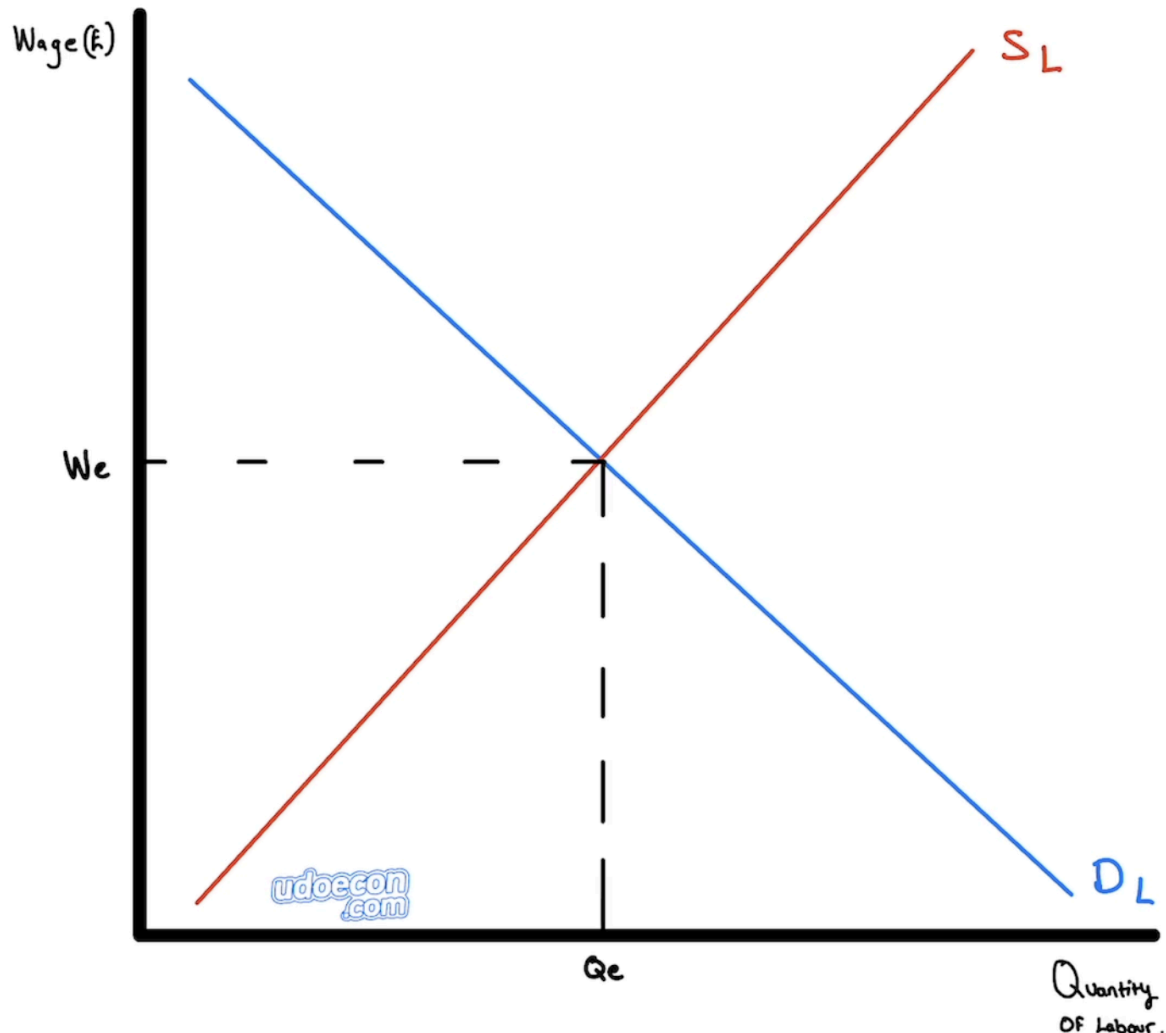


Wage Determination in Labour Markets

Labour Market Equilibrium



Labour market equilibrium occurs where the **demand for labour (DL)** is equal to the **supply of labour (SL)** giving quantity Q_e and wage W_e .

Remember workers do the **supplying** of labour, firms do the **demanding** (opposite to a goods market)

Current Labour Market Issues

Automation

Automation can reduce demand for labour where **capital and labour are substitutes**.

Technology $\uparrow \rightarrow$ firms substitute capital for labour $\rightarrow$ demand for labour $\downarrow \rightarrow$ employment $\downarrow \rightarrow$ wages $\downarrow$

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For example around **75,000 UK retail jobs** were eliminated due to self checkout machines with over **50% of store transactions** now passing through them .

However, capital and labour may also be **complements**.

Technology ↑ → **demand for workers needed to develop, maintain and operate capital**
↑ → **demand for skilled labour** ↑

For example, greater automation may increase demand for engineers and software developers.

Skills Shortages

A **skills shortage** occurs when firms struggle to find workers with the skills required for particular jobs.

Shortage of skilled labour → **labour supply relatively low** → **firms compete for workers** → **wage rates** ↑

For example a lack skilled engineers pushed average starting salaries up by over 7%, as firms outbid each other for limited talent.

Trade Unions and Strike Activity

A **trade union** is a group of workers that bargains collectively for higher wages and improved working conditions.

Trade unions can increase workers' bargaining power.

Collective bargaining power ↑ → **pressure on employers to raise wages or improve conditions** ↑

Strike action → **firms lose output and revenue** → **cost of continuing dispute** ↑ → **firms more likely to agree to wage demands**

For example following 44 days of strike action that cost the NHS over £3 billion and delayed 1.5 million appointments, the BMA leveraged its collective bargaining power to secure a 22% pay rise for doctors.

Low Productivity Growth

Productivity affects labour demand because more productive workers generate more output and revenue for firms.

Productivity growth ↓ → **MRP growth** ↓ → **growth in demand for labour** ↓ → **wage growth** ↓

For example the UK has had the 2nd slowest productivity growth in the G7 since 2008 leading to real wage stagnation .

Youth Unemployment .

Young workers may experience higher unemployment because they often have less experience and skills .

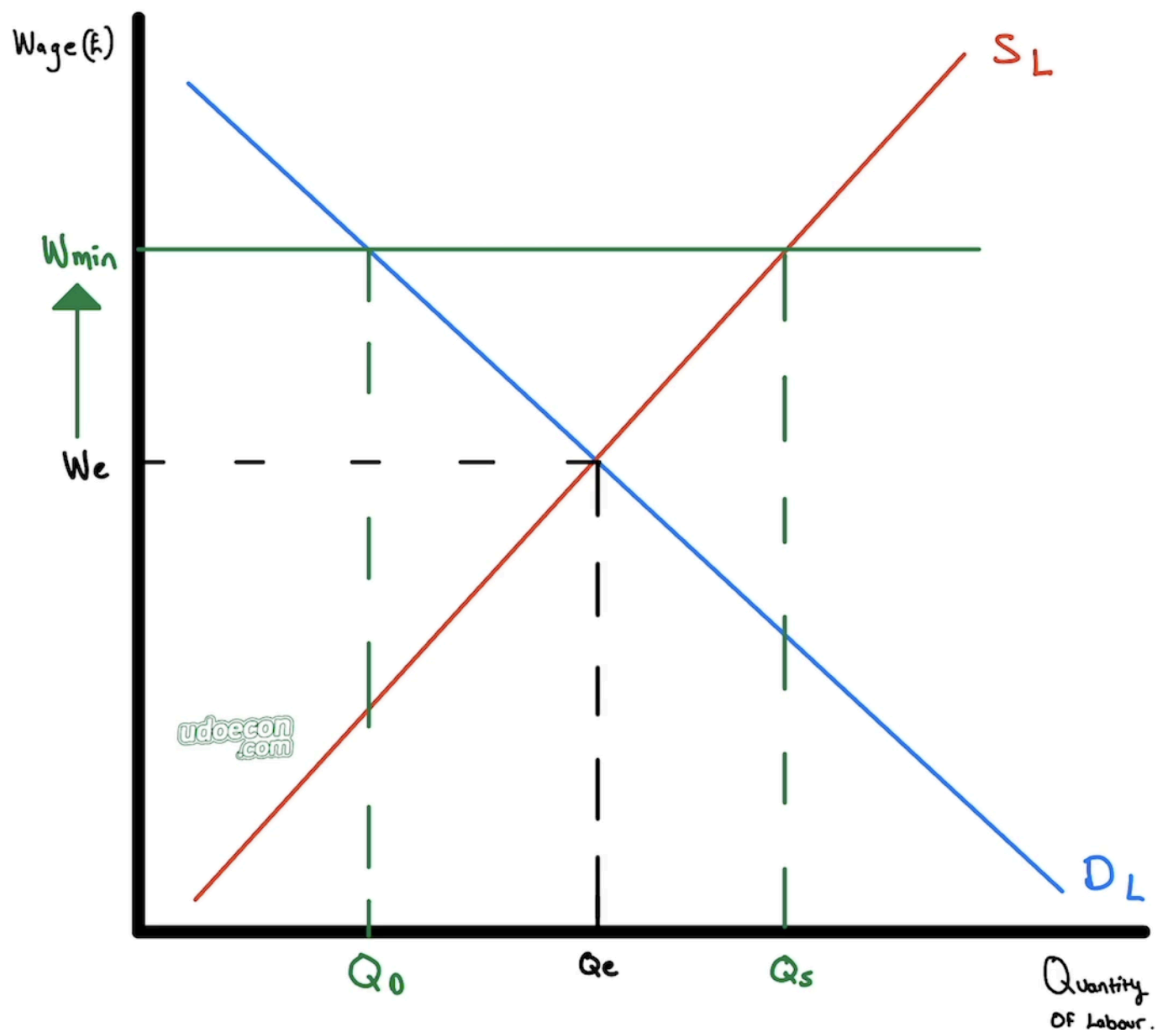
Time outside employment or education $\uparrow \rightarrow$ skills deteriorate + CV gaps $\uparrow \rightarrow$ employability $\downarrow \rightarrow$ structural unemployment $\uparrow$

For example Over 1 million 16 to 24 year olds are NEET (13.5%)

Minimum Wages

A **minimum wage** is a legal floor below which the hourly wage cannot fall.

For a minimum wage to affect the labour market, it must be set **above the equilibrium wage**.



Initially:

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Equilibrium is reached where $DL=SL$ thus giving us W_e wage rate and Q_e quantity of labour .

The government introduces a minimum wage at **W_1** , above W_e . This minimum wage forces the labour market into disequilibrium.

The higher wage incentivises workers to supply more labour thus shifting quantity supplied from Q_e to Q_s . On the other hand higher wages disincentivise firms to hire workers as it is more costly thus demand decreases from Q_e to Q_d .

This therefore means the discrepancy (the gap) between Q_s and Q_d represents excess supply of labour aka unemployment and specifically real wage unemployment .

For example National Minimum Wage in the UK in 2024 increased to £11.44/hr.

Benefits of a Minimum Wage

A minimum wage can increase the incomes of low paid workers thus reducing poverty and income inequality .

Higher wages may also improve worker motivation thus improving productivity

Higher wages can reduce labour turnover thus decreasing staff training costs for firms . For example UK Social care faces a around 30% annual turnover severely increasing staff training costs for firms.

Costs of a Minimum Wage

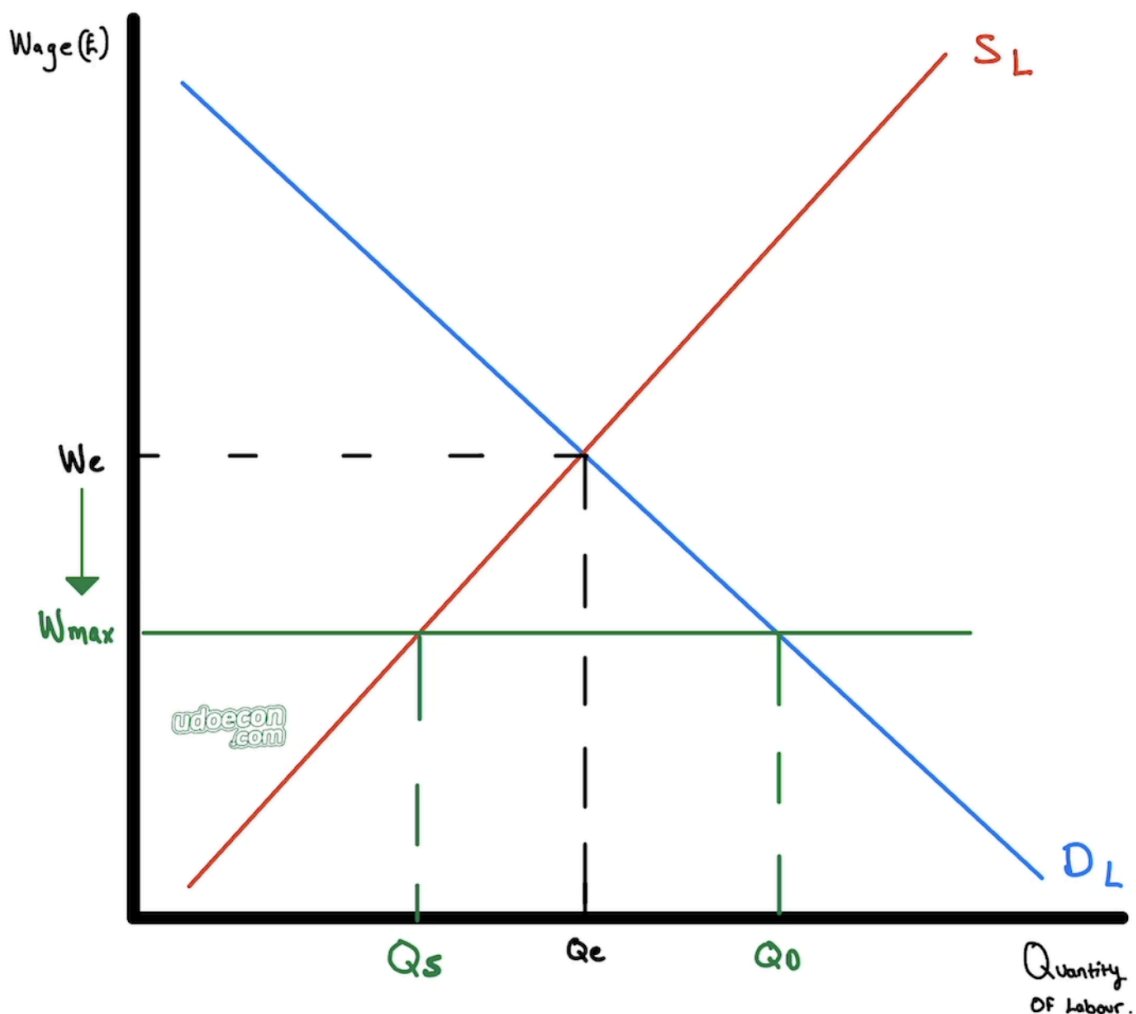
Higher wages increase firms labour costs thus likely to reduce demand for labour increasing unemployment .

Higher wage costs may also be passed onto consumers via higher prices .

Maximum Wages

A **maximum wage** is a ceiling above which wages cannot rise.

For it to affect the labour market, it must be set **below the equilibrium wage**.



Initially:

Equilibrium is reached where $D_L = S_L$ thus giving us W_e wage rate and Q_e quantity of labour.

The government introduces a **maximum wage at W_{max} , below W_e** . This maximum wage forces the labour market into disequilibrium.

The **lower wage disincentivises workers to supply labour** thus shifting quantity supplied from Q_e to Q_s . On the other hand **lower wages incentivise firms to hire workers as it is less costly** thus demand increases from Q_e to Q_d .

This therefore means the discrepancy (the gap) between Q_s and Q_d represents **excess demand for labour aka a labour shortage**.

For example in 1961 the top flight of English football capped players pay at £20 per week.

For example UK bankers previously faced a cap limiting bonuses to 100% (or 200% with shareholder approval) of their base salary under EU rules .

Benefits of a Maximum Wage

Firms spend less on executive pay, more funds may be available for lower paid workers thus reducing income inequality .

Costs of a Maximum Wage

A maximum wage may reduce the incentive for highly skilled workers to supply their labour. As these workers often have the highest MRP, such as senior managers, shortages may reduce productivity and organisation. This can negatively affect lower paid workers, for example through fewer shifts or employment opportunities, potentially worsening income inequality.

Occupational and Geographical Immobility of Labour

Occupational Immobility

Occupational immobility of labour occurs when workers lack the skills or qualifications needed to change occupations thus increasing structural unemployment .

For example, Margaret Thatcher closed the mines down in 1984 . In the north of England there were several generations of families employed in working in the mines . The only skill they knew was coal mining .

Geographical Immobility

Geographical immobility of labour occurs when workers cannot easily move location to find work thus increasing structural unemployment .

For example, UK deindustrialisation caused manufacturing and mining jobs in Northern England to decline, while service sector jobs became increasingly concentrated in London. High housing costs made it difficult for some workers to relocate, increasing geographical immobility.

Policies to Reduce Labour Market Immobility

Improved Education and Training

Government spending on education and training can improve workers' skills.

Training ↑ → skills ↑ → ability to move between occupations ↑ → occupational immobility ↓

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For example UK govts tax funded software engineering bootcamps train former retail workers in coding .

Improving Transport Infrastructure

Government investment in trains and buses can improve geographical mobility.

Transport infrastructure ↑ → cost/time of commuting ↓ → workers can access more jobs → geographical immobility ↓

For example Scrapping the Leeds leg lost a 52 minute time saving per trip, keeping Yorkshire commuters locked out of rapid daily access to London's job market.

Housing and Relocation Support

The government could increase housing supply or provide relocation subsidies.

For example The UK government provides direct £10,000 relocation bursaries to attract and move foreign teachers to UK schools .

Public Sector Wage Setting

The government directly influences wages in areas such as:

- Healthcare
- Education
- Police
- Fire services

Independent pay review bodies make recommendations on wage rises, although the government decides whether to accept them.

Benefits of Increasing Public Sector Pay

Higher wages may attract additional workers.

Public sector wages ↑ → labour supply to public sector ↑ → staff shortages ↓

Higher pay may also reduce strike activity.

Pay ↑ → worker satisfaction ↑ → likelihood of strikes ↓ → disruption to public services ↓

Higher wages may also improve living standards and reduce poverty for affected workers.

Costs of Increasing Public Sector Pay

Higher public-sector wages increase government expenditure.

Public sector pay $\uparrow \rightarrow$ government expenditure $\uparrow \rightarrow$ budget deficit may $\uparrow$

The government may therefore need to:

Increase taxes or reduce spending elsewhere

This creates an **opportunity cost**, as additional spending on wages cannot be used for other government priorities.

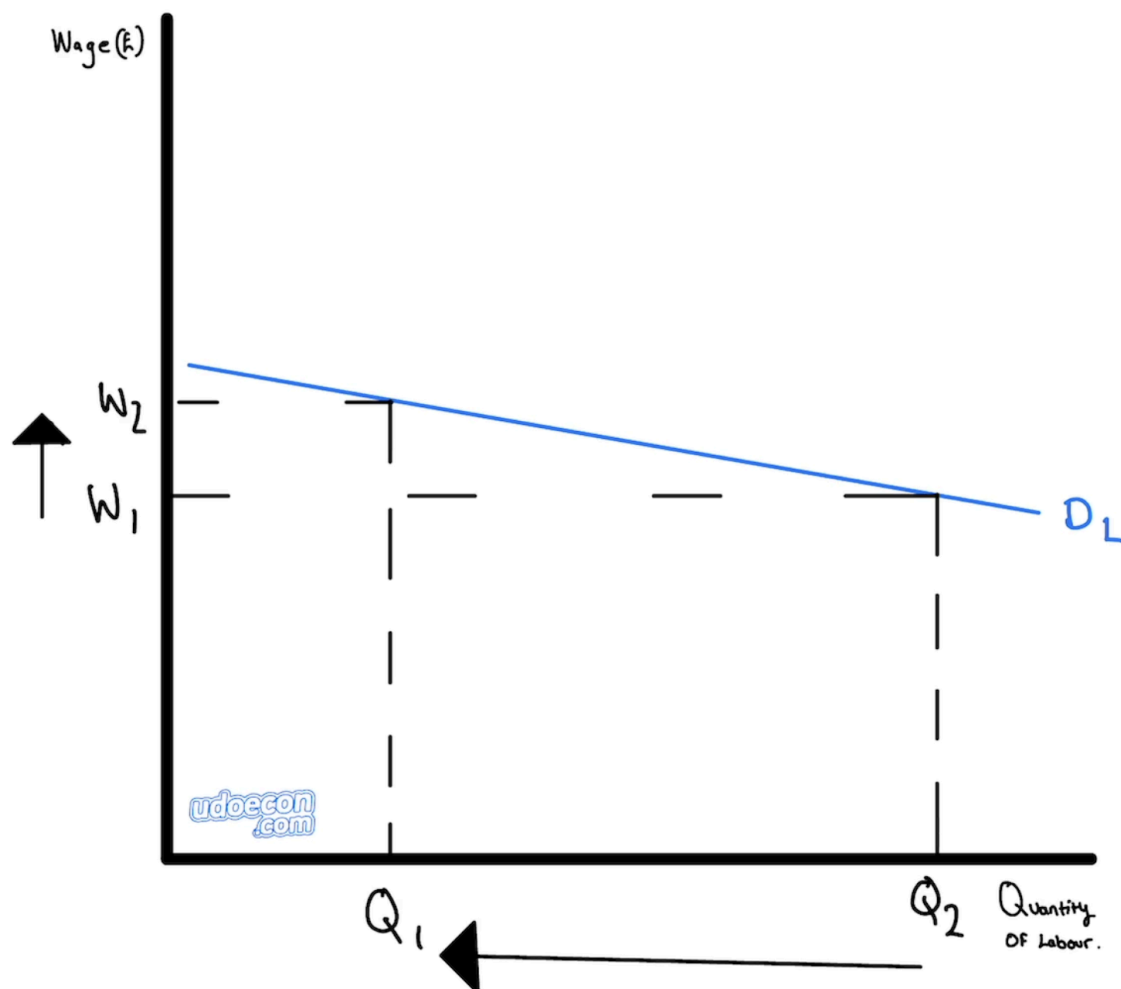
Wage Elasticity of Demand for Labour

Wage elasticity of demand for labour (WED) measures the responsiveness of the quantity of labour demanded to a change in the wage rate.

Wage Elastic Demand for Labour

Despite only a small increase in wage from W_1 to W_2 it leads to a proportionally much larger decrease in quantity demanded of labour from Q_2 to Q_1

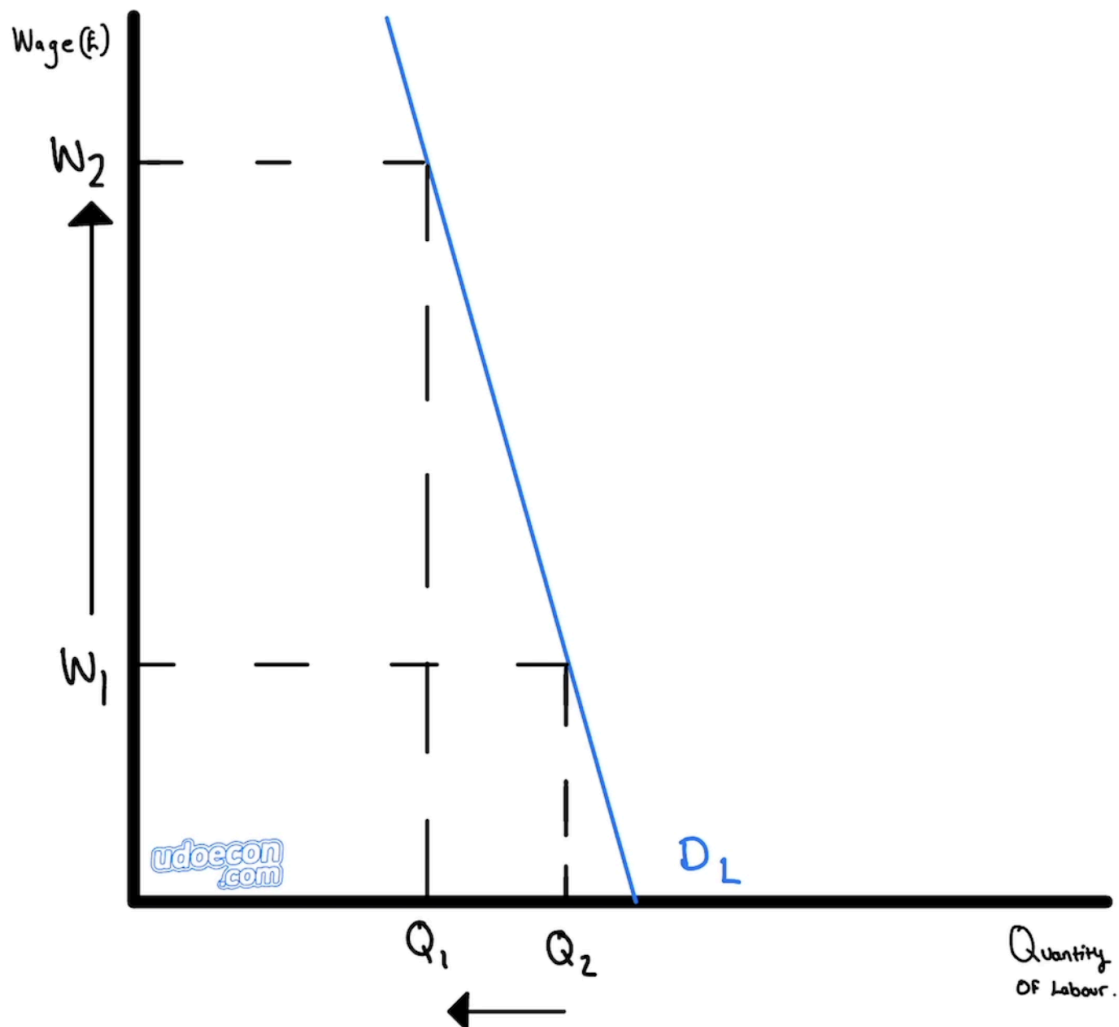
Firms are highly responsive to changes in wages.



Wage-Inelastic Demand for Labour

A large increase in wage from W_1 to W_2 leads to a proportionally much smaller decrease in quantity demanded of labour from Q_2 to Q_1

Firms are relatively unresponsive to changes in wages.



Wage Elasticity of Supply of Labour

Wage elasticity of supply of labour (WES) measures the responsiveness of the quantity of labour supplied to a change in the wage rate.

Wage-Elastic Supply of Labour

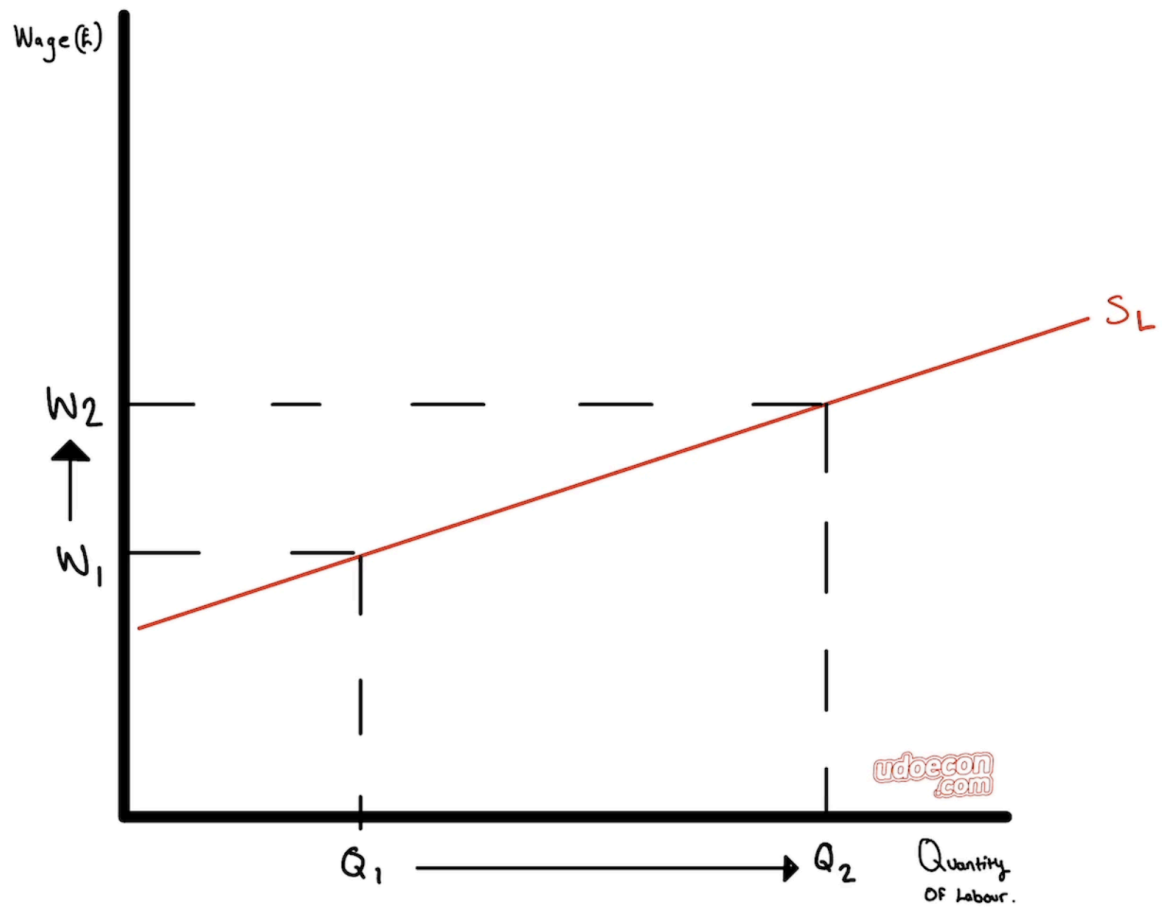
Despite only a small increase in wage from W_1 to W_2 it leads to a proportionally much larger increase in quantity supplied of labour from Q_1 to Q_2

This is more common in occupations with:

- Low barriers to entry

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- Limited training requirements
- Large pools of potential workers



Wage-Inelastic Supply of Labour

A large increase in wage from W_1 to W_2 leads to a proportionally much smaller increase in quantity supplied of labour from Q_1 to Q_2

This is more common in occupations requiring lengthy education and professional training.

