Theme 1 (1.1: Nature of Economics)

Economics as a social science

✓ Economics is a social science because it is a study of society and human behaviour.

In order to find a causal link between two variables, certain **assumptions** need to be made. These assumptions form the basis of predictions.

Process of creating economic models:

- Observation
- Forming hypothesis
- Forming predictions
- Testing predictions against evidence
- If evidence supports predictions, hypothesis becomes theory.

Unlike scientists, economists are usually unable to test hypotheses in a lab using controlled experiments. They mostly have to rely on evidence that is already available.

Economists need to interpret **data** and use **graphs** to illustrate models.

Positive statements → based on facts. Can be tested and proven true or false.

Normative statements → value judgments or subjective opinions, and cannot be proven true or false.

These value judgments may be used to influence certain economic decisions. For example, *in the case of a market failure, should the government intervene?*

Main 'assumption' in economics is:
ceteris paribus
= *everything else remains constant.*

PPFs and the economic problem

Main economic problem
= scarcity because **resources are limited**, while our **wants are endless.**

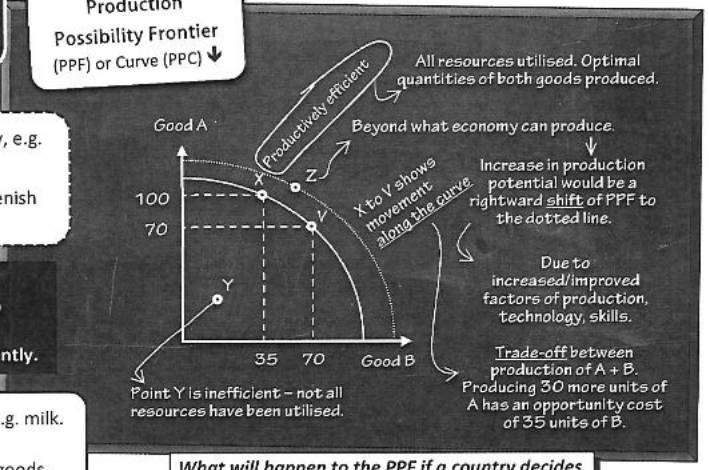
This means we all need to make choices. These choices have an **opportunity cost**. These choices have an added cost of the value of the alternative forgone.

✓ Opportunity cost is the cost of the next best alternative forgone.

Renewable resources replenish quickly, e.g. sunlight.

Non-renewable resources do not replenish quickly, e.g. oil.

Production Possibility Frontier (PPF) or Curve (PPC)



✓ PPF shows the optimal level of a combination of outputs between two types of goods when all economic resources are utilised fully and efficiently.

- **Consumer goods** are directly bought by consumers, e.g. milk.
- **Capital goods** are used to make consumer goods.
- So more capital goods help produce more consumer goods.

What will happen to the PPF if a country decides to increase its production of capital goods?

Adam Smith

Smith argued that markets always existed (even before the state) due to the natural division of labour, which led to specialisation and hence the need to exchange goods. However, the barter system is inherently flawed.

✓ Division of labour is about splitting work into various small tasks so that each task is performed by the same group of labourers repeatedly.

Advantages:

- Repeating one task increases productivity.
- Less time wasted in moving between tasks.
- Less time and money spent on training workers.

Disadvantages:

- Repetitive tasks can cause boredom. High worker turnover.
- Splitting tasks allows easily switching to machines. Can cause structural unemployment.
- Production process may in fact take longer as workers become dependent on each other.

✓ Specialisation is about focusing on producing only a few products to achieve efficiency.

Advantages:

- Efficient use of resources.
- Improves economic growth.

Disadvantages:

- Country becomes over-reliant on certain goods.
- Can experience supply and demand side shocks.
- This could lead to massive unemployment.

Functions of money

- Medium of exchange
- Measure of value
- Store of value
- Method of deferred payment

Economic structures

Advantages:

- Efficient use of resources
- Competition means low prices

Disadvantages:

- Market failure
- No public goods
- Bad for the environment
- High inequality

Adam Smith

- Efficient use of resources
- No waste
- Production at lowest cost

✓ Free market economy – where the economy is driven by the price mechanism.

Karl Marx

- Free market is flawed: entrepreneurs benefit at the expense of workers.
- Creation of social unrest: decisions by governments are the only answer.

Advantages:

- More equality
- Provision of public goods
- More certainty

✓ Command economy – where the economy is driven by the state.

✓ Mixed economy – essentially a free market economy with considerable government intervention.

Role of state:

- Only intervene following a market failure.
- Only provide public goods, welfare spending, etc.

Friedrich Hayek

- Sceptical of state intervention. Could lead to inefficiency.
- But state should provide public goods, as the free market does not provide them.

Disadvantages:

- Government failure
- Inefficient use of resources
- High average costs, as no profit motive
- Less consumer sovereignty

Theme 1 (1.2a: How Markets Work)

Consumer behaviour

Rational decision making:
We assume that economic agents primarily pursue self-interest. For example, firms maximise profit, workers maximise wages, consumers maximise utility.

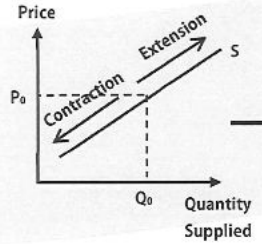
Irrational behaviour:
- People like to follow the trend ('herding behaviour'), regardless of its usefulness to them. For example, smoking.
- People find it hard to leave habits. For example, people may not change their phone contracts, even if the move benefits them, because they are used to the old contract.
- People find it hard to get their heads around mathematics. As a result, we tend to overestimate the likelihood of an event occurring that in reality has a small probability – and vice versa.

In estimating probabilities, we tend to base our decisions on:
- Recent experiences
- Some reference point

Supply

✓ **Supply** is the amount of a good or service that a firm wants to and is able to sell at a certain price, in a given time period.

Movement along supply curve:
Changes in price lead to movements along a supply curve. For example, if price falls, supply contracts.



Shift in the supply curve:
- Subsidies provided by the government
- Indirect taxes imposed by the government
- Changes in the number of firms in the economy providing a particular good or service
- Changes in technology
- Changes in costs, such as wage costs or the price of capital goods
- Changes in the quantity of a resource, e.g. emergence of a new gas field

Remember this does not include changes to the price variable.

- In economics, **short run** is the time period where at least one factor of production is fixed, such as land.
- Whereas, **long run** is the time period where all factors of production are variable.

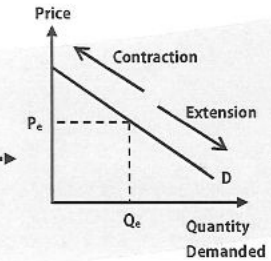
In the long run, supply tends to be relatively elastic, as all factors of production are variable. Hence, it is easy to increase supply.

In the short run, supply tends to be relatively inelastic, as at least one factor of production is fixed. Hence, it is hard to increase supply.

Demand

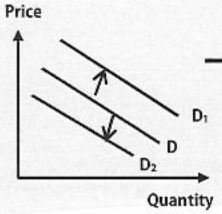
✓ **Demand** is the amount of goods and services that consumers want and can afford to buy for a given price over a given time period.

Movement along demand curve:
Changes in price lead to movements along a demand curve. For example, if price rises, demand contracts.



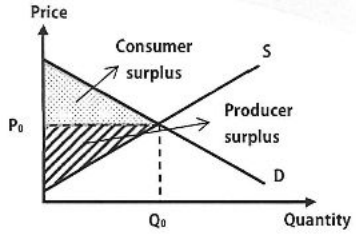
Shift in the demand curve result from changes in:
- Population size
- Advertising
- Tastes and preferences
- Income changes
- Others: price of complement/substitute goods

Remember this does not include changes to the price variable.



Downward-sloping demand curve:
The law of diminishing marginal utility posits that as consumption of a good increases, the extra satisfaction (marginal utility) that consumers get from this additional unit decreases, and so they are willing to pay less for the next unit.

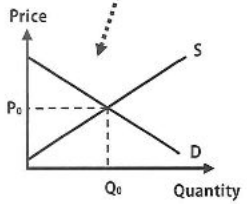
✓ **Consumer surplus** is the extra amount that consumers may be willing to pay for a good or service over what they actually pay.

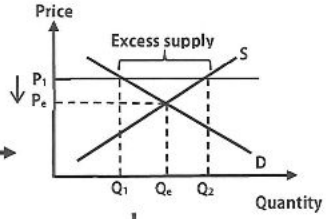


✓ **Producer surplus** is the extra amount that producers receive from selling a good or a service at a particular price over what they may be willing to receive for that good or service.

The price mechanism

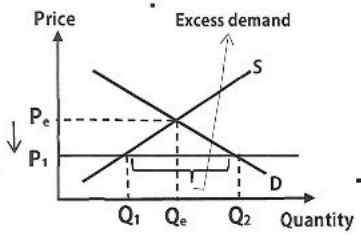
The point where demand and supply meet gives us the equilibrium price and quantity.

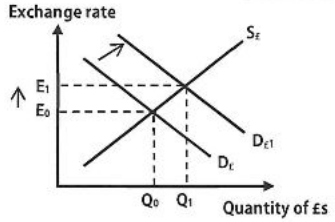




To eliminate **excess supply**, producers offer lower prices. Thus, demand rises and supply contracts until equilibrium is reached.

To eliminate **excess demand**, consumers offer higher prices. This allows producers to increase supply. Thus, supply expands and demand contracts until equilibrium is reached.





E.g. if tourism increases in the UK, demand for pounds will rise. Demand curve will shift to the right, which will increase the **exchange rate**.

Price mechanism allocates resources through:
- **Rationing** = goods and services are limited (scarcity): prices help allocate them to consumers, who pay the most.
- **Incentives** = high prices give producers incentive to produce more.
- **Signalling** = changes in price determine how demand/supply should change.

Theme 1 (1.2b: How Markets Work)

Price elasticity of demand

Measures the responsiveness of demand following a change in price

$$PED = \frac{\%\text{ change in quantity demanded of good A}}{\%\text{ change in price of good A}}$$

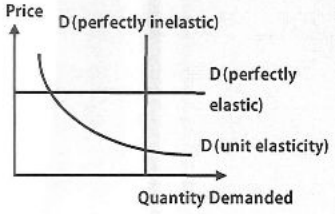
- PED > 1 means demand is relatively elastic.
- PED < 1 means demand is relatively inelastic.
- PED = 1 means demand has unit elasticity.
- PED = 0 means demand is perfectly inelastic.
- PED = infinity means demand is perfectly elastic.

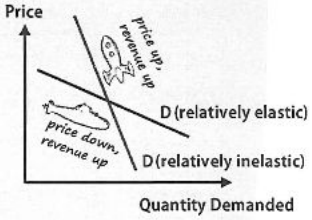
Factors that influence PED:
- Time period
- Proportion of income spent
- Availability of substitutes
- Type of good

Example:
Price of car increases, its demand decreases

Remember: PED is always negative.
- This means that price and demand always move in the opposite direction.
- For ease we will refer to the absolute values, i.e. '-1' becomes '1' as we ignore the minus.

PED and total revenue:
- **Total revenue = Price × Quantity**
- Elastic demand → fall in price increases consumer spending by a larger proportion, thereby increasing total revenue.
- Inelastic demand → increase in prices increases consumer spending by a smaller proportion, thereby increasing total revenue.
- Total revenue is maximised when demand is unit elastic.





Income elasticity of demand

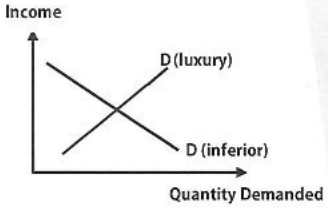
Measures the responsiveness of demand following a change in income

$$YED = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in real income}}$$

- YED > 0 means demand is elastic/inelastic (i.e. change in income brings about a change in demand in the same direction). **(Normal good)**
- 0 < YED < 1 means demand is relatively inelastic. **(Necessity)**
- YED > 1 means demand is relatively elastic. **(Luxury good)**
- YED = 1 means demand has unit elasticity.
- YED < 0 means demand is elastic/inelastic. **(Inferior good)**

Example:
Income increases,
- demand for car increases (luxury)
- demand for public transport decreases (inferior)

Significance of YED:
- Allows firms to decide what prices to keep
- Helps firms in predicting future sales
- Helps firms to strategise, e.g. diversification



If real income decreases from £3,000 to £2,000 a month and the demand for Sainsbury's' own brand bread increases from 500 loaves to 1,700 loaves a month,

a) Calculate the YED.
b) What type of good is this? **Inferior good**
c) Is the good relatively elastic or inelastic? **Relatively elastic (as XED>|1|)**

- $\%\ change\ in\ demand = \frac{1700-500}{500} \times 100 = 240\%$
- $\%\ change\ in\ income = \frac{3000-2000}{2000} \times 100 = 50$
- $YED = \frac{240}{50} = 4.8\%$

Cross elasticity of demand

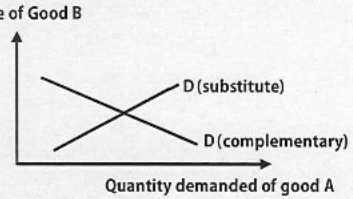
Measures the responsiveness of demand of good A following a change in the price of good B

$$XED = \frac{\%\text{ change in quantity demanded of good A}}{\%\text{ change in price of good B}}$$

- XED > 0 means demand is elastic/inelastic (i.e. increase in price of good A brings about a positive change in the demand for good B). **(Substitute good)**
- XED < 0 means demand is elastic/inelastic (i.e. increase in price of good A brings about a negative change in the demand for good B). **(Complementary good)**
- XED = 0 means there is no relationship between the 2 goods.

Example:
Price of tea decreases,
- demand for milk increases (complementary)
- demand for coffee decreases (substitute)

Significance of XED:
Allows firms to reduce their risk through:
- Horizontal integration
- Vertical integration
- Apt pricing strategy



Price elasticity of supply

Measures the responsiveness of supply following a change in price

$$PES = \frac{\%\text{ change in quantity supplied of good A}}{\%\text{ change in price of good A}}$$

- PES > 1 means supply is relatively elastic.
- PES < 1 means supply is relatively inelastic.
- PES = 1 means supply has unit elasticity.
- PES = 0 means supply is perfectly inelastic.
- PES = infinity means supply is perfectly elastic.

Example:
Price of oil increases, its supply increases

Factors that influence PES:
- Time period
- Level of growth in economy
- Shelf-life of goods
- Level of barriers to entry
- Level of available stock

Percentage change

$$\frac{\text{New value} - \text{Old value}}{\text{Old value}} \times 100$$

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Whereas **long run** is the time period where all factors of production are variable.

In the long run, supply tends to be relatively elastic, as all factors of production are variable. Hence, it is easy to increase supply.

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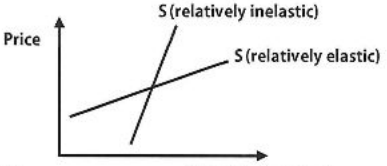

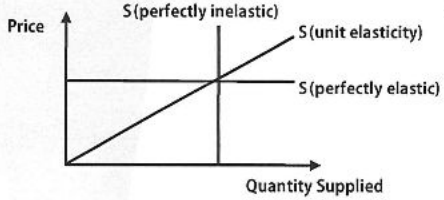

Theme 1 (1.2c: Taxes and subsidies)

Subsidies

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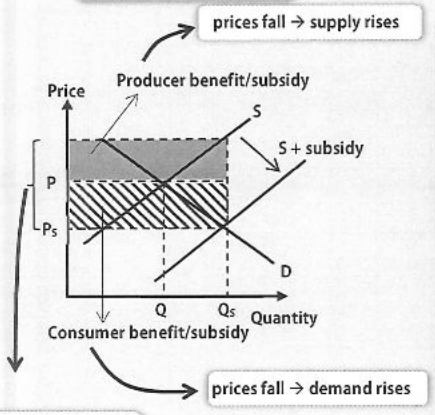
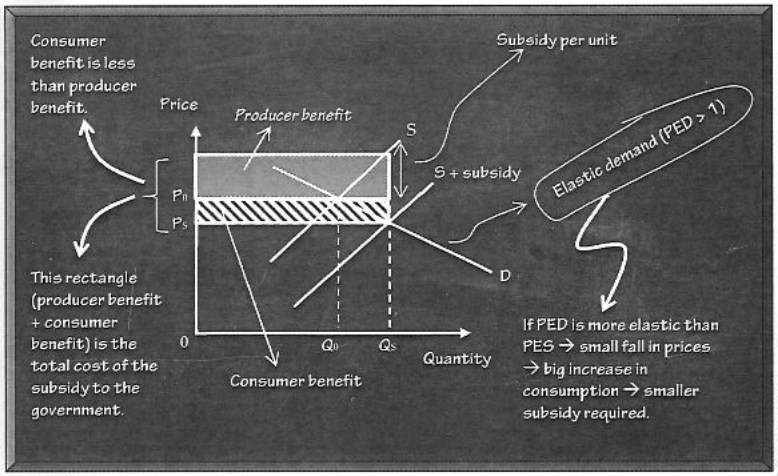
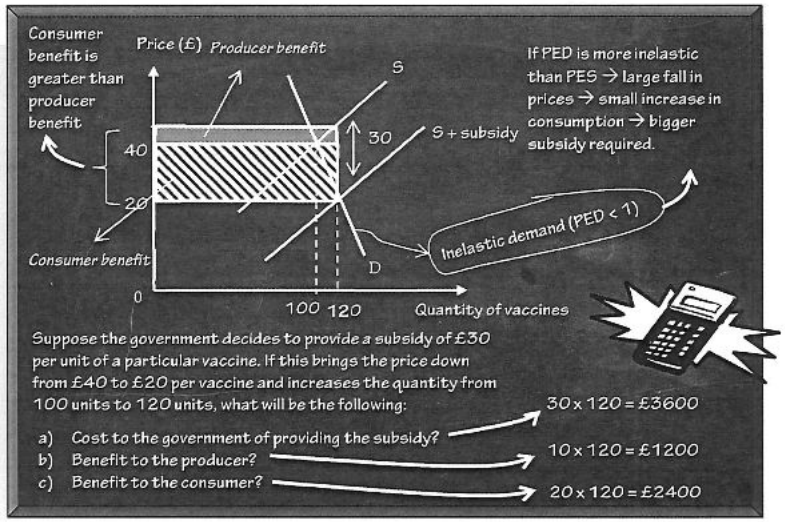


cost to government in the short-term

Elastic demand



Inelastic demand



Suppose the government decides to provide a subsidy of £30 per unit of a particular vaccine. If this brings the price down from £40 to £20 per vaccine and increases the quantity from 100 units to 120 units, what will be the following:

a) Cost to the government of providing the subsidy? → 30 x 120 = £3600
b) Benefit to the producer? → 10 x 120 = £1200
c) Benefit to the consumer? → 20 x 120 = £2400

Taxes

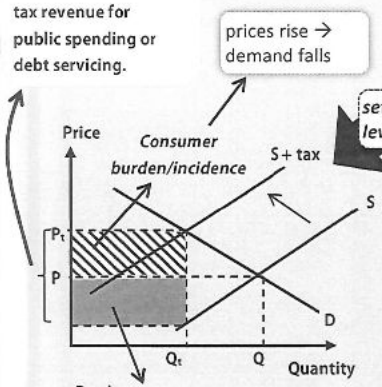
- **Direct taxes** are levied on income.
- **Indirect taxes** are levied on goods and services.

Indirect taxes

Specific tax: *set amount of tax levied on a good*

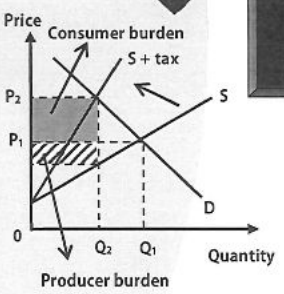
Ad valorem tax: *levied as a percentage of the good's price*

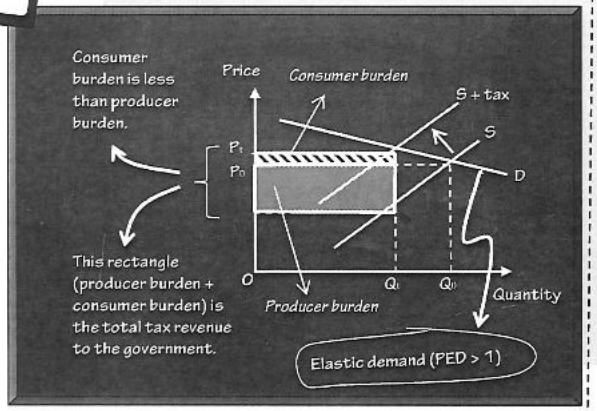
Government: more tax revenue for public spending or debt servicing.

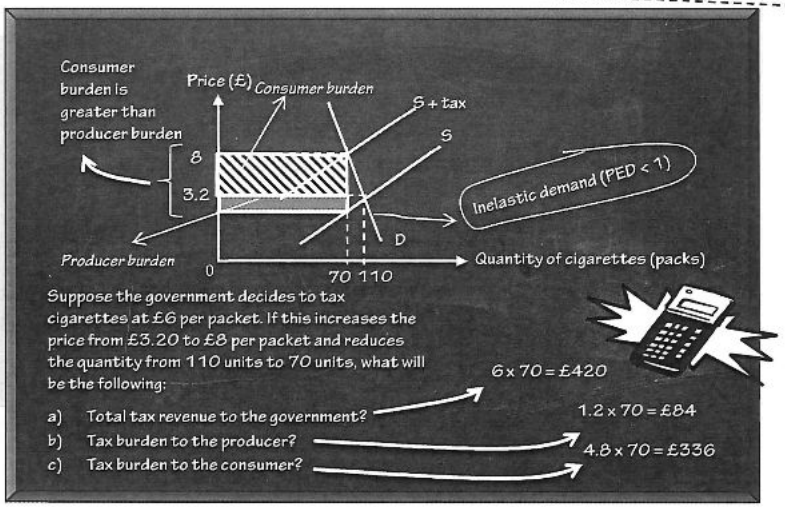


If PED is more elastic than PES → big fall in demand → lower revenue.

If PED is less elastic than PES → slight fall in demand → more revenue.







Suppose the government decides to tax cigarettes at £6 per packet. If this increases the price from £3.20 to £8 per packet and reduces the quantity from 110 units to 70 units, what will be the following:

a) Total tax revenue to the government? → 6 x 70 = £420
b) Tax burden to the producer? → 1.2 x 70 = £84
c) Tax burden to the consumer? → 4.8 x 70 = £336

Theme 1 (1.3: Market Failure)

Market failure

✓ **Market failure** refers to the misallocation of resources that result from the price mechanism when left alone.

Some abbreviations:
- Marginal private benefit (MPB)
- Marginal private cost (MPC)
- Marginal social benefit (MSB)
- Marginal social cost (MSC)

Main types of market failure:
- Externalities
- Lack of public goods
- Information gaps

Public goods

Public goods have two main characteristics:
- **Non-rivalrous** = more than one consumer can consume a good at the same time, e.g. roads.
- **Non-excludable** = even those people who do not pay for a good can consume it, e.g. NHS, national defence.

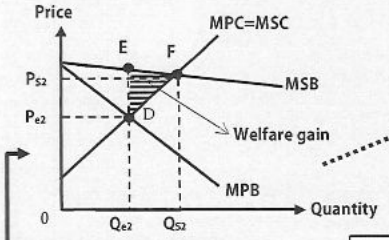
Private goods are those goods that can only be consumed once a consumer pays for them.

The free-rider problem occurs when those who do not pay for a good or service consume/benefit from it. As a result, the private sector is generally unable to provide many public goods, as they are not very profitable.

Externalities

Costs:
- **Private cost** = personal cost to the producer (consumer) of making (buying) a product, e.g. cost of labour/raw materials needed for production.
- **External cost** = indirect cost to a third party of producing/consuming a product, e.g. pollution from power stations.
- **Social costs** = External costs + Private costs.

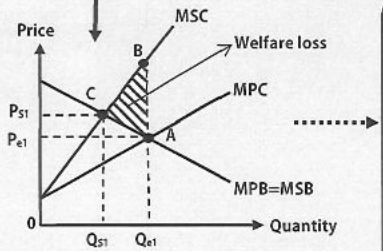
✓ **Externalities refer to the good or bad consequences that occur following the consumption/production of goods and services..**



- Zero external costs
- External benefits = DE units.
- Market equilibrium (MPC=MPB) at point D.
- Social optimum position (MSC=MSB) at point F.
- Social optimum position is different to market equilibrium.
- Hence, for marginal output (Q_{e2} and Q_{S2}), MSB is greater than MSC.
- Good is underpriced and underproduced in a free market.
- Welfare gain = area DEF

Benefits:
- **Private benefit** = personal utility to the producer (consumer) of making (buying) a product, e.g. satisfaction from consuming education.
- **External benefit** = indirect benefit to a third party of producing/consuming a product, e.g. benefits of education to society.
- **Social benefits** = External benefits + Private benefits

To what extent is the construction of a third runway at Heathrow likely to lead to market failure?



- MPC = supply curve
- MPB = demand curve
- Zero external benefits
- External cost = AB units.
- Market equilibrium (MPC=MPB) at point A.
- Social optimum position (MSC=MSB) at point C.
- Social optimum position is different to market equilibrium.
- Hence, for marginal output (Q_{e1} and Q_{S1}), MSC is greater than MSB.
- Good is underpriced and overproduced in a free market.
- Welfare loss = area ABC

Information gaps

✓ **Symmetric information is when both consumers and producers have the same information about a product.**

✓ **Asymmetric information is when either the consumers or the producers have more information about a product than the other party.**

As a result of asymmetric information, producers and consumers are likely to make incorrect choices that can lead to a misallocation of **resources**.

For example, when selling a house the sellers know more about the value of the house than the buyers. Hence, buyers may pay more than the property's value.

Theme 1 (1.4: Government Intervention)

Government intervention and failure

✓ Government intervention is any measure that is undertaken by the state to correct a market failure, e.g. taxation.

✓ Government failure is a further misallocation of resources that results from government intervention (to correct market failure).

Causes of government failure:

- ***Distortion of price mechanism*** = misallocation of resources when the price mechanism does not operate freely.
- ***Unintended consequences*** = state intervention can have added undesirable effects.
- ***Administrative costs***, e.g. monitoring compliance of rules and collecting of fines, taxes, etc.
- ***Asymmetric information*** = governments may lack all essential information necessary to make informed decisions.
- ***Conflicting priorities*** = can lead to incorrect or compromised measures taking place to deal with market failure.

Maximum price:

- A maximum price is generally imposed on goods with positive externalities.
- Max. price is set below the market equilibrium price, to encourage consumption.
- Supply contracts and demand extends, creating excess demand (or a shortage of output).

Providing information:

Providing certain information can be made mandatory to facilitate making efficient choices.

Public goods:

As free markets do not provide public goods, governments raise taxes to provide them.

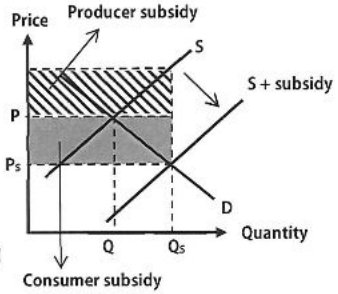
Tradable pollution permits:

- Permits given to firms, allowing them to pollute up to a limit.
- Firms can trade these permits.
- Gives incentive to firms to invest in clean technology.
- This method is a combination of state intervention and market based solution.

Possible government failure

Tradable pollution permits:

- If most firms in the economy produce high levels of pollution, they will be unable to trade their permits.
- Also, low emitters can sell their permits to high emitters of pollution. This may eliminate the need for high emitter to invest in clean technology.
- Governments can miscalculate the acceptable level of pollution.



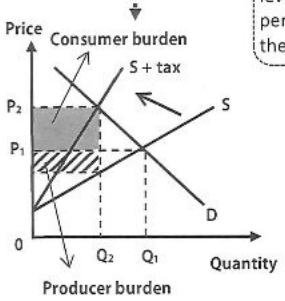
Subsidising education:

- Education has positive externalities.
- Subsidies shift the supply curve to the right. This pushes the price down and encourages the consumption and production of education.

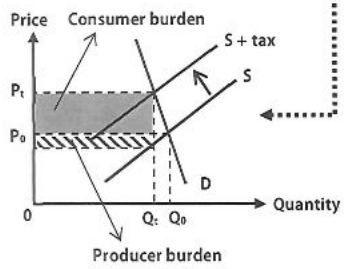
Taxing alcohol:

- Alcohol has negative externalities.
- Placing an indirect tax equal to the amount of the externality shifts the supply curve to the left. This increases the price of alcohol, discouraging its consumption.
- This will decrease the negative externality, while tax revenue can be used for improving a country's welfare.

Ad valorem tax = levied as a percentage of the good's price.



Specific tax = set amount of tax levied on a good.



Possible government failure

Taxing alcohol:

- The government may under- or overestimate the value of the externality, caused through excessive alcohol consumption. And so the socially optimal level will not be achieved.
- Potential risk of illegal trade to escape higher taxes.
- Demand for alcohol tends to be very inelastic, so people keep on drinking too much alcohol in spite of the tax.

Regulation:

Enforcement of rules/laws restricting consumption and/or production of goods and services with negative externalities, e.g. restrict the amount of cigarettes sold.

Possible government failure

Regulation:

- Can lead to a misallocation of resources, as the price mechanism is not allowed to function freely.
- Can create a black market.
- Costly to monitor compliance.

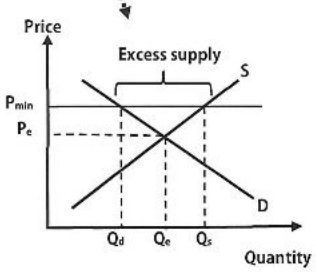
Minimum price for oil:

- A minimum price is generally imposed on goods with negative externalities or on commodities (to guarantee farmers' incomes).
- Min. price is set above the market equilibrium price, to discourage consumption.
- Supply expands and demand contracts, creating excess supply of Q_d to Q_s.

Possible government failure

Minimum price for oil:

- The government can store excess supply, but this will be at a cost.
- Guaranteed income may allow producers to become inefficient.
- Since demand for oil tends to be inelastic, consumption may not fall significantly.



Theme 2 (2.1: Measures of Economic Performance)

Economic growth

A *What is meant by economic growth?*

GDP is the value of all the goods and services produced in a country over a specified period of time.

Measured by calculating the rate of change of GDP.

Purchasing power parity (PPP) is used to compare the living standards between countries.

£10 can buy more things in India than it can in the UK. Hence, PPP accounts for the different price levels in countries.

National wellbeing measures how satisfied people are in their lives. It is a measure which incorporates things like income, health, environment and education.

Evidence suggests a positive relationship between income and happiness – however, after a certain point there is no clear link.

In order to compare growth rates between countries and over time, it is better to use data that can be comparable, e.g. GDP per capita, rate of change of **real** GDP.

Measures of national income:
- GDP
- GNP
- GNI

GNP = value of goods and services produced by the citizens of a country, both domestically and abroad.

GNI = incomes of citizens of a country earned _____ and _____.

Fill in the blanks. **B**

GDP - limitations when comparing living standards:
- Benefits of economic growth may accrue only for a small proportion of the population.
- High GDP does not necessarily mean people are happier.

GDP - a few useful distinctions:
- **Real GDP** = _____
- **Nominal GDP** = GDP not adjusted for inflation.
- **Total GDP** = total number of goods and services produced in an economy in a given time period.
- **GDP per capita** = _____
- **Value of GDP** = _____
- **Volume of GDP** = _____

Fill in the blanks. **C**

Year	Real GDP (£tr)	Population (m)
2000	1.5	58.9
2015	2.7	64.1

The above table shows some data for the UK for the years 2000 and 2015. Find out:
a) what the growth rate was between these two years
b) what the GDP per capita was in 2015

$$\text{Growth rate} = \frac{2.7 - 1.5}{1.5} \times 100 = 80\%$$

$$\text{GDP per capita} = \frac{2{,}700{,}000{,}000{,}000}{64{,}100{,}000} = 42{,}121.68$$

UK's growth rate in 2015 was 2.15%

Since the beginning of 2016, UK's unemployment rate has been 5%.

Balance of payments

D *Define balance of payments.*

- Current account **surplus** = inflows > outflows
- Current account **deficit** = outflows > inflow

E *What are the two components of the balance of payments?*
- **Income transfers** = inflow and outflow of remittances to home countries.
- **Current transfers** = inflow and outflow of loans or grants.

Current account = *trade in goods and services + income transfers + current transfers*

It can be risky if a country relies heavily on one major export, e.g. commodities. A fall in demand will lead to huge job losses and a reduction in AD (and growth).

Huge reliance on imports can lead to massive debts.

Trade makes economies interconnected with each other. If a country imports most of its raw materials, then a recession in the exporting country will also affect the importing country, as it will be deprived of resources to produce more products. There may be massive job losses and a fall in the growth rate.

Unemployment

F *Define the following terms:*
- a) ***Unemployment:*** .....
- b) ***Underemployment:*** .....

H **Given the following explanations of the various causes of unemployment, can you provide the correct technical term for each?**
- _____ = when workers do not have the right skills employers want.
- _____ = when workers are moving between jobs.
- _____ = when demand for a good or service is low at certain times of the year, e.g. tourism.
- _____ = when workers lose jobs due to slowdown in growth, e.g. in a recession.
- _____ = when supply of labour does not adjust to a fall in demand for labour. Wages tend to remain high, causing unemployment.

Effects of unemployment:
- High rates of unemployment reduce AD → low growth.
- Adversely affects people's psychological wellbeing.
- Government loses in tax revenues and needs to spend more on welfare.

If the number of people employed increases over time, it does not necessarily mean that unemployment is falling. In fact, it could be rising as well if population is also rising.

Immigration can increase the supply of labour in the host country. However, they need to have the right skills.

G *What are the two measures of unemployment?*

The ILO measure is based on a survey of nearly 40,000 households and measures unemployment based on certain criteria – e.g. people need to be unemployed for at least a month.

Claimant count simply tells us how many people claimed Jobseeker's Allowance in a given period of time.

Inflation

I *Define the following:*
- a) ***Inflation:*** .....
- b) ***Deflation:*** .....
- c) ***Disinflation:*** .....

UK's target inflation rate is 2%. And recently it has tended to stay around % (2.17% in June 2016). However, following the Brexit vote, it has surged to 2.52%.

K *State three main causes of inflation.*
-
-
-

What are the two measures of inflation?
-
-

J
- CPI uses prices of a 'basket' of everyday goods that are compared over time.
- RPI includes housing costs and uses arithmetic mean, which is why it gives a higher estimate of inflation.

Effects of inflation:
- Creates uncertainty → consumers may be unwilling to spend → AD falls
- Loss of international competitiveness → exports fall
- Savings are now worth less.
- People on fixed incomes will see purchasing power decline.
- Menu costs – firms need to update all prices.
- Shoe leather costs – consumers will have to spend more time and energy trying to find cheaper options.

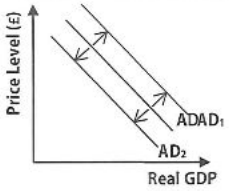
Limitations of CPI:
- Prices could change due to changes in quality.
- Temporary shocks can exaggerate inflation figures.
- A typical 'basket' of goods could be different for different groups of consumers (e.g. students, pensioners).
- Price rise for certain goods may induce a rise in demand for its substitutes, which is not entirely captured by CPI.

Theme 2 (2.2, 2.3, 2.4.3: AD/AS)

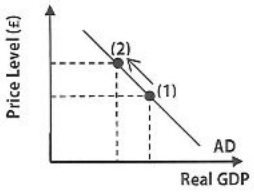
Aggregate demand

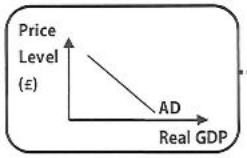
✓AD refers to the total demand for all the goods and services produced in an economy.

Movement along the AD curve



Shift in the AD curve





AD curve is downward sloping because of:

- **Real balance effect** – as prices rise, fewer people are able to buy goods and services.
- **International competitiveness** – if domestic prices are higher, exports appear more expensive, while imports appear less expensive. So net exports fall, reducing AD.
- **Interest rate** – at higher price levels, interest rates tend to rise to offset the price increases. Higher interest rates reduce investment and consumption (because firms and households are more likely to save than spend), thereby reducing AD.

AD = C + I + G + (X–M)

C

- **C for consumption**
- **Total consumer spending**
- **Largest component of AD in the UK (about 60%)**

If **interest rates** are high, consumers tend to save more than they spend because savings give a higher reward (utility) – and vice versa.

Consumer confidence also determines the level of consumption. If the economy is doing well and confidence levels are high about the future, consumers are likely to increase consumption – and vice versa.

- **Disposable income** is income that is left after all taxes have been deducted.
- This determines the level of consumption.

Wealth effects also matter. If the price of a person's asset (e.g. house) goes up, the person is more likely to increase spending. This is related to the consumer confidence idea.

- Marginal propensity to consume establishes how much extra is consumed following a rise in the disposable income.
- This tends to be higher for low-income families.

If households decide to **save** more, their consumption will fall.

In 2015, total consumer spending in the UK was £296 billion.

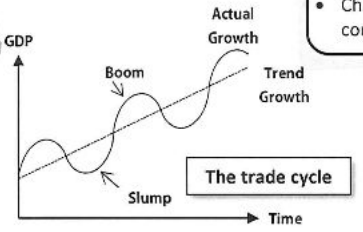
- Government spending is a part of **fiscal policy**.
- Fiscal policy is about making changes to government spending and/or taxation.
- A government can adopt either a contractionary or an expansionary fiscal policy.
- Contractionary policy is about increased taxation and lower spending.
- Expansionary policy is about lowering taxation and increasing spending.

G

- **G for government spending**
- **Spending on welfare, health, education, etc.**
- **Forms about 25% of AD in the UK**

In 2015, 43.2% of UK's GDP was used in the form of government spending.

- Government spending depends on the **trade cycle**.
- When the economy is doing poorly, unemployment rises. So the government has to spend more on welfare, while the tax revenue it receives also declines.
- The opposite happens during an economic boom.



I

- **I for investment**
- **Spending by firms on technology, infrastructure, etc.**
- **Forms about 15% of AD in the UK**

In 2015, UK was a net importer, with a trade gap of £88 billion.

- **Gross investment** refers to the total investment made in a period of time.
- **Net investment** = gross investment – depreciation of assets

Influences on investment:

- As the economy grows, more jobs are created and incomes rise. So to meet the increased demand, firms increase investment.
- Business confidence – how owners feel about the prospect of investing, based on economic conditions.
- High demand for exports requires more investment to meet the demand.
- If interest rates are high, investment will be low because the cost of borrowing would be high.
- If credit is easily accessible, investment will be high.
- Tight government regulation is likely to limit investment, e.g. high taxes.

X – M

- X for exports. M for imports
- Forms about 2% of AD in the UK

Real incomes:
As real incomes rise, demand for imports rises. This decreases net trade (X – M). In other words it increases a country's current account deficit.

Non-price factors:
The exchange rate does not affect the quality of traded goods, and changes to exports/imports as a result of exchange rates changes could be mitigated if domestic goods are particularly high-quality or unique.

State of the world economy:
Recession is likely to affect a country's ability to trade with its partners. In a recession, inflation lowers, so exports may increase and imports decrease. However, if there is a global recession, other countries will be unlikely to buy more imports. Thus, total volumes of exports and trade will fall. The reverse applies for a national/global boom.

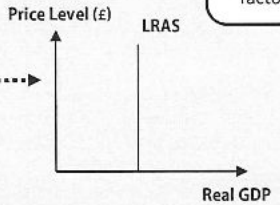
Exchange rates:
If the value of the pound increases (appreciation), UK exports appear more expensive. Thus, exports fall and imports rise, which worsens the balance of trade, ceteris paribus. The opposite applies to depreciation.

Degree of protectionism:
A country can try to protect its exports by subsidising its domestic producers and/or taxing imports (tariffs). This is likely to increase net exports, as exports appear cheaper than imports. However, if one country imposes trade barriers, others are likely to follow suit. This will negate the effect.

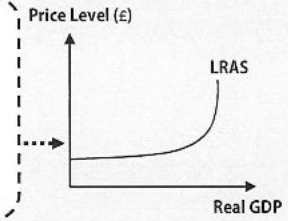
Aggregate supply

- **Short-run AS** refers to AS where capital is fixed and only labour is variable.
- **Long-run AS** refers to AS where all factor inputs are variable.

Classical: Assumption is that firms operate at full capacity.



Keynesian: Assumption is that the economy can have output gaps due to market imperfections.

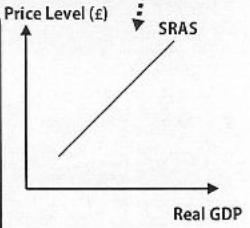


Factors affecting short-run AS:

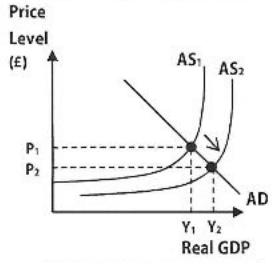
- **Changes in raw material costs** – e.g. if cost of oil rises, short-run AS will decrease.
- **Changes in exchange rate** – e.g. if the exchange rate rises, imports become cheaper. Since many firms rely on imported material for production, a rise in the exchange rate will increase short-run AS.
- **Changes in tax rates** – e.g. if tax rates are reduced, short-run AS will increase.

Factors affecting long-run AS:

- Technological improvements
- Changes in relative productivity
- Improvement in education and skills
- Changes in government regulation
- Demographic changes – immigration increases long-run AS
- Changes in competition policy – more competition increases long-run AS

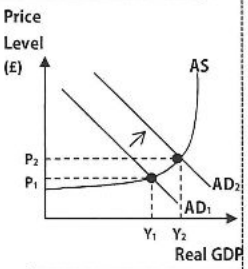


When AD = AS, the economy is at an equilibrium level of real output.



Outward shift in AS

- Shift in AS extends AD
- Real output increases
- Price level falls



Outward shift in AD

- Shift in AD expands AS
- Real output increases
- Price level rises

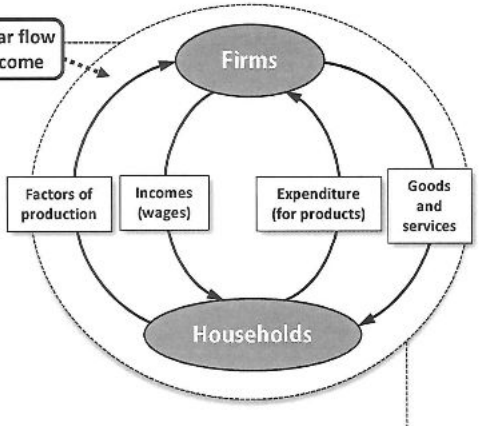
Theme 2 (2.4/2.5: National Income and Economic Growth)

National income

✓ National income is the total value of output in an economy.

Income is a flow concept and refers to what a person earns when factor inputs are put to use. Wealth is a stock concept and refers to savings and assets accumulated over time.

Circular flow of income



G = government spending
I = investment
X = exports
T = taxation
S = savings
M = imports

- Injections = G + I + X
- Withdrawals = T + S + M

Injections increase AD and growth. Withdrawals decrease AD and growth.

Multiplier

If the Bank of England found that in 2015 the marginal propensity to consume for the average UK household was 0.65, what was the value of the multiplier in that year?

$$MPW = 1 - MPC$$
$$MPW = 1 - 0.65 = 0.35$$
$$Multiplier\ ratio = \frac{1}{0.35} = 2.86$$

When there is an injection into the economy, the actual increase in output can be greater than the initial injection, depending on the size of the **multiplier ratio**.

The multiplier effect would shift AD to the right every time there is an injection into the economy (progressively smaller shifts).

Multiplier ratio = 1 ÷ (marginal propensity to withdraw)

How does the multiplier work? If a foreign firm invests £100m in the UK, the UK will gain more income than the amount invested. This is because this money will provide wages, which will be spent in the economy – leading to further growth. If the final increase in national income is £500m, then the multiplier ratio would be $\frac{500\,m}{100\,m} = 5$.

Marginal propensity to withdraw (MPW) is the proportion of additional income that is taken out of the economy (i.e. it is not spent in the domestic economy).

- MPW = 1 – MPC (marginal propensity to consume)
- MPW = MPS + MPT + MPM
  - MPS = marginal propensity to save
  - MPT = marginal propensity to tax
  - MPM = marginal propensity to import

- A rise in MPC increases the multiplier.
- A rise in MPS reduces the multiplier.
- A rise in MPT reduces the multiplier.
- A rise in MPM reduces the multiplier.

Growth

Trade can help an economy to grow further. This happens in the form of export-led growth. An economy invests in the export industry, as it has the potential to attract demand from the whole world.

- **Actual economic growth** is real growth measured using GDP figures.
- **Potential economic growth** is the overall capacity for growth in the economy. This may be higher than actual economic growth.

- **Actual growth rate** is recorded for a particular time period.
- **Trend rate of growth** is the average rate of growth over time.

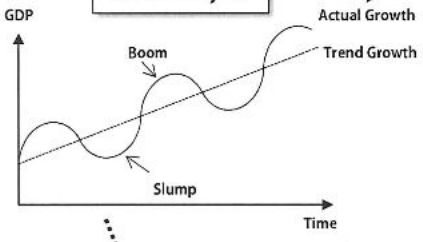
Causes of growth:

- **Demand-side factors:**
  - Increases in the components of AD will increase growth (C, I, G, X – M)
- **Supply-side factors:**
  - Technological advancement
  - Education and skills
  - Demographic changes / migration
  - Government regulation

Impacts of growth:

- **Benefits:**
  - More jobs
  - Better living standards
  - Reduced poverty
  - More public goods
  - Improved government finances
- **Costs:**
  - Environmental damage
  - High inflation
  - Wider gap between the rich and poor

The trade cycle



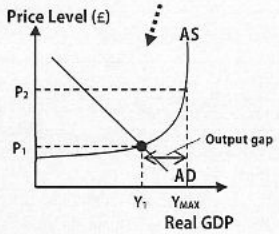
	Boom	Recession
Economic growth	High	Low
Unemployment	Low	High
Inflation	High	Low
Consumers/business confidence	High	Low
Government finances	High tax revenue, low welfare spending	Low tax revenue, high welfare spending
Exchange rate	Strong currency (higher imports, lower exports)	Weak currency (lower imports, higher exports)

Output gap is the difference between the actual and the potential real GDP.

Negative output gap:

- Actual real GDP < Potential real GDP
- Spare capacity and high unemployment

Negative output gap: long run

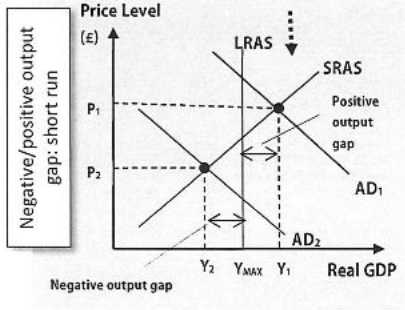


Positive output gap:

- Actual real GDP > Potential real GDP
- Over capacity and high inflation

- **Keynesians believe that a negative output gap can occur in the short and long run.**
- **Classical economists believe that negative and positive output gaps only occur in the short run.**

Negative/positive output gap: short run



Theme 2 (2.6: Macroeconomic Objectives and Policies)

Demand-side policies during:

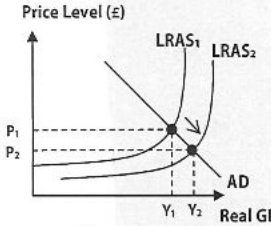
- **The Great Depression**: occurred in the US in early 1930s. Also affected UK.
  - USA increased tariffs on imports. Others retaliated. This reduced world trade and world growth slowed.
  - USA increased spending on infrastructure to create jobs and increase AD. Impact is disputed.
  - USA increased the money supply and cut interest rates. Impact is disputed.
  - UK increased taxes and tariffs and reduced wages and interest rates. This reduced AD.
- **Global Financial Crisis of 2008:**
  - USA increased spending to increase AD.
  - USA cut interest rates and increased money supply (QE) to increase AD. Impact is disputed.
  - UK cut VAT, income tax and interest rates. Increased money supply.

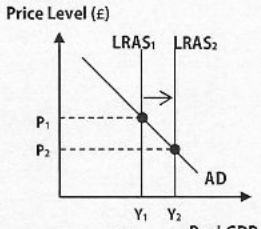
Demand-side policies	
Strengths	**Weaknesses**
• Shorter time lags	• Can cause inflation • Slow and inaccurate data collection may lead to incorrect decisions

✓Supply-side policies are any policies that increase AS.

Types of supply-side policies:

- **Market-based** = little government action. Markets are left alone.
- **Interventionist policies** = government takes action in a more direct manner.





Effect of supply-side policies on a Keynesian diagram

Effect of supply-side policies on a Classical diagram

Supply-side policies	
Strengths	**Weaknesses**
• Can reduce inflation • Create more jobs • Lead to international competitiveness	• Longer time lags • Large opportunity cost • Slow and inaccurate data collection may lead to incorrect decisions

- **Budget deficit** occurs when government spending > tax revenues.
- **Budget surplus** occurs when government spending < tax revenues.

Role of Bank of England:

- It maintains the financial stability of the economy.
- Its aim is to maintain a target inflation rate of 2%.
- The Monetary Policy Committee (MPC) discusses the long-term growth prospects, the effects of government policy, debt levels in the economy, etc. in order to decide how (if at all) to change interest rates.

Demand-side policies

Macroeconomic objectives:

- **High economic growth**
- **Low unemployment**
- **Low and stable inflation**
- **Greater income equality**
- **Environmental sustainability**
- **Balanced government budget**
- **Balanced current account on BoP**

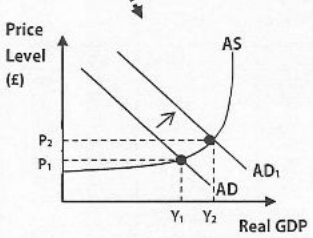
Supply-side policies

- **Improve infrastructure** = investment in transport links, communication links and housing, etc. can help to increase AS, as it reduces costs of production.
- **Research and technology** = investment in R&D can make production more efficient, cheaper (in the long-run) and quicker.
- **Increase incentives** = raising minimum wages or providing perks can increase the supply of labour.
- **Increasing competition** = e.g. preventing monopolies will allow more firms to enter the market, increasing AS.
- **Reforming labour market** = e.g. abolishing the minimum wage or trade unions will allow firms to hire more workers.
- **Human capital** = providing vocational training and subsidising education can create more skilled workers.

There are two types of demand-side policies:

- Fiscal policy
- Monetary policy

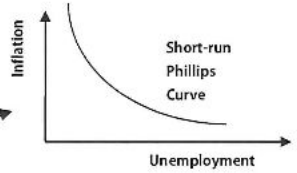
Effect of an expansionary fiscal/monetary policy



✓Monetary policy refers to the use of interest rates and money supply by the central bank to influence the economy.

✓Fiscal policy refers to the use of taxes and government spending by the state to influence the economy.

Policy/objective conflicts



Policy conflicts:

- **Fiscal policy:**
  - Increasing spending today to increase AD might mean that tomorrow taxes will have to be increased.
  - Reducing spending may reduce budget deficit but it may lower living standards.
- **Monetary policy:**
  - Cutting interest rates may control inflation but it also erodes the value of savings.
  - Increasing interest rates can reduce AS, as borrowing becomes expensive (lower investment). This could lead to cost-push inflation.
- **Supply-side policies:**
  - More spending today may mean less spending tomorrow.
  - Infrastructure projects can harm the environment.

- High interest rates → increase savings and decrease spending/investment → reduce AD/AS and growth. And vice versa.
- High money supply → increases borrowing and investment → increases AD/AS and growth. And vice versa.

Note: quantitative easing (QE) refers to the electronic creation of money by the bank (through selling of assets and bonds, etc.). This injects money into the economy for borrowing and spending.

Compare how demand-side and supply-side policies may resolve macroeconomic objectives.

	Low inflation	Current account balance	Environmental sustainability	Low unemployment	Balanced budget	Income inequality
High economic growth	✗	Depends on development of export sector	✗	✓	Depends on the level of welfare spending	✗

Theme 3

3.1: Business growth

Sizes and types of firms

Types of firms

- **Private sector:** (Groups of) individuals own and run the firm
- **Public sector:** The state owns and runs the firm
- For-profit / not-for-profit firms (e.g. charities)

Size of firms

Why firms grow?
- More profit
- More market power
- Diversify product range to reduce risk
- Gain efficiency

Why firms remain small?
- Avoid barriers to entry
- Niche markets tend to be small
- Avoid inefficiency
- Managers' preference

The principal-agent problem

Shareholder = principal	*Aims*	• Maximise profits • Higher dividends
Manager = agent	*Aims*	• Maximise sales • Expand business • Higher salaries • Better working conditions

Shareholders have limited control over managers, as they do not work for their business

Business growth

Type of growth	Definition	Costs	Benefits
Organic growth	Internal growth via reinvestment of profits	• Limited growth • Risky due to over-reliance on one few products • No control over supply chain	• Improves brand loyalty • Profits need not be split into many parts for reinvestment
Forward / backward vertical integration	Merging with a firm from the same industry that is at the subsequent (forward) / preceding (backward) stage of production	• May lead to inefficiency • Limits competition	• More control over suppliers • Efficiency • More control over industry
Horizontal integration	Merging of two firms from the same industry and at the same stage of production	• May lead to inefficiency • Differences in the running of the two firms may cause issues	• Greater growth, due to limited competition • Efficiency • More market share
Conglomerate	Merging of two firms from two different industries	• May lead to inefficiency • May lack expertise in the production of some goods	• Less risk due to diversification

Constraints on business growth:
- market saturation point already reached
- unable to access finance
- growth not an objective
- regulation to promote competition

Demergers

Demerger = large firm splits into 2 or more firms

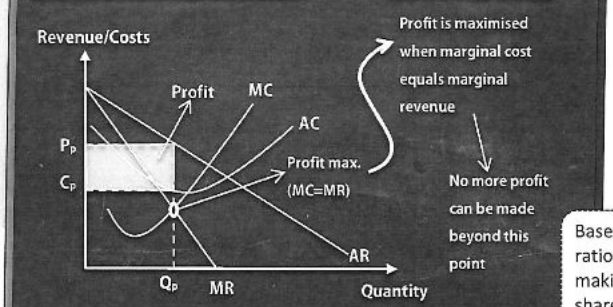
Reasons for demergers:
- inefficiency
- cultural differences between the previously merged firms
- allows specialisation in the production of a few goods
- regulation may have forced the demerger
- firms can raise funds by selling certain parts

Impacts of demergers		
Businesses	**Workers**	**Consumers**
• May lead to inefficiency • Conversely, firms may become more efficient • Firms can raise funds from selling assets • Firms may get a higher profit margin	• Lower wages as competition increases • Greater job security as loss-making parts of the business are removed, as opposed to there being an increase in redundancies	• Greater competition may lead to lower prices • Smaller businesses may mean better customer service • More choice for consumers due to greater competition

3.2 Business objectives

Profit maximisation

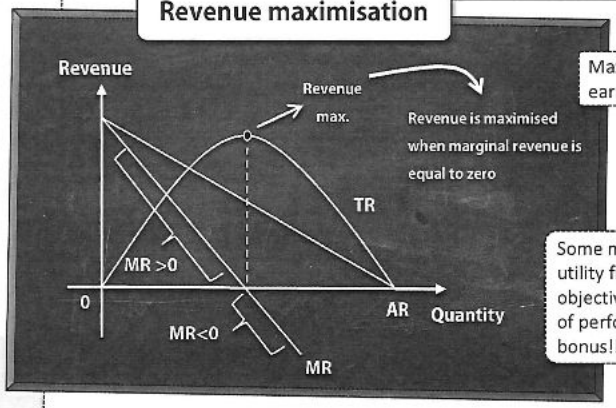
Maximising return on factor inputs



Based on the rational decision making model (i.e. shareholders get maximum utility from maximising profits)

However, if a firm is making a loss at MC=MR, it may pursue other objectives

Revenue maximisation

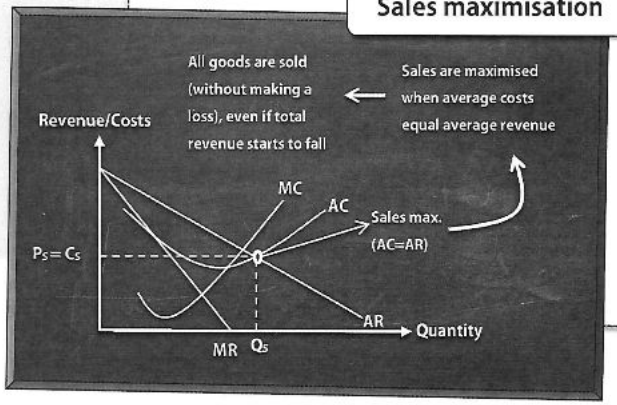


Maximising earnings from sales

Some managers derive utility from this objective → incentive of performance related bonus!!!

Sales maximisation

Maximising the number of products sold, without making a loss



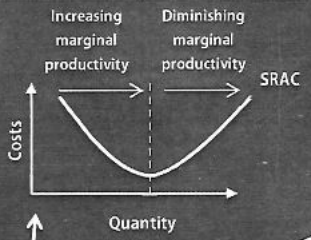
Satisficing: Managers maximise profits up to a point that pleases the shareholders – after that they pursue their own goals

Theme 3: 3.3/3.4.1 Revenues, costs and profits / Efficiency

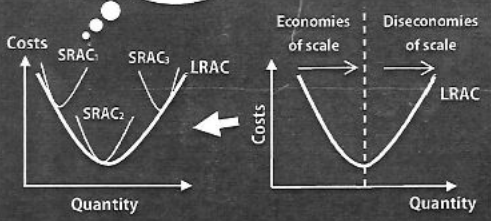
Costs and revenue

The law of **diminishing marginal productivity** states that as more *variable* factor inputs are added to the fixed inputs, the resultant *rise in output* increases at a decreasing rate.

When this happens average costs in the short run rise



Long-run average cost (LRAC) curve envelopes short-run average cost



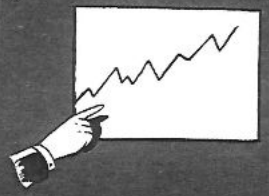
$$\text{Average revenue } (AR) = \frac{\text{Total revenue}}{\text{Quantity}}$$

$$\text{Total revenue } (TR) = \text{Price} \times \text{Quantity}$$

What a firm sells over time

$$\text{Marginal revenue } (MR) = \frac{\text{Change in revenue}}{\text{Change in quantity}}$$

Earnings from selling an additional unit of output.



Output	Average revenue (£)	Total revenue (£)	Marginal revenue (£)
10	100	1000	-
11	96	1056	56
12	92	1104	48
13	88	1144	40

Costs that do not vary with output

$$\text{Average total cost } (ATC / AC) = \frac{\text{Total cost}}{\text{Quantity}}$$

$$\text{Marginal cost } (MC) = \frac{\text{Change in cost}}{\text{Change in output}}$$

$$\text{Average fixed cost } (AFC) = \frac{\text{Total fixed cost}}{\text{Quantity}}$$

Output (units)	Total fixed cost (£)	Total variable cost (£)	Total cost (£)	Average total cost (£)	Average fixed cost (£)	Average variable cost (£)	Marginal cost (£)
10	300	50	350	35	30	5	–
20	300	120	420	21	15	6	7
30	300	170	470	15.67	10	5.67	5
40	300	200	500	12.5	7.5	5	3

Costs that vary with output

$$\text{Total variable cost } (TVC) = \text{Variable cost} \times \text{output}$$

$$\text{Average variable cost } (AVC) = \frac{\text{Total variable cost}}{\text{Quantity}}$$

Recall: Price elasticity of demand (PED) measures the responsiveness of demand following a change in the price of a good.

PED affects total revenue.
- Elastic demand → fall in price → increased consumer spending → increased revenue – and vice versa.
- Inelastic demand → price rise → increased consumer spending → increased revenue – and vice versa.

Economies of scale

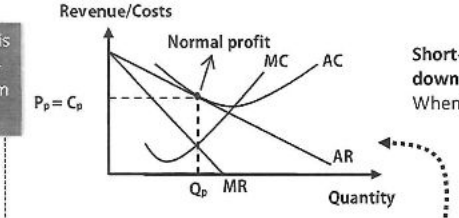
Minimum efficient scale is the point where the long-run average costs of a firm are at their lowest.

External economies of scale = decrease in the cost per unit of a firm when the market that the firm is in grows.
e.g.
- Relocation of supplier closer to the firm
- Investment in R&D
- Better infrastructure

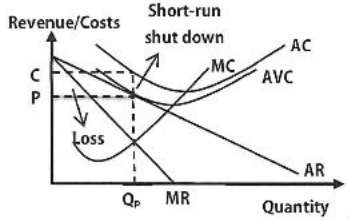
Internal economies of scale = decrease in the cost per unit of a firm when the firm itself grows.
e.g.
- **Risk-bearing economies** – diversification to reduce risk
- **Managerial economies** – employing experts to improve efficiency
- **Financial economies** – access to cheap credit
- **Marketing economies** – marketing cost spread over greater products
- **Technical economies** – funds to buy expensive equipment

Diseconomies of scale = increase in the cost per unit of a firm as it grows.
e.g.
- Large firm → workers may feel alienated/ demotivated → lower productivity
- Principal-agent problem (see 3.1)
- Poor communication between departments
- X-inefficiency

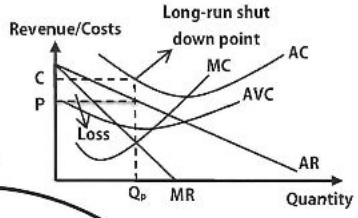
Profits

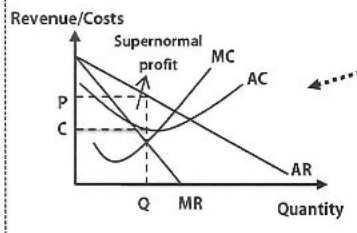


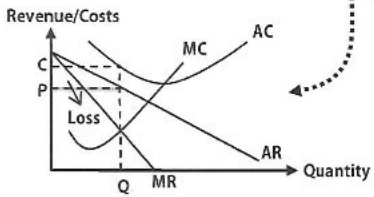
Short-run shut down point: When AVC > AR



Long-run shut down point: When AC > AR, even if AVC < AR







Normal profit = zero economic profit

Supernormal profit = total revenue > total costs (positive economic profit)

Loss = total revenue < total cost

Accounting profit = revenue – cost of producing the good

Economic profit = revenue – cost – opportunity cost of producing the good

Condition for profit maximisation: **MC = MR**

Efficiency

Allocative efficiency
- Resources are allocated fully and efficiently
- P = MC

Productive efficiency
- Producing output at the lowest unit cost
- MC = AC

Dynamic efficiency
- Decrease in long-run costs due to improvements (e.g. investing in R&D) in long-run production
- Allow SRAC to increase to benefit from decreasing LRAC

X-inefficiency
- Rising average costs/inefficiency due to lack of competition
- Firms don't lower costs, as they already have a big market share

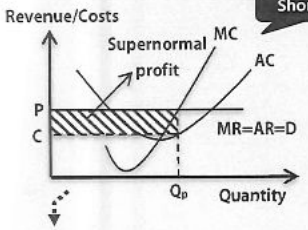
Theme 3 (3.4: Market structures)

Perfect competition

Characteristics:
- Large number of small firms
- Homogenous products
- No barriers to entry or exit
- Perfect information
- Firms are price takers

Horizontal AR

Example: Stock market, agricultural market

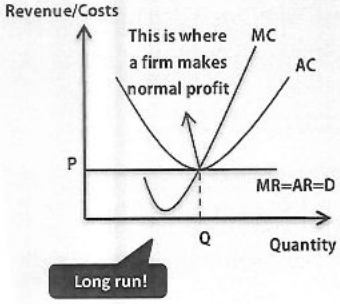


Firms can make supernormal profit/loss in the **short run** *but* not in the long run

Because of perfect information and no barriers to entry/exit

As new firms enter, prices fall and this eliminates any abnormal profit

Firms make normal profit in the **long run**. Long run equilibrium position is at AC = AR

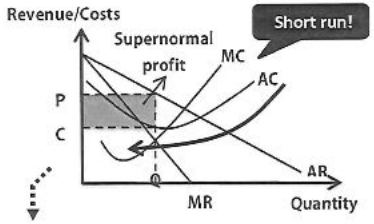


Monopolistic competition

Characteristics:
- Large number of small firms
- Similar products
- Low barriers to entry or exit
- Imperfect information
- Limited influence over prices

Downward-sloping AR and MR

Example: Newsagents

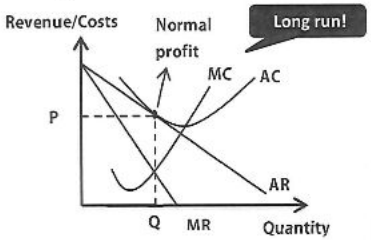


Firms can make supernormal profit/loss in the **short run** *but* not in the long run

Because of low barriers to entry/exit

As new firms enter, a firm's individual demand curve (AR) shifts to the left and eliminates any abnormal profit.

Firms make normal profit in the **long run**



Not allocatively or productively efficient

Oligopoly

Example: UK supermarket industry

Characteristics:
- Small number of big firms
- Product differentiation
- High barriers to entry or exit
- Imperfect information
- Considerable influence over prices

Downward-sloping AR and MR

Concentration ratio tells us the total market share that the largest firms hold.

Calculating the 4-firm concentration ratio for the UK supermarket industry is simply done by adding the top four firms' market shares (28% + 16% + 16% + 10%). This gives us a concentration ratio of 70%.

Oligopolistic firms are **interdependent** (i.e. they follow each other so they don't lose out), e.g. if one firm cuts its prices, others have to follow suit, otherwise consumers will stop coming to them.

Game theory explains the issues firms face because of their interdependence.

		Firm 1	
		High price	**Low price**
Firm 2	**High price**	Both earn £500m	Firm 1 earns £850m Firm 2 earns £100m
	Low price	Firm 1 earns £100m Firm 2 earns £850m	Both earn £300m

Can lead to price wars

Types of price competition:
- **Price wars**: firms keep lowering prices below their competitor's
- **Predatory pricing**: initially firms keep very low prices to stop new entrants
- **Limit pricing**: prices are so low that firms experience a short-run loss

Types of non-price competition:
- Offers (e.g. B-O-G-O-F)
- Branding and marketing
- Customer service

Thus, firms mostly choose to collude.

Overt collusion:
Dominant firms form a cartel. The cartel occupies monopoly power. Individual firms may agree to split profit or share technology, etc. but this is illegal.

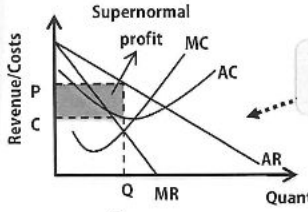
Tacit collusion:
Informal agreement – not legally binding. A price leader emerges – and others follow. This is also illegal.

Not allocatively or productively efficient

Monopoly

Natural monopolies occur when it is only feasible to have one supplier. This may be due to very high sunk costs. This means running such a business will remain unprofitable for a very long time. Thus, such monopolies tend to be subsidised. Natural monopolies can be seen in markets for gas, water, electricity, etc.

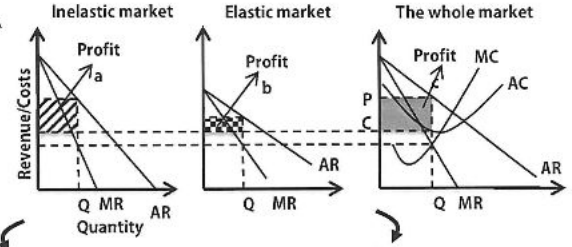
Characteristics:
- One firm
- Unique products
- High barriers to entry or exit
- Imperfect information
- Firm is a price maker



Downward-sloping AR and MR

Example: Local/village grocery store

3rd degree price discrimination



The combined profit (profit a + b), earned from the markets with inelastic and elastic demand, is more than the profit that a monopoly firm would have earned without price discrimination (profit c).

3 necessary conditions:
- Firm needs enough power (i.e. monopoly firm) to price discriminate.
- Firm needs to separate different markets, based on the different elasticities of demand for each group.
- Consumers should not be able to resell products.

	Advantages	Disadvantages
Firms	• Higher profits • Higher dividends for shareholders • Higher salaries for workers, potentially improving their productivity	• Costs of differentiating the market – e.g. market research, printing different price tags
Consumers	• Some groups benefit from lower prices	• Some groups have to pay the higher price

Advantages of monopolies	Disadvantages of monopolies
• High profits • May provide cheaper products • Cross-subsidisation (losses in one department can be financed by profits from another department) • Can invest in research and development • Provide goods that others may not be able to (e.g. natural monopoly)	• Higher prices for consumers • Low output for consumers • Monopolies are very inefficient • Barriers to entry for others • Resources may be wasted due to cross-subsidisation • Reduced consumer surplus due to price discrimination

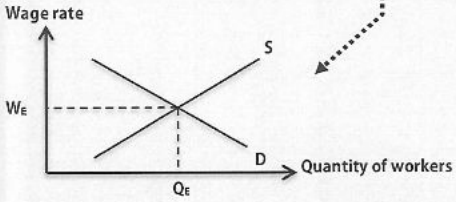
Theme 3 (3.5: Labour market)

Labour demand and supply

Demand for labour is an example of **derived demand**. This means that labour demand is 'derived' from the demand for goods and services.

Factors influencing supply of labour:
- Income tax
- Skills set
- Migration
- Trade union
- Perks of a job

Factors influencing demand for labour:
- Demand for goods/services
- Price of other factors of production
- Productivity of labour

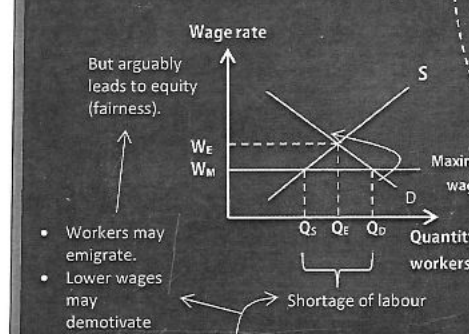


Government intervention in the labour markets

Public sector wage setting:
This is about changing the equilibrium wage rate to match changes in the public sector wage rate (set by the state).

Maximum wages

- Workers may emigrate.
- Lower wages may demotivate workers – leading to low productivity.
- May also cause inflation.
- Local/foreign firms may relocate abroad (job losses).

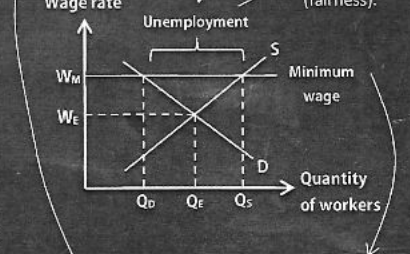


Max. wage is set below the equilibrium wage rate.

Max. wage is imposed to deny very high wages to workers.

Minimum wages

But arguably leads to equity (fairness).



Min. wage is set above the equilibrium wage rate.

Min. wage is imposed to avoid very low wages for workers.

Elasticities

Factors affecting elasticity of labour demand:
- Time period – demand elastic in short run
- Factor substitution – demand elastic if cheap and easy to substitute
- PED – demand elastic if PED high
- % of labour cost (out of total costs) – demand elastic if higher %

$$Elasticity\ of\ labour\ demand = \frac{\%\Delta\ quantity\ of\ labour\ demanded}{\%\Delta\ wage\ rate}$$

Significance:
- Elastic labour demand → rise in wage rate → fall in demand by a greater proportion. And vice versa.
- Inelastic labour demand → rise in wage rate → fall in demand by a smaller proportion. And vice versa.

$$Elasticity\ of\ labour\ supply = \frac{\%\Delta\ quantity\ of\ labour\ supplied}{\%\Delta\ wage\ rate}$$

Factors affecting elasticity of labour supply:
- Time period – supply elastic in long run
- Level of skill the job requires – supply elastic if low-skilled job

Significance:
- Elastic labour supply → rise in wage rate → increase supply by a greater proportion. And vice versa.
- Inelastic labour supply → rise in wage rate → increase supply by a smaller proportion. And vice versa.

Market failure in labour markets

Geographical immobility:
Workers unable to switch jobs due to physical hindrances, such as:
- Family ties
- High living costs
- Cultural differences

State solutions
- Reform housing market to increase supply of cheap houses
- Provide relocation subsidies to lower cost of moving

Occupational immobility:
Workers are unable to switch jobs due to the absence of skills. This tends to happen if an entire industry (e.g. agriculture) becomes obsolete.

State solutions
- Providing vocational training, e.g. IT skills
- Fund apprenticeships for the NEETs
- Subsidise private firms to provide training

Current issues in the labour market:

Youth unemployment:
- Problems in the short run (less tax revenue, high welfare spending).
- Problems in the long run, as an entire generation is deprived of gaining experience and developing skills → skills become redundant → remain unemployed in the future.

Increased retirement age:
- Good for the economy, as more taxes are collected and spending on pensions is delayed.

Skills shortage:
- Refers to a lack of skills in a particular industry, e.g. IT sector. This means a country is unable to develop that industry.

Theme 3 (3.6: Government intervention)

Government intervention

Since firms are able to acquire monopoly power following a merger, the state requires the firms to consult the Office of Fair Trading (OFT) and the Competition and Markets Authority (CMA) before entering a merger. They decide whether the merger should go ahead based on its potential impacts on consumers.

Government intervention to control mergers

Merger refers to the combining of two or more firms.

Government intervention to control monopolies

Monopoly refers to a single producer in the market.

- **Price regulation:**
  - Price caps are placed on the additional amount a monopoly can charge. This is done in 2 ways:
    - RPI – X: this is about taking the price level and deducting any gain in efficiency of factor 'X' from it.
    - RPI + K: this is about taking the price level and adding a factor 'K' to it to take account of additional spending on capital goods by the firm.
- **Profit regulation:**
  - Excess profit may be taxed.
- **Quality standards:**
  - Monitor quality of products. Penalise non-compliance.
- **Performance targets:**
  - Give firms targets to achieve. Penalise poor performance and reward good performance.

Promoting competition and *contestability*:

- **Promoting small businesses:**
  - Help reduce entry/exit barriers.
  - Subsidise new businesses.
- **Deregulation:**
  - Minimising role of state to allow market forces to function freely – leads to efficiency.
- **Competitive tendering for government contracts:**
  - Allow private sector to bid for government contracts, since they are more efficient than the state at running a business. Increased efficiency, lower costs and better quality will be achieved.
- **Privatisation:**
  - Private firms are more efficient and competitive.

Impact of government intervention on:

- **Prices:**
  - Successful intervention → increased competition → lower prices.
- **Profit:**
  - With respect to price caps, firms can reduce their costs to ensure supernormal profit.
  - Regulators may underestimate the efficiency gains → firms will continue to make supernormal profits.
- **Efficiency:**
  - Successful intervention → increased competition → greater efficiency.
  - However, due to asymmetric information, regulators may underestimate efficiency gains. Thus, firms may continue being inefficient.
- **Quality:**
  - Successful monitoring of quality → improved quality products.
- **Choice:**
  - Successful intervention → increased competition → more choice for consumers.
  - However, increased competition may mean lack of funds to invest in product development.

Limitations of government intervention:

- Government intervention will fail if it leads to **regulatory capture** – i.e. regulators may work to benefit the firms, rather than regulating them for the public.
- Government intervention may fail due to **asymmetric information** – i.e. regulators may find it hard to detect anti-competitive practices and/or to set targets/caps.

Protecting suppliers and employees:

- **Controlling monopsony power:**
  - Imposing price floors (i.e. a guaranteed minimum price from supplier)
  - Regulating quality/profits
  - Giving performance targets
- **Nationalisation:**
  - Private sector firms may give very low wages to their employees, since the focus is on cost cutting and profit maximisation
  - Allowing state ownership will ensure that employees are given a good pay package, since the focus is on providing a good service for the public and creating jobs

3.4.6: Monopsony

Characteristics:

- Single buyer
- High barriers to entry or exit
- Profit maximisers

Example: NHS

Advantages of monopsony	Disadvantages of monopsony
• Lower raw material prices → lower prices for consumers • Able to buy at very low prices → higher profit • Higher profits → high wages for workers	• Suppliers may stop making a profit → lead to unemployment • Supplier may have to reduce the quality of its products to maintain profits

3.4.7: Contestability

Characteristics:

- Low sunk costs
- Same access to technology
- No customer loyalty

Contestable markets are vulnerable to 'hit and run' firms.

- If firms make supernormal profits, new firms will want to enter the market
- Low barriers to entry will allow this
- But as market supply will increase, prices + profits will fall
- The newly joined firms will want to exit the market
- Low barriers to exit will allow this
- So existing (or incumbent) firms will act like a perfectly competitive firm to avoid making supernormal profits and attracting the notorious 'hit and run' firms
- Firms stop profit maximising
- Instead adopt P=AC

Types of barriers to entry/exit:

- High sunk costs, such as advertising costs
- Copyrights
- Pricing strategies
- Economies of scale

High (low) **sunk costs** → high (low) barriers to entry and exit → reduces (increases) market contestability.

4.1a International Economics

Globalisation

Impacts of globalisation:

Positive	Negative
• Increase in consumer choice • Low prices for consumers • Improved living standards • Access to cheap factor inputs for businesses • Firms can make higher profits due to access to a bigger market • Encourages specialisation → increased efficiency • Reduction in unemployment • Increased revenue from import tariffs for governments	• Increased environmental degradation/pollution • Increased interdependence → recession in one country spreads quickly • Access to cheap labour abroad → local unemployment will rise

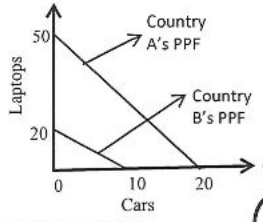
Characteristics of globalisation:
- Increased trade
- Increased interdependence
- More foreign direct investment (FDI) and transnational companies (TNCs)
- Easy access to factor inputs

Increased globalisation over the last 50 years:
- Better means of communication (e.g. internet) and transport
- World Trade Organisation (WTO) – reduction in trade barriers
- Creation of TNCs

Specialisation and trade

Specialisation is about a country producing goods in which it has a comparative advantage.

	Cars production	Laptops production
Country A	20	50
Country B	10	20



Country A has **absolute advantage** in the production of both goods (i.e. it can produce more of both goods *cheaply* using the same resources than country B).

Country A needs to forego 2.5 units of laptops to produce 1 car (20:50).
Country B needs to give up 2 units of laptops to produce 1 car (10:20).

Country B has **comparative advantage** in the production of cars (i.e. it can produce cars at a lower opportunity cost than country A).

Assumptions/limitations of the theory of comparative advantage:
- All countries produce identical goods
- Free movement of factor inputs
- Zero transportation costs
- Zero economies of scale
- Perfect information

Advantages of trade and specialisation	Disadvantages of trade and specialisation
• Greater choice for consumers • Cheaper goods for consumers • Greater efficiency • Firms experience economies of scale • Wider market → higher profits • Increased growth + higher standards of living	• Countries become interdependent • Terms of trade may worsen (i.e. they import higher-value goods and export low-value goods) • Over-reliance on the production of one good • Countries lacking comparative advantage will lose out • Unwanted goods can be 'dumped' in poorer countries at very low prices, which is bad for local firms • May widen the rich and poor gap • Bad for '**infant industries**'

Terms of trade (ToT)

ToT calculates the amount of imports that a country's exports can buy.

$$\text{ToT} = \frac{\text{index of export prices}}{\text{Index of import prices}} \times 100$$

Suppose that over the past 20 years the index of import prices has fallen by 5%, while the index of export prices has risen by 9%.
The terms of trade will be:

$$\text{ToT} = \frac{109}{95} \times 100 = 114.7$$

This suggests that the terms of trade have improved by 14.7%.

Impacts of improvement in ToT:

Advantages	Disadvantages
• Greater choice for consumers • Better living standards	• Loss of international competitiveness • Leads to a **current account** deficit • As demand for exports decreases, unemployment in the export industry increases

Factors that affect ToT:
- **Relative inflation rates**
  Higher inflation → exports costly → ToT improves
- **Relative productivity rates**
  Greater productivity → comparative advantage → ToT improves
- **Exchange rate (ER)**
  Higher ER → exports costly → ToT improves

Trade blocs + WTO

- The **World Trade Organisation (WTO)** promotes free trade by following a policy of **trade liberalisation**. It provides a platform for trade negotiations and settlement of any trade issues between member countries.
- Conflict between WTO and regional trade agreements → latter lead to trade diversion, which decreases trade elsewhere and undermines comparative advantage.

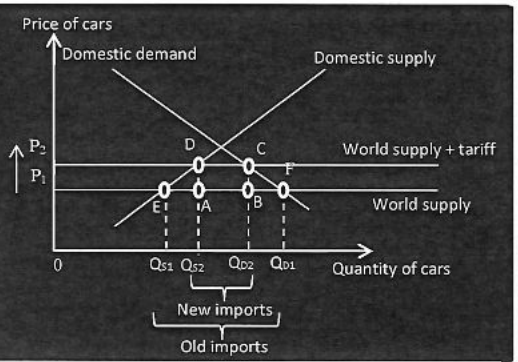
Regional trade agreements / monetary unions:

Advantages	Disadvantages
• No transaction costs • Greater price transparency • No need to account for ER fluctuations, which hurt countries' competitiveness • Attract FDI → good for growth	• Transition costs, e.g. **menu costs** • No control over monetary policy

Types of trade blocs:
1) **Free Trade Area (these can be bilateral or regional)**
   - Free movement of goods and services
   - Each member can set their own trade barriers for non-members
2) **Customs union**
   - Member countries have a joint trade policy for all non-members
3) **Common market**
   - Free movement of factor inputs
4) **Monetary Union**
   - Single currency – as in the **Eurozone**
   - Conditions necessary for success include:
     - Similar growth patterns and **business cycles** of member countries
     - Similar cultures to decrease barriers to free movement
     - Increase spending in adversely affected (from this move) areas

Restrictions on free trade

- Tariff increase on the price of imports → lower demand
- Revenue for government (ABCD)
- Domestic consumer surplus increased by P_1P_2DE
- Welfare loss (ADE + BCF)



Reasons for restrictions on free trade:
1) Protecting local industries:
   - Infant industries are new industries that need time to mature out
   - Sunset industries are firms in decline but they may be useful
   - Countries need to be self-sufficient in industries such as defence and energy
2) Preventing 'dumping' from very cheap imports
3) Protecting jobs
4) Less dependency
5) Correct current account deficit
6) Avoid competition
7) Retaliation

Types of trade barriers:
- Tariffs – tax on imports
- Quotas – limit on number of imports
- Subsidies – grants to local producers
- Non-tariff barriers – e.g. health and safety requirements

Impacts of trade barriers:

Advantages	Disadvantages
• Revenue for government from tariffs • Local firms make higher profits • Local jobs are protected	• Less choice for consumers • Higher prices for consumers • Lower living standards • Inequality

Trade blocs → Divert trade from old to new partners → Trade diversion
Trade blocs → Create new trade → Trade creation

Factors that influence it:
- **Comparative advantage**: poorer countries tend to export low-value goods, e.g. crops while richer countries tend to export high-value goods, e.g. cars
- **No. of emerging economies**: these are rich in cheap labour, which helps the export sector to grow
- **Growth of trading blocs and bilateral trade agreements**: these eliminate trade barriers
- **Changes in relative exchange rates**: these determine the ratio of imports to exports between 2 countries, e.g. pound depreciation will make UK exports cheaper abroad

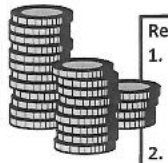
Pattern of trade

4.1b International Economics

Balance of payments (BOP)

Current account (C/A)
- Trade in goods/services → Exports minus imports
- Primary income → Inflow of income minus outflow of income
- Secondary income → Loans/grants received and/or given out by governments

Capital account
- Capital investment
- Financial investment
- Speculative capital flows



Significance of trade imbalances:
- As a negative trade balance increases, it becomes more and more difficult to finance. Hence, loans have to be taken out. This is because a negative current account implies a positive capital account.
- Government spending may fall significantly to repay those loans.
- Also, if exports outstrip imports, domestic consumers may be faced with limited choice. Trade imbalances also lead to massive currency fluctuations → affects global trade.

Causes of C/A deficit	Causes of C/A surplus
• High inflation rate → cheap imports • Relatively low labour productivity → increased average cost → cheap imports • Higher exchange rate → cheap imports • High domestic growth → increased demand for imports • Growth in large economies → increased demand for imports	• Protectionist measures decrease imports • Low inflation → cheap exports • Lower exchange rate → cheap exports • Low domestic growth → increased demand for exports • Relatively high labour productivity → low average cost → cheap exports

Reducing current account imbalances:
1. **Expenditure-reducing policies**
   Policies that reduce AD, e.g. increasing income tax → reduces disposable income → demand for imports decreases.
2. **Expenditure-switching policies**
   Policies that affect demand for imports, i.e. trade barriers, e.g. imposing tariff → imports become expensive → demand for imports falls.
3. **Supply-side policies**
   Policies that affect demand for exports, e.g. increasing spending on education → improves labour productivity → improves quality/quantity of exports → demand for exports rises.
4. **Doing nothing**
   Some of the policies described above have downsides, e.g. raising taxes will also affect domestic demand and imposing trade barriers is often met with retaliation. Thus, some countries may opt to do nothing.

Exchange rates (ER)

Value of one currency in terms of another

Value decreases = depreciation
Value increases = appreciation

Floating
Forces of demand and supply determine the value of the currency

Managed
Indirect government intervention, e.g. buying/selling currency, determines the value of currency

Fixed
The value of currency is manually pegged against another currency (or gold)

Value decrease = devaluation
Value increases = revaluation

Factors influencing the ER:
- **Relative interest rate**
  If relative interest rate is higher → people encouraged to save money in UK banks to get a higher return on their savings → demand for £ increases → £ appreciates.
- **Relative inflation rate**
  If relative inflation higher → exports appear more expensive → demand for UK exports fall → £ depreciates.
- **Speculation**
  If people **speculate** that the value of £ will fall, they will sell their £s for another currency with a higher value. As demand for £ decreases, it depreciates → self-fulfilling prophecy.
- **State of the economy**
  Economy improving → investors feel confident → demand for £ rises → £ appreciates.

Managing the ER:
- **Foreign currency transactions**
  To increase the currency value, central bank will buy domestic currency. This reduces supply of £ and increases its demand. Thus, £ appreciates.
- **Interest rates**
  To increase the currency value, central bank will raise the interest rate. This increases demand of £, as saving in UK banks reaps higher rewards. Thus, £ appreciates.

Effects of devaluation/depreciation:
- Makes exports more competitive → current account surplus
- However, if all countries devalue their currencies, then nobody gains from it

International competitiveness

Ability to sell domestic goods abroad

International competitiveness:

Benefits
• Creates jobs in the export industry • Export-led growth • Improves trade deficit
Costs
• Over-reliance on exports can become a problem if the world economy experiences recession → massive job losses

Measures of international competitiveness:
- **Relative unit labour costs**
  If labour in country A is more productive or gets lower wages than country B, then the former is said to be more internationally competitive (i.e. it can export more)
- **Relative export prices**
  If country A's export prices are lower than country B's, then the former can export more

Factors affecting international competitiveness:
1. **Relative unit labour costs**
2. **Relative level of regulation**
   If firms in a country face less regulation, then they are more competitive
3. **Relative inflation**
   Exports from a country with lower inflation compared to others appear cheaper
4. **Relative non-wage costs**
   If other factor inputs in a country are cheaper compared to another country, it will be able to produce goods cheaply → more exports

Impact of changes in the ER

Current account (C/A)
1. **The Marshall-Lerner condition** posits that depreciation only leads to a C/A improvement if $(PED_{exports} + PED_{imports} > 1)$.
2. **The J-curve** suggests changes in the ER have time lags. Initially C/A deteriorates because in the short-run exports and imports have inelastic demands. Later, as demands become more elastic, we see an improvement.

Growth and unemployment
ER depreciates → demand for exports rises → job creation → more consumer spending → more growth

Inflation
ER depreciates → imports appear more expensive, and if country is reliant on imports → inflation

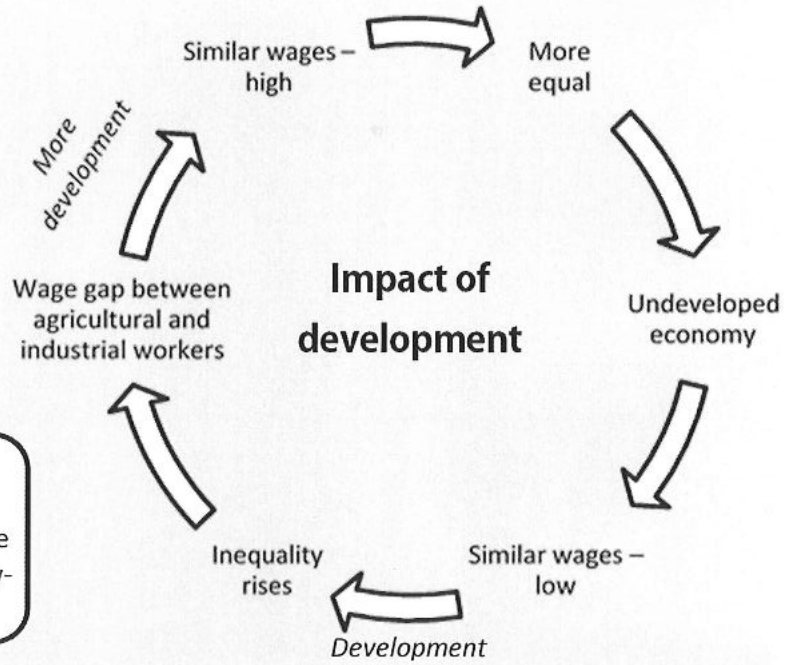
Foreign direct investment (FDI) flows
ER depreciates → domestic goods appear cheaper → more FDI flows

4.2 Poverty and Inequality

Causes of inequality:

- Regressive tax system → more equality
- Weak trade unions → more equality
- Unfair pension scheme → more equality
- Lack of social security → more equality
- Level of education
- Employment/inheritance laws, etc.

Capitalism and inequality:
Capitalism allows individuals to pursue their own goals. For firms this means profit maximisation. Thus, firms hire highly skilled labour, who demand high wages, while low-skilled workers earn much less. This creates inequality.



Absolute poverty refers to a situation where a person is denied basic needs over a long period of time (e.g. food, shelter and clothing). Measured by calculating the proportion of people living under some income threshold – around $2 a day.

Causes of changes in poverty:

- High growth → decreases absolute poverty due to creation of jobs
- High growth → increases average income → possible increase in relative poverty
- More FDI → more jobs → decreases absolute poverty
- More trade → more jobs → decreases absolute poverty
- Increased income tax → reduces relative poverty

Relative poverty occurs when a person can meet basic needs but earns considerably less than the country's average person.

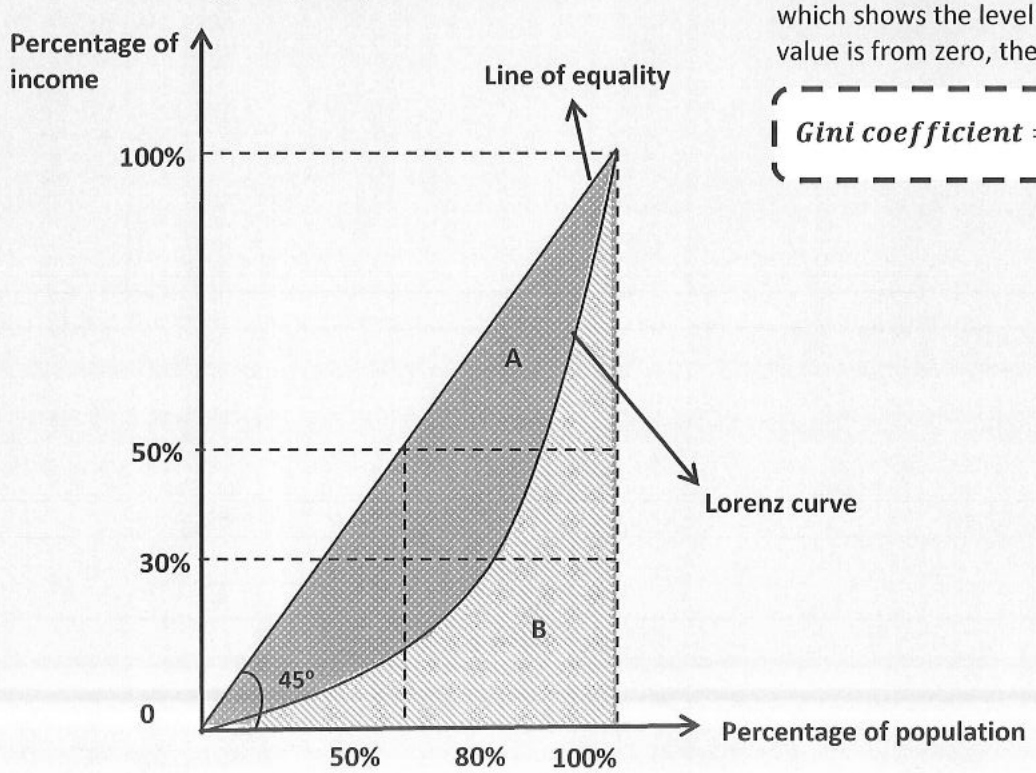
In Britain any person earning less than 60% of the median income is considered relatively poor.

Wealth inequality refers to the extent of the difference in the value of assets that people in a country own.

Income inequality is the extent of the difference in the amount people in a country earn.

Wealth = stock concept = asset, e.g. house
Income = flow concept = liquid money

Measuring inequality: the Lorenz curve



The Gini coefficient is a number between 0 and 1, which shows the level of inequality. The further the value is from zero, the greater the inequality.

$$Gini\ coefficient = \frac{area\ A}{areas\ A + B}$$

Graph shows income distribution of a country

↓

Total equality is when 30% of the population hold 30% of the total income.

↓

However, this graph shows that only 20% of the population holds half of total income

4.3 Emerging and Developing Economies

Measures of development

Human development index (HDI) is a composite measure of development.

$$HDI = \sqrt[3]{\text{education index} \times \text{life expectancy index} \times \text{income index}}$$

- **Education Index**: Average + expected years of schooling
- **Life expectancy index**: Life expectancy at birth
- **Income index**: GNI per person

Lorenz curve + Gini coefficient: Measure inequality

Head count ratio: Counts the number of poor people

Multidimensional poverty (MPI): Looks at income and things like crime, sanitation, water, etc.

Benefits of HDI	Drawbacks of HDI
• Multidimensional • Uses two measures for education	• Ignores inequality, as it uses averages • Missing factors, e.g. happiness

Number of people with access to clean water

Number of people with access to mobile phones

Privatisation:
- This is about selling state-owned firms to the private sector because the latter is more efficient.
- Efficiency translates into lower prices for consumers and higher profits for firms. This leads to increased consumer spending and investment, which results in higher growth.

Microfinance schemes:
- This is about providing small loans to poor people, who are unlikely to get loans from big banks that require the provision of collateral.
- Loans are given to groups so that repayment is guaranteed.
- This helps poor people escape poverty.

Floating exchange rate:
Countries tend to peg their currency value at a higher rate. Switching to a floating regime will demand that demand and supply will decide the value of the currency, which means the currency is likely to depreciate. Thus, imports become expensive while exports become cheap. Thus, local industries will flourish, leading to higher growth.

Removal of subsidies:
- Subsidies lead to inefficiency
- Removing subsidies increases competitiveness → increases productive/allocative efficiency
- Competitiveness means lower prices → more consumer spending

Foreign direct investment (FDI):
- Creates jobs → more consumer spending → higher AD → growth
- Countries can benefit from expertise of other nations
- Foreign firms may spend on local infrastructure

Trade liberalisation:
- This is about reducing trade barriers
- Free trade promotes growth by creating jobs
- Free trade leads to greater allocative efficiency
- But this could reduce growth if a country is flooded with cheap imports

Foreign currency gap:
Developing countries tend to face a shortage of foreign currency. This is mainly due to:
- Low export earnings
- Increase in global prices
- Using foreign currency on debt repayment

Harrod-Domar model:
- Model posits that savings level and the capital-output ratio are the main determinants of growth
- Developing countries have low levels of savings → lack of investment in capital → low growth

Volatility of commodity prices:
Inelastic demand and supply price instability → overall economic instability (high inflation, unemployment, etc.)

Factors influencing growth and development

Primary product dependency:
- Primary products = commodities (generally low-valued)
- Hence, countries dependent on primary products tend to remain poor
- Demand is income inelastic, which means rising incomes do not increase demand to the same extent
- Such countries export low-valued goods, while importing high-value goods, leading to falling terms of trade

Economic factors ✓

Infrastructure:
Poor infrastructure makes trading very costly → discourages FDI

Capital flight:
- This is about people saving their money in foreign banks, which are more secure and/or have a higher interest rate
- Thus, developing countries are deprived of savings → lack of investment in capital → low growth

Education:
Developing countries tend to lack the appropriate educational infrastructure

Demographic factors:
Developing countries tend to have large populations →increases dependency ratio →low income per head

Access to credit:
- Essential for doing business
- Countries that lack such facilities (e.g. microfinance) limit growth, as people are unable to escape poverty

Debt:
Developing countries tend to be drowned in debt. While their governments take loans to build infrastructure and create jobs for the current generation, it is often the future generation that has to pay back this money and becomes visibly worse off.

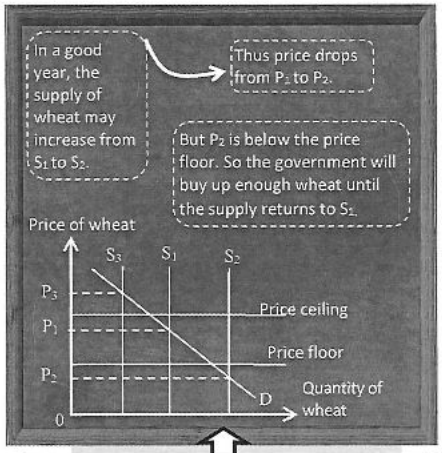
Absence of property rights:
Property rights give a sense of certainty, which is good for investment/borrowing and growth. However, developing countries lack some property rights.

Non-economic factors ×

Wars:
- Disrupt growth and development
- Children cannot attend schools
- Discourages FDI
- Brain drain

Poor governance:
This leads to an inefficient resource allocation, as resources are used to produce goods/services that are popular

Corruption:
Corruption leads to an inefficient resource allocation



Buffer stock schemes:
- Commodities face price volatility, which threatens farmers' incomes.
- Under this scheme the government sets upper and lower limits of prices. If prices go beyond these limits the government intervenes to either buy up excess goods or release more stock.
- However, storing perishable items is costly and difficult.

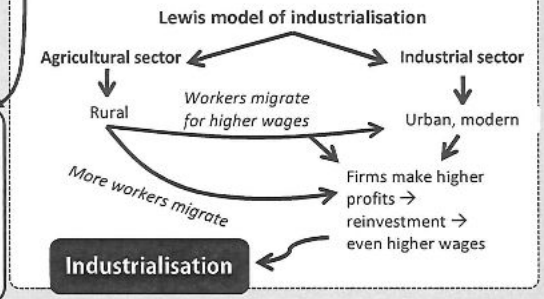
Infrastructure development:
- This reduces the firms costs and time lags
- Makes it easier to start a business
- Improving means of communication is also useful, as it becomes easier to connect and expand your market

Managed exchange rate:
- This means that, although the exchange rate is not fixed, the government can intervene indirectly, e.g. by changing interest rates

Strategies influencing growth and development

Market orientated strategies

Market mechanism of demand and supply affect growth and development



Other strategies

Fairtrade schemes:
- Developed countries exercise monopsony power. Thus, poor countries get unfair prices for their exports
- Fair trade ensures farmers get a fair price
- But the need for middlemen eliminate some benefit to the farmer

Tourism:
- Developing tourism can lead to high growth
- Need to improve infrastructure, facilities and marketing
- Will create many jobs
- Demand for currency will rise → increase foreign reserve
- But it can lead to environmental degradation

Development of primary products:
Countries rich in resources should develop their primary industries, especially if they are high-valued goods and/or the country has a comparative advantage

Interventionist strategies

Government intervention affects growth and development

NGOs: Privately run, not-for-profit organisations, which range in size and can operate at any level. Mainly concerned with community-based development

World Bank: Gives long-term grants/loans (humanitarian aid to developmental loans) to countries

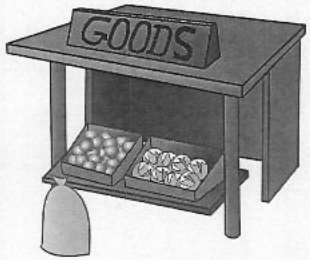
International Monetary Fund (IMF): Gives short-term grants/loans to countries, mainly to maintain stability, improve trade deficit, etc.

Protectionism:
- This is about placing trade barriers
- This protects local firms from foreign competition
- But a country may face retaliation, which will harm its exports
- Also increases inefficiency

Human capital:
- Need to invest in education
- Improved human capital improves a country's productivity. This will lower average costs, which will make domestic goods more competitive internationally. As a result, exports will increase, leading to higher growth
- But this is a long-term solution

4.4 The Financial Sector

Role of financial markets

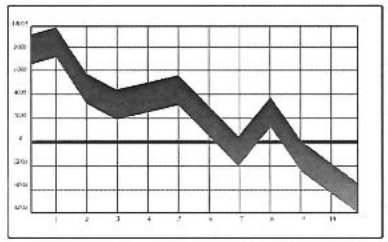


The financial market is a market where people buy and sell commodities, bonds and equities.

Financial markets come in three main forms:
1. money market
2. capital market
3. foreign exchange market

- Allow people to save their money, so others can borrow while the savers benefit from interest payments.
- Provide funds to those who want to invest. People's savings are used to lend money to others, and the banks facilitate this channelling of funds.
- People can also borrow money to buy certain goods and services, e.g. property.
- Assist in the buying and selling of currency. Currencies are often bought in what is known as the forward market. Currency can be bought in the future at a rate decided today for that future sale. This protects buyers and sellers from exchange rate instability.
- Provide market for equities (i.e. shares and bonds). The stock market is where shares can be bought or sold to raise capital for firms. Similarly, government bonds can be sold to raise funds for financing debts.

Market failure in the financial sector



Asymmetric information:
- Borrowers may know more than the lenders.
- For example, they know better if they can repay any loans.
- Lenders may end up giving loans to borrowers who are unable to pay (adverse selection): this will negatively affect the entire economy.

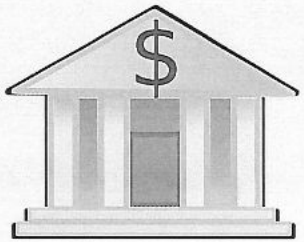
Externalities:
- If financial markets see excessive risky practices, this can significantly cost the economy.
- For example, every taxpayer had to pay for the financial losses in the aftermath of the Global Financial Crash.

Moral hazard:
- If people/institutions are insured against losses, they are likely to indulge in risky behaviour.
- So banks tend to feel they can take excessive risks, since 'they are too big to fail'.
- Following the 2008 recession, the taxpayers bailed out banks.

Speculation and market bubbles:
- Excessive lending can create 'market bubbles'.
- This means that the value of assets rises artificially, due to inflated expectations (speculation).
- However, adverse selection may lead to expectations of a fall in the asset's value.
- Thus, people will try to sell off their assets, which will increase the supply in the market, lowering the price.
- This leads to a negative wealth effect, which causes AD to fall.

Market rigging:
- This involves the illegal manipulation of something (generally for personal benefit).
- Market rigging can take place while setting interest rates or the exchange rate.
- Banks can get confidential information about their borrowers and are in a position to place their orders to benefit from the manipulated changes in the exchange rate.

Roles of central banks



Central banks are the main financial institutions that ensure the smooth running of the monetary system. They do so by setting the interest rate and maintaining the level of money supply.

Implementation of monetary policy:
Central banks decide on the monetary policy, i.e. changing the interest rate or the money supply.

Banker to the government:
Central banks are the government's commercial bank. They lend to the government.

Banker to other banks:
Central banks act as the 'lender of last resort' when commercial banks suffer from a liquidity crisis.

Regulation of the banking sector
Central banks can also regulate the commercial banks. For example, the latter may be asked to maintain a certain amount as their 'reserve' in order to cope with any liquidity crisis.

4.5 Role of the State in the Macroeconomy

Public expenditure

Capital expenditure: Government spending on capital for long-term development

Current expenditure: Government spending on everyday expenses, e.g. public sector wages

Transfer payments: Government spending on the welfare system

Factors affecting the size and composition of public expenditure:

- **Changes in demographics**: different age structures have different needs. The UK has an ageing population, hence the government spends more on health care and pensions
- **Financial crisis**: following a crisis, government aims to provide more jobs as unemployment rises
- **Changes in income**: when incomes rise, welfare spending tends to decrease
- **Changes in expectations**: an expectation of a baby boom would lead to an increase in the spending on education and health care

Impacts of public expenditure:

- **Growth**: high level of public expenditure → job creation → increased consumer spending → increased growth. (Note: transfer payments will not increase growth rates.)
- **Living standards**: transfer payments improve living standards, as nobody lives in absolute poverty. However, this may mean high levels of taxation, which lower the living standards of taxpayers.
- **Crowding out**: increased government spending may require borrowing from the private sector. This causes the private sector to shrink (i.e. crowd out), as interest rates rise, leading to decreased investment.
- **Taxation**: increased public spending → higher taxes.
- **Equality**: transfer payments may improve inequality. However, capital spending initially increases inequality (as transfer payments decrease) but in the long run improves equality as the country develops.

Taxation

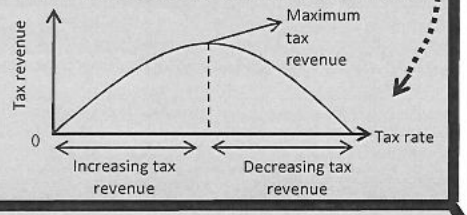
Progressive taxes: Taxes increase as incomes rise

Proportional taxes: Tax rates are fixed: they do not change with income

Regressive taxes: Taxes decrease as incomes rise

Effect of changes in tax rates on other variables:

- **Incentives to work**: progressive taxes can discourage workers from improving productivity. This will negatively affect the entire economy. This could lead to the creation of tax exiles (i.e. people moving to countries with lower taxes), which would result in a brain drain.
- **Tax revenues**: the Laffer curve suggests that as tax rates increase, tax revenue at first increases and thereafter decreases. This may occur due to practices of tax avoidance and evasion, as well as disincentive effects.
- **Income distribution**: progressive taxes help redistribute income, while regressive taxes increase inequality.
- **Real output and employment**: taxes reduce disposable incomes, which leads to a fall in real output. This causes unemployment.
- **Price level**: direct taxes decrease inflation as spending goes down. However, indirect taxes increase inflation by directly increasing the prices of goods and services.
- **Trade balance**: increase in direct taxes → reduction in disposable income → less AD → fall in demand for imports → improve trade deficit.
- **FDI flows**: high taxes discourage FDI, as profits will shrink.



Public sector finances

Factors affecting the size of the fiscal deficit:

- **Politics**: different parties have different priorities. Governments that focus on contractionary fiscal policy (i.e. high taxes and low spending) will reduce fiscal deficit
- **State of the economy**: if the economy is doing well → low unemployment → more tax revenue and less welfare spending → fiscal deficit will shrink
- **Housing market**: if the housing market is doing well (i.e. prices are rising), government can earn more revenue from taxes on houses (stamp duty)
- **Unplanned events**: major incidents can massively impact fiscal policy

(Note: the size of fiscal deficit directly affects the size of national debts. The bigger the fiscal deficit, the bigger the national debt)

Fiscal deficit: When government spending > tax revenues

National debt: Accumulated government borrowing over a long period

Structural deficit: Permanent/long-term fiscal deficit (also exists during times of economic boom)

Cyclical deficit: Temporary fiscal deficit that occurs during a recession

Automatic stabilisers: As economy goes through changes, government spending and taxation naturally vary

Discretionary fiscal policy: Artificial manipulation of government spending and taxation to help the country grow

Impacts of deficits and debts:

- **Debt servicing**: the bigger the debt, the more will have to be spent on debt repayments.
- **Inflation**: big fiscal deficit → contractionary fiscal policy → less disposable income → low consumer spending and possible increased unemployment → lower inflation.
- **Interest rates**: the bigger the debt, the higher the rate of interest for additional loans. This is because such countries are at the constant risk of defaulting.
- **FDI**: high levels of debt discourage FDI flows, as investors fear potential political and economic instability.
- **Intergenerational equity**: this is about how our actions will affect future generations. So increased borrowing today will mean higher taxes and less spending for future generations, who will have to repay our loans.
- **Credit rating**: as debts become bigger, it becomes hard for countries to repay their loans. This results in the lowering of credit ratings, which measures the ability of a country to repay its loans.

Macroeconomic policies in a global context

Effects of external shocks to the global economy:

- E.g. a rise in the price of a commodity like oil will lead to cost-push inflation. Deflationary policies, such as raising taxes, may not work as oil is a necessity – and will be consumed regardless of the level of income tax.
- The Global Financial Crisis began in USA but soon spread across the globe due to ever-increasing globalisation. Thus, many countries suffered from massive unemployment and economic slowdown.

External shocks may result from sudden changes in global economics or politics.

Measures to control transnational companies (TNCs):

- Governments of recipient countries can make TNCs work in their country conditional on using local factor inputs. This would help create more jobs, leading to higher living standards.
- However, most TNCs are 'footloose' (i.e. they can easily move to different countries), which makes regulating them hard. Another concern for developing countries is the TNCs' use of transfer pricing, which enables them to lower profits where taxes are high. All this makes it hard to regulate TNCs.

Quantity theory of money (Fisher equation):

$$MV = PT$$

Where,
M = money supply
V = velocity of circulation (i.e. number of times the money supply has been used)
P = price level
T = total number of transactions made in a year

Issues of implementing policies:

- **Inaccurate information**: incorrect data on GDP, unemployment, etc. make it hard to adopt the right policies.
- **Risk and uncertainties**: human behaviour is hard to predict, hence, the desired result of a policy can never be guaranteed.
- **Inability to control external shocks:** as countries and markets become interdependent, events in one economy can affect others too. Thus, it is hard to implement the right policies.

Use of macroeconomic policies:

- Up until the recession of 2008 fiscal policy was not considered a popular policy tool because the monetarists argued that it was ineffective and that the automatic stabilisers play their role organically.
- A deflationary **fiscal policy** (high taxes and less spending) reduces the fiscal deficit but does not lead to growth as disposable incomes and, thus, consumer spending fall. This coupled with spending cuts on services like education and health care, significantly lower living standards. Inflationary fiscal policy has the opposite effect.
- **Supply-side policies** aim to improve a country's international competitiveness by improving productivity and increasing supply, e.g. improving the education system will create a skilled workforce for the future.
- **Direct controls**, which involve controlling prices of factor inputs and/or goods and services so that they always remain within a designated range, also help reduce poverty and inequality, e.g. the minimum wage guarantees a certain level of income to all so that no one falls into absolute poverty.
- Monetarists believe that only **monetary policy** can stabilise inflation. This can be done by:
  - Raising the interest rate, as it reduces borrowing (i.e. investment). Investment is a component of AD – thus, AD reduces with it, lowering the inflation rate. Similarly, this would make saving more rewarding, hence consumer spending, also a component of AD, will go down – further reducing inflation.
  - Reducing money supply. The Quantity Theory of Money posits that the money supply determines the price level. Money supply can be increased by selling government bonds, amongst other things. With less money out there, consumer spending decreases, decreasing inflation. However, Keynesians argue that money supply has little effect on inflation – suggesting that increasing money supply will not increase inflation if the 'velocity of circulation' is low. Many argue this will only hold for small increases in money supply.