curve includes the salary of the additional worker and also the extra money paid to all of the other workers
  - This causes the marginal cost to be greater than the average cost

Graph: Wages & employment in a monopsony labour market



Wages are determined where MC_L is equal to MRP_L

Diagram analysis

Wage and employment levels in a competitive market

- In a competitive labour market, wages and levels of employment are determined by the intersection of demand (MRP_L) and supply of labour (AC_L)

    - This provides a wage rate of W1 and level of employment equal to E_1

Monopsonists reduce wage and employment levels

- The **profit maximising level of employment** for a monopsonist occurs when the **MC_L = MRP_L**
    - This would provide an effective wage rate of W_2 and level of employment equal to E_2
- However, due to their market power, wages can be set at a lower level
    - The monopsonist sets an effective wage rate of W_3 at the employment level of E_2
- By setting wages below the competitive level, the **employer can reduce its labour costs and increase its profits**

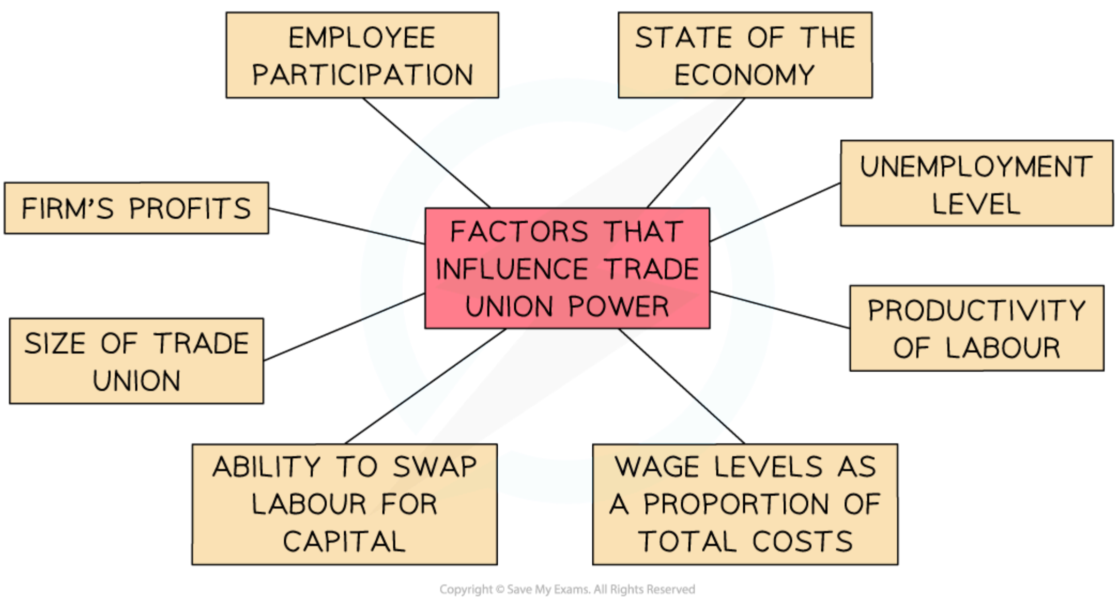
Your notes

Your notes

The Influence of Trade Unions on Wages & Employment

Factors that Affect Trade Unions Power in Influencing Wages & Employment

- The **higher** the percentage of workers from a firm that belong to a trade union, the **greater the collective bargaining power** of that union with the employer to influence wages and employment
- The higher the percentage of workers **from an economy** that belong to trade unions, the greater the collective bargaining power of the unions **with the government**
- There are numerous other factors which influence the **collective bargaining power** of specific unions at different periods of time



The stronger a trade union, the more they can influence wages and employment levels

1. **The unemployment level**: the higher the unemployment level, the weaker the bargaining power as firms can more easily replace existing workers
2. **Wage levels as proportion of total costs**: the lower the percentage of total costs that a firms's wages represent, the higher the bargaining power
3. **Swapping labour for capital**: the nearer the replacement cost of capital for labour to meet the increased costs demanded by the union, the weaker the bargaining power

4. **The level of profits:** higher profits strengthen the unions demands for higher wages
5. **State of the economy:** less bargaining power in a recession and more when the economy is booming
6. **Overall size of the trade union**: the larger the union, the stronger their bargaining power
7. **The productivity of labour**: if the workers are extremely productive, generating high levels of output from low levels of input, they are more valuable to the firm, and the union has stronger bargaining power

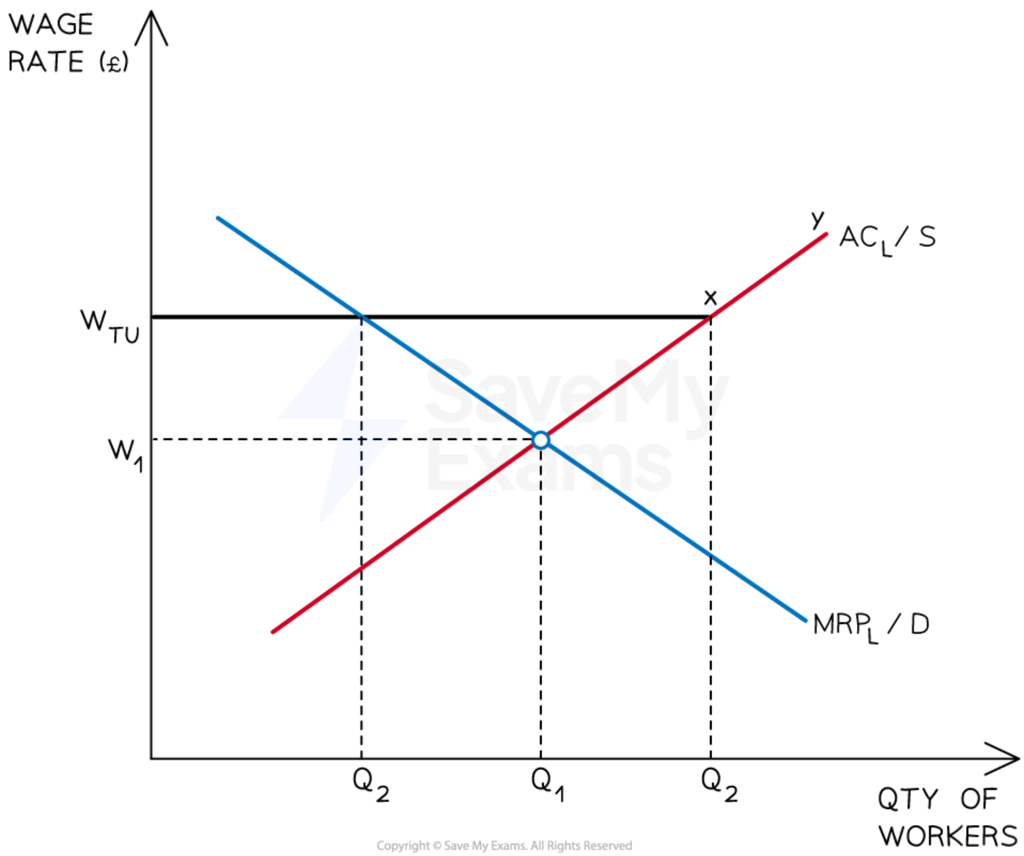
Your notes

Impact of a Trade Union on Perfectly Competitive Labour Markets

- Trade union intervention changes the **equilibrium wages and employment** of a perfectly competitive labour market
  - Through **collective bargaining,** workers have the power to increase wages
  - This impacts the supply and demand of labour, making the labour market more **imperfectly competitive**

Diagram: Impact of Trade Union on Perfectly Competitive Labour Markets

Your notes



Wages increase from W_1 to W_{TU}

Diagram analysis

- Before trade union intervention, the equilibrium wage rate is set at **W_1** and quantity of workers is **Q_1**
- Trade unions negotiate for a wage rate (WTU) higher than the market rate
- More workers are willing to work at the higher wage rate **(Q_1 to Q_3)**
- At the higher wage rate, W_{TU} firms demand fewer workers **(Q_2)**
  - This creates an **excess supply of labour** and unemployment between **Q_2 – Q_3**

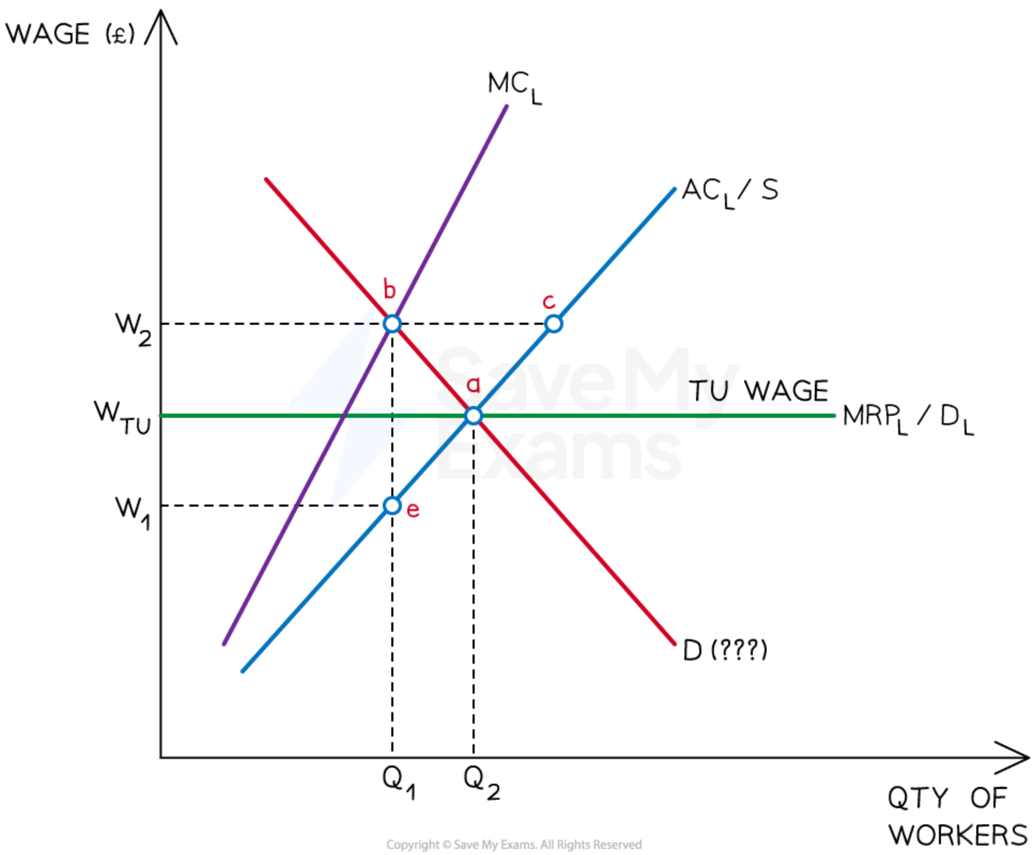
Impact of a Trade Union on Monopsony Labour Markets

- The **British Medical Association (BMA)** is a trade union that is engaged in negotiating (2023) on behalf of doctors in the NHS (the main employer of UK doctors)

Your notes

- Through **collective bargaining**, they are looking to improve **wages and working conditions**
  - This includes improving the workload, staffing levels and standards of patient care

Diagram: Impact of Trade Union on Monopsony Labour Market



Wages increase from W_1 to W_{TU}

Diagram analysis

- Before trade union intervention, the market equilibrium in the monopsony is set at $\mathbf{W_1}$ and $\mathbf{Q_1}$
- The BMA Union negotiate for a higher wage at $\mathbf{W_{TU}}$
- This raises both the wage and level of employment ($Q_1 \rightarrow Q_2$)
- The **new supply curve in the monopsony labour market** is now $W_{TU}Z\ AC_L$
  - The marginal cost of labour (MC_L) continues to remain higher than the AC_L

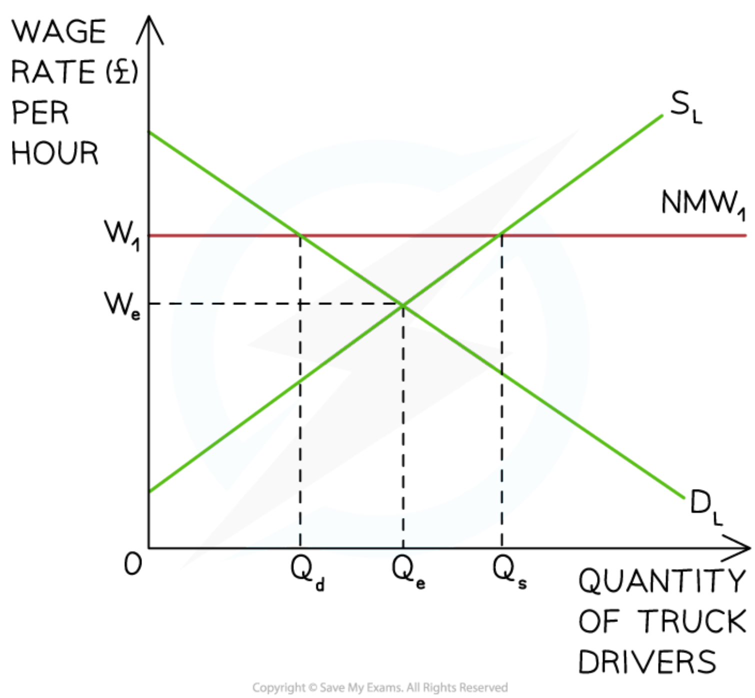
The National Minimum Wage (NMW)

Your notes

The Impact of a National Minimum Wage

- Government's often **intervene in the labour market** by setting a minimum wage
  - They do this in order to **improve equity** & avoid the **exploitation** of worker
- A **minimum wage** is a **legally imposed wage level** that employers must pay their workers
  - It is set **above** the market rate
    - The minimum wage/hour often varies **based on age**

Diagram: National Minimum Wage



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

Diagram analysis

- The **market equilibrium** wage and quantity for truck drivers in the UK is seen at **W_eQ_e**
- The government imposes a **national minimum wage** (NMW) at **W_1**

- Incentivised by higher wages, the **supply of labour increases** from Q_e to Q_s
- Facing higher production costs, the **demand for labour** by firms **decreases** from Q_e to Q_d
- This means that **at a wage rate of W_1** there is **excess supply of labour** & the potential for **unemployment** equal to $\mathbf{Q_dQ_s}$

Examiner Tips and Tricks

When **evaluating** national minimum wages, **do not** assume that they will automatically increase unemployment.

Many studies have shown that **unemployment does not increase**, and in some instances, employment increases. This is likely due to the fact that workers are receiving higher wages and choosing to consume more. This **increases total demand** in the economy, which in turn **increases the demand for labour by firms**, thus reducing/eliminating any potential unemployment.

Advantages & Disadvantages of a National Minimum Wage

Evaluating the use of Minimum Wages

Advantages	Disadvantages
- Guarantees a **minimum income** for the lowest paid workers	- Raises the **costs of production** for firms that may respond by **raising the price of goods/services**
- Higher income levels help to **increase consumption** in the economy	- If firms are unable to raise their prices, the introduction of a minimum wage may force them to lay off some workers, **increasing unemployment**
- May **incentivise** workers to be more productive	

Discrimination in the Labour Market

Your notes

Conditions Necessary for Wage Discrimination

- **Wage discrimination** occurs when there is a **difference in wages** between workers with **comparable skills** in the same job

Conditions Necessary for Wage Discrimination

Condition	Explanation
Bias	▪ **Discriminatory attitudes** towards particular groups, such as gender or ethnic minorities, can lead to wage discrimination ▪ **Women and men** may not receive equal pay for the same work based on gender
Information asymmetry	▪ This occurs when employers have **more information** about labour productivity, skills or qualifications than employees ▪ Employers may exploit the **lack of transparency** to justify paying lower wages to certain individuals
Regulation	▪ When government agencies fail to enforce **legislation or regulate**, employers may feel they can engage in discriminatory practices **without fear of repercussions**

Gender & Ethnicity Discrimination

Gender Discrimination

- The **gender pay gap** is a form of **discrimination** that occurs when a women is **paid less** than a man who is doing exactly the same job
- The gender pay gap for full-time employees in 2023 was 7.7%. This is due to the following:
  - Women are concentrated in **lower-paying occupations**. They make up 77% of workers in health and social work
  - Fewer women are in senior and leadership positions

    - In 2022, only 1 in 25 of CEOs in Britain's largest publicly listed companies are women
  - Career progression can be interrupted by maternity leave and **family responsibilities**

Ethnicity Discrimination

- **Ethnic pay gaps** show the difference in the average pay between workers from minority ethnic backgrounds in a workforce, compared to white workers
  - Ethnic minorities in the UK face both **wage and employment disparities**
- Minority groups are more likely to work in lower paid sectors such as hospitality and retail. These sectors also tend to offer fewer opportunities for **career advancement**
  - E.g In 2023, UK-born black employees had a **pay gap of 5.6% less** than white employees
    - Non-UK-born black employees has the **highest pay gap**, earning **12% less** than UK-born white workers
- Ethnic minorities are also **underrepresented in leadership** positions within businesses
  - E.g Only **4.6% of UK leadership roles** are held by minority ethnic groups

Your notes