Objectives of government economic policy

The main macroeconomic objectives

The main macroeconomic objectives are the aims or goals of government policy

- **Economic growth** (% change in real GDP)
- **Price stability:** control of cost and price inflation (e.g. via an inflation target)
- High employment rate, **low unemployment,** reduced inactivity in the labour market
- Sustainable overseas trade balance in goods and services/**Balance of Payments current account in equilibrium**
- Improved national well-being/**higher standard of living**

The government can also set other goals such as net zero, targets for reducing child poverty, new house building etc.

Other macroeconomic objectives

- **Environmental protection**: growth needs to be sustainable
- Improved **productivity**
- Improved **international competitiveness**
- Creating a good economic environment for **investment**
- Improved **public services,** e.g. healthcare & education
- **Sustainable government finances** (both borrowing and debt); balancing the budget
- More equitable final distribution of income and wealth - **greater income equality**
- Target for **reducing poverty,** especially child poverty

Changing prioritisation of objectives

Objectives can change over time depending on the economic (& political) context

- In a cost-of-living crisis, achieving price stability may become more important than growth
- In a recession, achieving economic recovery can be highest priority
- Climate change is pushing environment protection up the list of priorities

Macroeconomic conflicts or trade-offs

It can be difficult for all macroeconomic objectives to be met at the same time – there are **trade-offs**, improving one may worsen another:

- Faster growth can fuel demand-pull inflation and widen a deficit on the current account; income inequality may rise if the growth is not inclusive
- Low unemployment can increase real wages and cause cost-push inflation
- Polices to reduce inflation can slow growth and cause unemployment
- Reducing government borrowing and the national debt can slow growth and cause living standards to stagnate

Using index numbers

Index numbers are a useful way of expressing economic data over time series and comparing/contrasting information.

An index number is a figure reflecting price or quantity compared with a base value. The base value always has an index number of 100.

The index number is then expressed as 100 times the ratio to the base value.

Note that index numbers have no units

Examples: Consumer Price Index, Sterling effective exchange rate index, Big Mac index, Human Development Index

Index number calculations

Year 2020 = 100	Economic variable
2019	95
2020	100
2021	105
2022	110

2020 is the base year - the index is set at 100

To calculate the rate of change in the economic variable, find the percentage change = (new-old)/old x 100

e.g The annual % change between 2021 and 2022 is:

(110-105)/105 x100 = + 4.76%

Macroeconomic indicators

Macroeconomic indicators: measures of growth

Gross domestic product (GDP): measures the value of real output of the economy over a period of time; a rise in GDP indicates economic growth
Nominal GDP: the monetary value of all goods and services produced in the economy (GDP at current prices)
Real GDP: the nominal value of GDP ***adjusted for inflation*** (GDP at constant prices)
Real GDP per capita: national income per person often used a proxy measure for the standard of living
Value v volume: the value of goods and services shows what they are worth; the volume shows the number that are produced.

Macroeconomic indicators: inflation

The 'headline' rate of inflation is **the annual % change in the Consumer Price Index.** The CPI tracks changes in the ***prices of a basket of goods and services*** purchased by an average household. It is expressed as an index number.
RPI – retail price index - the basket of goods/services includes some items not in the CPI, such as council tax & mortgage interest payments; it is often used to calculate increases in welfare benefits, pensions, index-linked bonds and wage negotiations; in a period of rising interest rates it typically gives a higher rate of inflation than the CPI.

Macroeconomic indicators: unemployment

Labour Force Survey - This survey asks 60-70,000 UK households to self-classify as being employed, unemployed or economically inactive.
Claimant Count - This counts the total number of recipients of Job Seeker's Allowance (JSA) added to those looking for work who claim Universal Credit (UC).

Macroeconomic indicators: productivity

Productivity is a measure of supply-side efficiency
Total factor productivity: output per unit of input
Labour productivity: output per hour, output per job or output per worker employed

Macroeconomic indicators: balance of payments on the current account

Balance of Payments: a record of all the flows of money between the residents of one country and the rest of the world
Balance of payments on the current account: the section of the balance of payments that records international trade in goods, services, primary income & secondary income
Balance of trade in goods and services: the *value* of exports of goods & services minus the *value* of imports of goods and services. If this is positive, there is a **trade surplus**, if it is negative there is a **trade deficit**

Other macroeconomic indicators & measures

Public finances: measured by looking at the budget deficit (government borrowing when government spending exceeds tax revenue) and the National Debt as a % of GDP; The Budget and Autumn Statement reveal the government's fiscal plans
Income inequality: measured by the Gini coefficient
International competitiveness: measured by global competitiveness indices, e.g. World Economic Forum

Comparing macroeconomic indicators across countries

When comparing macroeconomic data across countries, it is important to remember: To check you are comparing **like-for-like**; to think about what exchange rate is used or if data uses purchasing power parity (PPP); to think about **how the data was collected** and its likely **accuracy** (data collection may be more robust in some countries compared to others).

The circular flow of income

Circular flow of income

National income: the monetary value of the flow of output produced in an economy over a period time

Households: own the productive resources of the nation, which they exchange for rent, wages, interest and profit; they use the income earnt to buy goods and services

Firms: hire the resources as inputs to use them to produce output; they sell the goods and services produced to households

National income can be measured as any point as income flows round the economy so **national income = national expenditure = national output**

Explaining the circular flow model

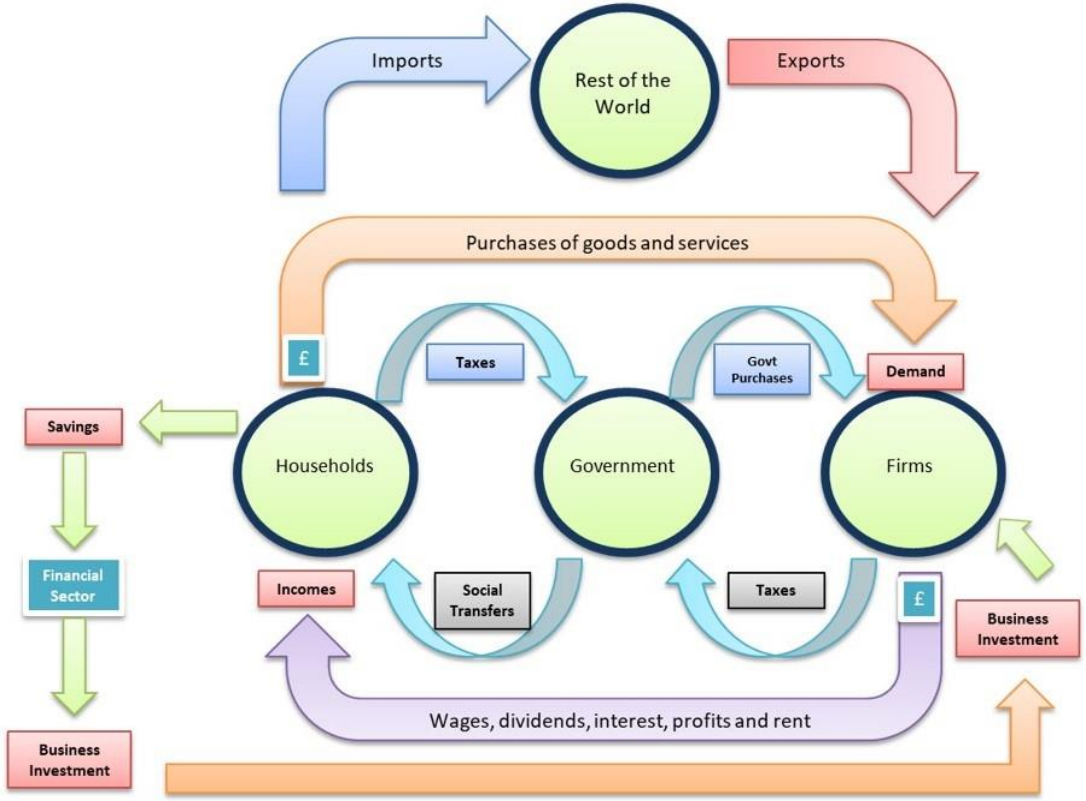
Households earn income by selling their factors of production to firms and use it to purchase goods and services produced by the firms, which use up these resources.

Financial sector: not all income is spent; some is saved; the financial sector lends income saved to businesses to invest

Government sector: some income is taken out of the flow as tax, but the government also spends which injects income into the flow

Foreign sector: some income flows out to other countries when imports are purchased; exports add to the flow of income because income comes in from outside the economy

Circular flow model



Injections and withdrawals

Injections add money to the circular flow of income, which can lead to economic growth; they are investment I, government consumption G and exports X

Withdrawals remove money from the circular flow of income, which can lead to economic contraction; they are savings S, taxation T and imports M

National income equilibrium: planned injections = planned withdrawals

If injections exceed withdrawals, national income rises (economic growth)

If withdrawals exceed injections, national income falls (economic contraction)

Wealth and income

Wealth is a <u>stock concept</u> – it is the value of assets held; assets includes income saved, vales of shares & property owned, money held in pension funds

Income is a <u>flow of money</u> going to factors of production – it includes wages & salaries, rent, profits, people receiving benefits, interest paid

Income and wealth are NOT the same, but are related; people with higher incomes can build up their wealth; wealth can generate an extra source of income. Wealth is more unevenly distributed than income.

Aggregate demand AD

The Aggregate Demand Curve

AD curve: shows the relationship between the level of real planned expenditure and the general price level in an economy

AD = C + I + G + X – M

A fall in the general price level (PL) causes an extension of AD (movement along the AD curve, higher real Y).

A rise in the PL causes a contraction of AD (movement along AD curve, lower real Y).

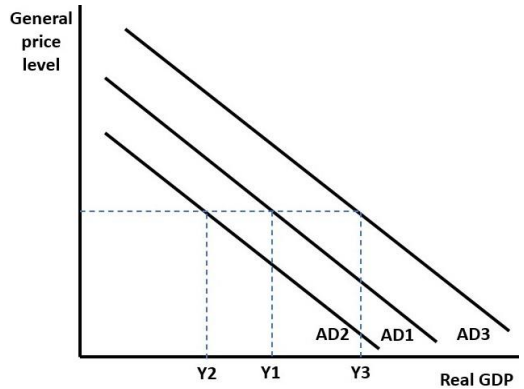
The relationship is INVERSE because:

- **Real income effect:** As the price level falls, the real value of income rises, consumers can buy more; higher consumption C (the real money balance effect).
- **Balance of trade effect:** A fall in the relative price of level of a country could make foreign-produced goods more expensive, causing a rise in exports, X and a fall in imports, M.
- **Interest rate effect:** If price inflation is low and this might lead to a reduction in interest rates and there is less incentive to save and consumption C rises; the exchange rate could also depreciate and improve net exports (X-M).

AD and Shifts in AD

AD slopes downwards to the right; as AD1 curve

- Any change that causes AD to increase other than a change in the PL shifts AD to the right from AD1 to AD3
- Any change that causes AD to decrease other than a change in the PL shifts AD to the left from AD1 to AD2



Factors that shift the AD curve

Changes in real income and employment: When the economy is growing and inflation is stable, people's real incomes increase as does their job security. This gives people the disposable income and confidence to spend more. Consumption C increases, boosting AD. Higher C may lead to more investment I as businesses expand to meet the higher consumer demand.

Changes in consumer & business confidence (Keynes' 'animal spirits'): When there is high consumer and business confidence in the economy, both consumption C and investment I demand grow. Confidence is affected by a multitude of factors – economic news, market sentiment, policy changes etc.

Changes in household wealth – the 'wealth effect': When assets prices increase, then people begin to feel wealthier. Homeowners see similar houses to theirs increasing in value; shareholders see the value of their holding go up. This gives households more confidence to spend rather than save and encourages them to take out more loans, secured against their higher valued assets. C increases adding to AD. *(Negative wealth effect* does the opposite).

Changes in monetary policy: Lower interest rates make saving less attractive and borrowing cheaper, so consumers are more likely to spend; mortgage holders may also find their mortgage interest payments fall giving them more spending income; businesses are more likely to invest because borrowing costs are lower and saving any retained profit gives a lower return.

Changes in fiscal policy: The government can increase its own consumption G and/or public investment I. It can fund this via more government borrowing. Cutting income tax can boost C; cutting indirect taxes such as VAT can also increase disposable incomes and cause consumer confidence to rise; cutting corporation tax may encourage more I. All these can cause AD to increase.

Changes in the exchange rate and in the global economy: a depreciation reduces export prices and increases import prices so net exports rise; global growth can also boost net exports (X-M)

NB: reverse the chains of reasoning for all factors for decreasing AD

Aggregate demand – Consumption C; Savings S

Characteristics of AD

$$AD = C + I + G + X - M$$

Consumption C

Consumer spending on real output; spending on non-durables, durables & services; the largest component of AD, usually about 60%.

Capital Investment I

Spending on capital goods; spending on plant, equipment etc. that help produce more consumer goods in future; investment demand comes from both private and public sector.

Government consumption G

Spending by the government on its current day-to-day provision of public services such as healthcare, education, defence and transport. Does not include transfer payments (pensions and welfare benefits).

Net trade (export demand X - import demand M)

Exports X are an inflow of demand from citizens abroad (inflow)
Imports M is where some demand is for foreign-produced goods (outflow)

Factors influencing consumption C

Income: especially real disposable income; typically, more income means more consumer spending.

Wealth effect: an increase in the value of assets (property, shares etc) encourages more consumer spending through a positive wealth effect.

Consumer confidence: high confidence leads to more consumer spending.

Job security: low unemployment can make people less worried they may lose their job and so they spend more.

Interest rates: affect the cost of borrowing; spending on big ticket items such as houses, cars and white goods are likely to rise when interest rates fall.

Demography: a growing population (e.g. immigration) spending more

(And vice versa for factors causing a fall in consumption).

Benefits and costs of rising consumption

- Rising AD
- Faster short run economic growth
- Less spare capacity
- Falling unemployment
- Gives businesses confidence to invest
- Inflation pressure
- Current account deficit (more imports sucked in)
- Unbalanced growth
- More household debt
- Could be bad for environment

Saving

Saving (S) is NOT a component of AD, but disposable income that is not spent is saved.

$$\text{Savings ratio} = \frac{\text{Total household savings}}{\text{Total household disposable income}}$$

Importance of saving for an economy

- Savings flow into financial markets and businesses can access these funds to invest
- Savings provide households with a cushion of financial stability and funds for the government when it needs to borrow.

Paradox of Thrift

The Keynesian **paradox of thrift** is an economic theory which states that an increase in saving can lead to a decrease in economic activity and, ironically, a decrease in overall saving.

Related concepts

Average propensity to consume (APC)= C/Y
Marginal propensity to consume (MPC) = **change** in C/**change** in Y
Average propensity to save (APS) = S/Y
Marginal propensity to save (MPS) = **change** in S/**change** in Y
where Y = national income, C = consumption, S = saving

Aggregate demand – Investment I

Investment

Investment: addition to capital stock of the economy e.g. factories, machines, offices, equipment, stocks of materials used to produce other goods

Depreciation (capital consumption): value of the capital stock that falls in value over time as it wears out or is used up

Gross investment: investment before depreciation

Net investment: gross investment – depreciation

NB Capital investment is not the same as financial investment

Private sector investment: investment undertaken by businesses in the private sector

Public sector investment: investment by the government often in infrastructure (transport, telecommunications, energy networks, new schools, new hospitals)

Foreign direct investment (FDI): capital investment made by a company based in one country in another country e.g. Nissan in Sunderland

Why do firms invest?

To expand their business and increase their output **capacity**

To reduce average **costs** of production due to economies of scale

To increase **efficiency and productivity** through innovation and technological progress

To meet an increase in market demand and increase **market share**

To expand a firm's **product range**

To **replace** depreciated capital

To increase **competitiveness** at home and abroad

Impact of investment on AD & AS

Investment adds to **aggregate demand AD** causing short run growth, lower unemployment

Successful investment also adds to the economy's capacity, **long run aggregate supply LRAS**; long run non-inflationary growth

Factors influencing investment

Interest rate: lower interest rate reduces the cost of borrowing and boosts the attractiveness of investing relative to retaining profit; investment will increase

Availability of finance: if a firm is borrowing funds to invest, it has to access them from financial institutions; if they have funds, it will be easier to borrow

Demand for the final product: if the demand for a firm's output increases, a firm has a greater incentive to expand to meet the demand, driven by potential for more profit; **accelerator process** = how changes in the **rate of growth of output** or income influence the rate of investment in new capital goods.

Business confidence: if business are confident about their future sales then they are more likely to invest

Corporate taxes: if taxes on companies e.g. corporation tax or business rates, fall, there is more retained profit to use for investment

Business regulation: a reduction in red tape and bureaucracy for businesses can incentivise more investment

Technological change: businesses will invest in new technologies/innovations to ensure they do not lag behind their competitors

(And vice versa for factors causing a fall in investment)

How investment influences the macroeconomy

- Creates extra demand in investment goods industries
- Injects money into the circular flow of income (multiplier effect)
- Boosts both short run and long run economic growth
- New capital boosts productivity and increases the capacity to supply
- Improves a country's competitiveness, improving the trade balance
- Improves the economy's infrastructure to make it more efficient
- Can help create new jobs (though some may be lost to automation/AI)
- Can help reduce inflation pressure

Aggregate demand – government consumption G and net trade X-M

Government consumption G

Government consumption: the day-to-day running costs of government e.g. wages to public sector workers, energy & rent bills for government offices, schools and hospitals etc..; also known as **current spending** by the government (*NB: Public sector **capital spending** belongs in Investment I)*
It does not include **transfer payments** (e.g. government spending on welfare benefits or pensions – spending on these is not new income but a transfer of income from taxpayers to other groups)
Central government: government run at Westminster
Local government: local councils and county councils, city mayors

Role of government spending

Changing government spending is a part of **FISCAL policy**

- Can be used to change the level of AD (with fiscal multiplier)
- Can be used to provide public and merit goods
- Can be used to correct market failures, e.g. positive consumption externalities
- Can be used to influence economic regions., e.g. 'levelling up'
- Can be used to achieve greater equity in society by providing public services, including universal access to healthcare and education

Decisions about how much the government spends in the economy are often dependent on the government's economic and political goals

Fiscal policy terms

Budget deficit: government spending exceeds tax revenue G>T; government borrows to fund its spending
Budget surplus: government spending is less than tax revenue G<T; government can pay back some of its debt
Balanced budget: government spending equals tax revenue G=T
Fiscal multiplier: estimates the final change in real national income (GDP) that results from an initial change in government spending plans.

Government spending and the trade cycle

In an economic **downturn/recession**, government spending increases on welfare-benefits and support for businesses – this is **cyclical government spending;** the opposite occurs in a **growth phase.**
The government can also choose to make **discretionary** changes to its spending, unrelated to the economic cycle, e.g. in the Budget.

Net trade X-M

Net trade X-M: net export demand is the **value** of exports less the **value** of imports
Trade surplus: net export demand is positive and adds to AD
Trade deficit: net export demand is negative and reduces AD
Trade balance equilibrium: value of exports X equal the value of imports M, net export demand is neutral and AD does not change

Factors influencing net trade

- **Real income:** if incomes are increasing at home, this can suck in imports reducing X-M; if incomes abroad are increasing, this may increase exports, increasing X-M
- **Exchange rate:** a depreciation makes imports more expensive and exports cheaper, which would increase X-M (unless there is a low response i.e. price elasticity of demand for exports or imports is low)
- **State of global economy:** strong global growth may increase demand for exports, increasing X-M
- **Degree of protectionism:** if other countries are cutting their tariffs and non-tariff barriers to trade, X-M may rise
- **Non-price competitiveness:** if a country improves its non-price competitiveness (quality, design, speed of delivery, after-sales service) this could increase X-M
- **Price competitiveness**: if a country improves this so its product are better value for money, then X-M should increase

(And vice versa for factors causing a fall in net export demand)

The Multiplier

The **multiplier effect** occurs when an **initial injection into the circular flow** causes a **bigger final increase in real national income**. This injection of demand might come for example from a rise in exports X, investment I or government spending G.

The multiplier process

The multiplier effect arises because **one agent's spending is another agent's income**. When a spending project creates new jobs for example, this creates extra injections of income and demand into a country's circular flow.

The **negative multiplier effect** occurs when an **initial withdrawal or leakage of spending from the circular flow** leads to knock-on effects and a **bigger final drop in real GDP.**

The multiplier coefficient

The **multiplier coefficient** itself is found by:

Final change in real GDP / Initial change in AD

Example: If the government increased spending by **£5 billion** but this caused real GDP to increase by a total of **£12 billion**, then the multiplier would have a value of **12/5 = 2.4**

Multiplier formula

Multiplier k = 1/(1-mpc) where the MPC = the marginal propensity to consume

MPC = change in consumption/change in income = change in C/change in Y

Initial change in injections x k = final change in national Y

Example: if investment increases by £100bn and the MPC = 0.8, the final increase in real GDP will be £100bn x 1/(1-0.8) = £500bn

The Multiplier

EXTENSION KNOWLEDGE: other formulae

In a closed economy with no government: k = 1/MPS

In a closed economy with a government k = 1/(MPS+MPT)

In an open economy with a government k = 1/(MPS+MPT+MPM) or **1/MPW**

Where MPS = marginal propensity to save, MPT = marginal propensity to tax, MPM = marginal propensity to import and MPW = marginal propensity to withdraw

Factors influencing the size of the multiplier

High multiplier value

- Economy has plenty of spare capacity
- Propensity to import and tax is low
- High propensity to consume any extra income

Low multiplier value

- Economy is close to full capacity
- Rising demand causes inflation
- Higher inflation causes rising interest rates

The size of withdrawals (S, T, M) from the circular flow is a major factor in determining the size of the multiplier.

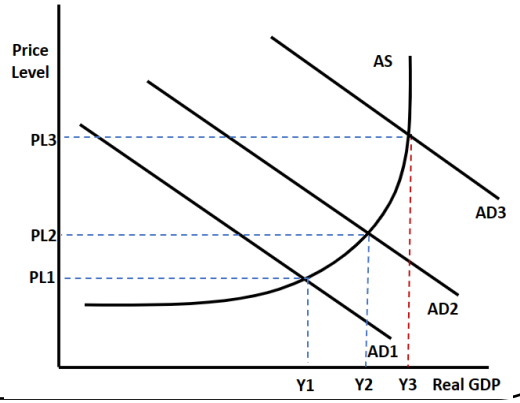
Showing the multiplier effect in a diagram

Initial increase in AD from AD1 to AD2 increases real GDP from Y1 to Y2. This then kicks off a multiplier effect which increases AD further to AD3 and real GDP rises to Y3.

Investment multiplier – initial change from I

Fiscal multiplier – initial change from G or government borrowing

Export multiplier – initial change from X



Evaluation of multiplier

- Difficult to know exact size of multiplier - hard to measure
- Takes time for multiplier process to feed through to real GDP – time lag
- Economists disagree over its size
- Long run multiplier effect is likely higher for developing economies than for developed ones; infrastructure projects often have higher multiplier effects

Aggregate supply AS - Classical

The Aggregate Supply Curve - Classical

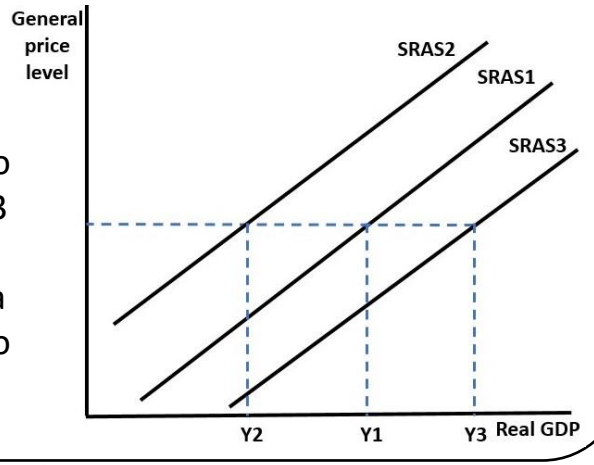
Short run aggregate supply SRAS: total **planned output** when the general price level can change but the prices and productivity of factor inputs are held constant. **In the short run**, the SRAS curve is assumed to be upward sloping

Movements along the SRAS Curve: **a** change in the price level brought about by a shift in AD results in a movement along the short run AS curve. If AD rises, there is an **extension** of SRAS; if AD falls there is a **contraction** of SRAS.

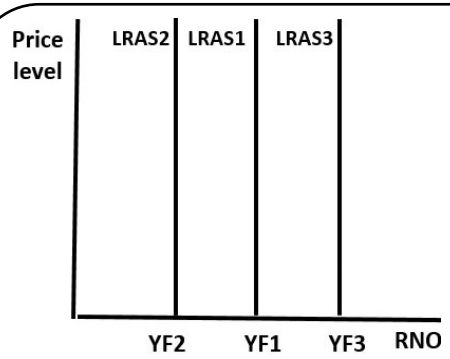
Shifts in SRAS

SRAS slopes upwards to the right;

- Any change that causes SRAS to increase other than a change in the PL shifts SRAS to the right from SRAS1 to SRAS3
- Any change that causes SRAS to decrease other than a change in the PL shifts SRAS to the left from SRAS1 to SRAS2



Long run aggregate supply (LRAS)



Long run aggregate supply LRAS: total planned output when both prices and average wage rates can change – it is a measure of a country's potential output and the concept is linked to the **production possibility frontier**

- **In the long run**, the LRAS curve is assumed to be vertical (i.e. it does not change when the general price level changes)

Factors that shift the SRAS curve

Changes in wage costs: if firms can pay lower real wages, this reduces their costs of production making them more willing to supply.

Changes in productivity: if labour become more productive – more output per labour input, this increases the efficiency and more can be supplied.

Changes in unit labour costs: Unit labour costs = labour cost per unit of output. If wages fall relative to productivity growth, then ULCs fall, reducing costs to businesses, so they will be prepared to supply more.

Changes in commodity, energy and raw material costs: if the cost of buying raw materials, energy and other commodities needed for production fall, production costs fall and SRAS shifts right.

Changes in education/skills: improved education and training boosts skills and occupational mobility, which helps increase productivity, reducing the costs of production and increasing SRAS.

Changes in indirect taxes & subsidies: if indirect taxes are cut and/or government subsidies are increased, this reduces the costs of production and SRAS shifts right.

Changes in the exchange rate: an appreciation decreases import prices; if a country is a net importer of energy, raw materials and components, this decreases the costs for many businesses and SRAS shifts right.

Changes in regulation: if the government reduces the red tape and bureaucracy for businesses, this reduces their costs and SRAS shifts right.

NB: reverse the chains of reasoning for all factors for decreasing SRAS

Factors that shift the LRAS curve

The LRAS represents the economy's ***productive potential,*** i.e. its maximum output given its resources. LRAS is located at the economy's **full employment** level of output. There is no spare capacity. It shifts when there is:

- Change in the quantity of resources (land, labour, capital & enterprise)
- Change in the quality of resources
- Technological progress

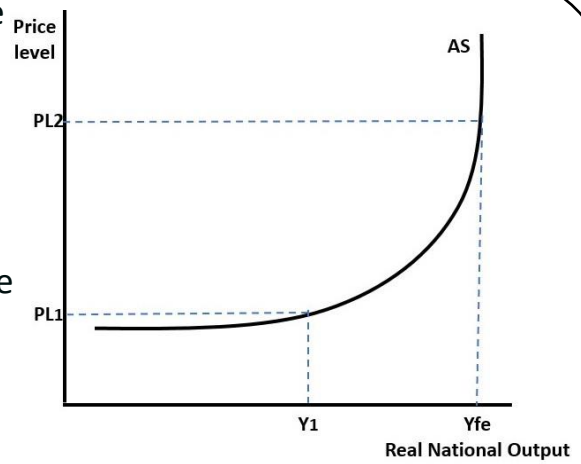
Aggregate supply AS - Keynesian

The Keynesian Aggregate Supply Curve

There is no distinction between the short run and long run for AS in the Keynesian model. The Keynesian AS curve is curved.

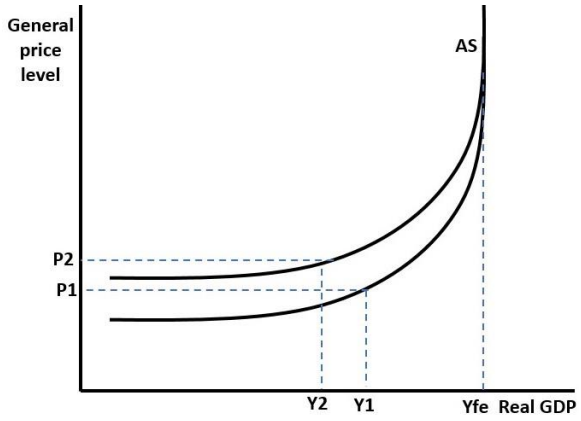
Below Y1L AS is very elastic; the economy has lots of spare capacity and any increase in AD can easily be met without inflation

Between Y1 and Yfe the AS becomes less elastic: there is less spare capacity; increase in AD can be met, but costs to businesses start to increase as firm compete for skilled labour and other scarcer resources; some inflation



For Yfe and above, the AS is perfectly inelastic; there is no pare capacity; an increase in AD will cause inflation not growth

Shifts in Keynesian AS



Shifts in AS (with no change in full employment income Yfe):

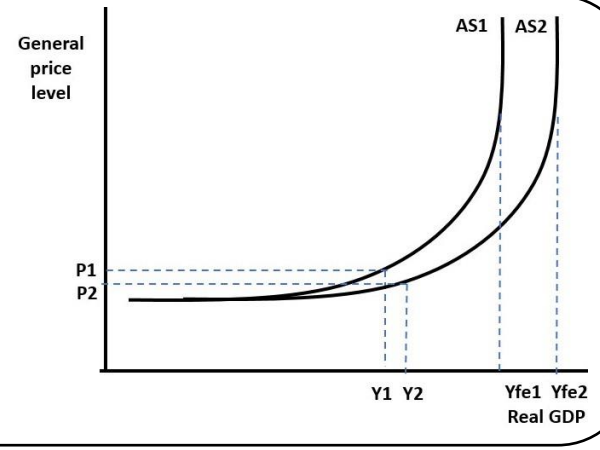
Any change that causes the costs of production in the economy to fall or rise will shift the AS curve 'up' or 'down' respectively.

(The same factors that cause the classical SRAS to shift). However, there is no increase in the productive potential of the economy

Shifts in the Keynesian AS

Shifts in AS (where full employment income Yfe increase):

Any change that causes the productive potential of the economy (full employment income) to rise will shift the AS right (and vice versa).(The same factors that cause the classical LRAS to shift).



Classical v Keynesian views

Classical economists believe in the self-adjusting nature of markets, where wages and prices are flexible, and the economy naturally tends toward full employment. They argue that government intervention is often counterproductive.

Keynesian economists emphasise the role of aggregate demand and argue that markets may not always self-adjust efficiently, especially during recessions. They advocate for government intervention, such as fiscal policies, to manage demand and stabilise the economy.

Summary of key factors that shift the AS in the long run

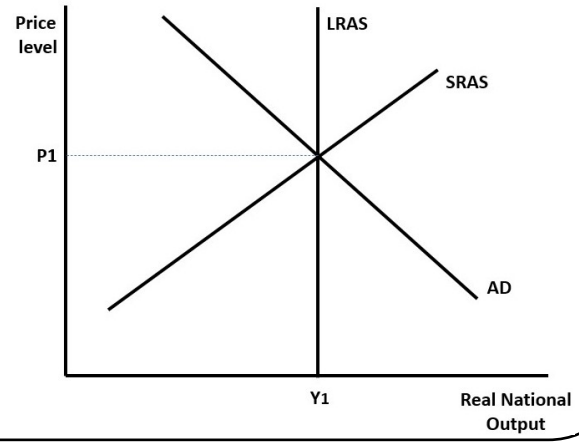
Factors that increase the economy's ***productive potential,*** or its **full employment** level of output. These are the same factors that shift the production possibility frontier to the right:

- Technological advances
- Changes in relative productivity
- Changes in education & skills
- Changes in government regulations
- Demographic changes and migration
- Competition policy

Equilibrium levels of real national output

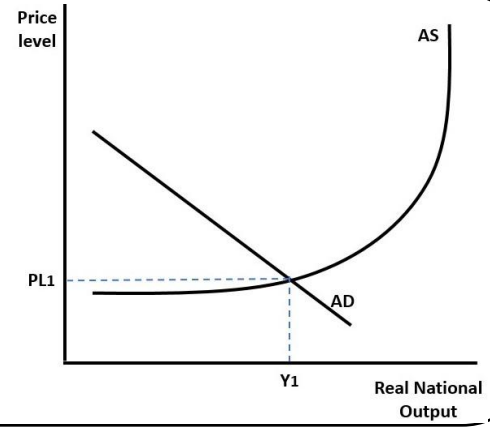
Equilibrium national income (Classical)

- The short run equilibrium national output level is the output where **AD = SRAS.**
- The long run equilibrium level of national output is where the **AD = LRAS**, at Y1

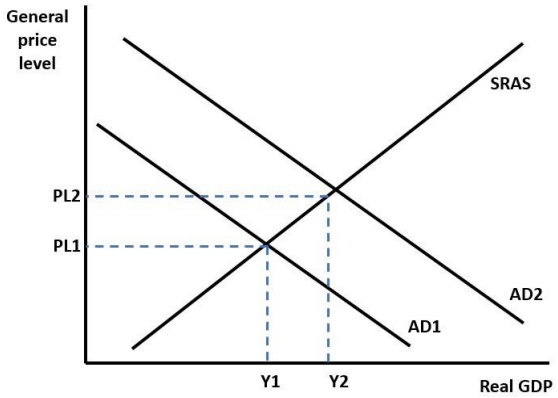


Equilibrium national income (Keynesian)

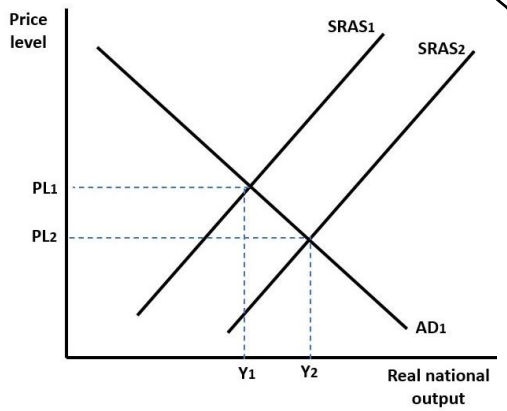
- Equilibrium national output level is the output where **AD = AS at Y1.**
- If AD is high enough, then the equilibrium can be at the full employment level of income (where the AS is vertical)



Increases in AD and SRAS

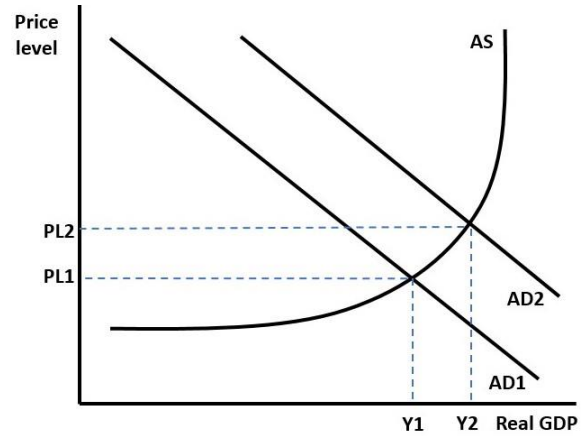


AD increases from AD1 to AD2. The equilibrium national output increases from Y1 to Y2. There is some demand-pull inflation as the price level rises from PL1 to PL2.



SRAS increases from SRAS1 to SRAS2. The equilibrium national output increases from Y1 to Y2. The price level falls from PL1 to PL2 suggesting some disinflation or deflation

Increases in AD and AS



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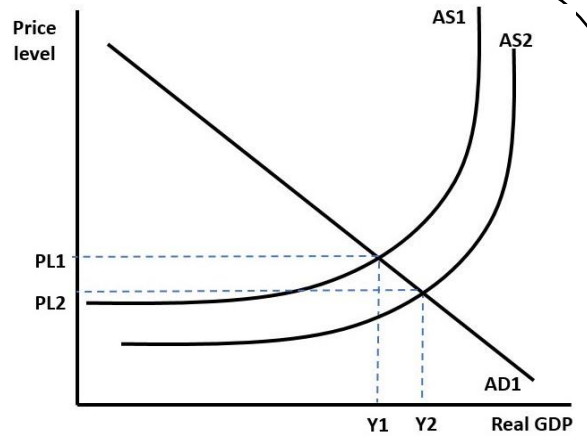


AS increases from AS1 to AS2. The equilibrium national output increases from Y1 to Y2. The price level falls from PL1 to PL2 suggesting some disinflation or deflation

NB: Decreases in AD and/or AS would results is changes in equilibrium national income too. Students need to identify the original and final equilibrium coordinates.

Economic Performance – Economic Growth

Economic growth

Economic growth: increase in the potential output of an economy or in the real value of goods & services produced, measured by the % change in real GDP.

Gross domestic product (GDP): measures the value of real output of the economy over a period of time; a rise in GDP indicates economic growth

Nominal GDP: the monetary value of all goods and services produced in the economy (GDP at current prices)

Real GDP: the nominal value of GDP ***adjusted for inflation*** (GDP at constant prices)

Real GDP per capita: national income per person often used a proxy measure for the standard of living

Value v volume: the value of goods and services shows what they are worth; the volume shows the number that are produced.

Other national income measures

GDP: Value of national output produced in an economy

Gross National Product (GNP): GDP + net property income from abroad

Gross National Income (GNI): similar to GNP = final value of income flowing to a country's owned factors of production in a given year

GNI = Gross Domestic Product + net income from abroad of compensation of employees and property income.

GNI could be higher than GDP if there is:

- income from worker remittances,
- income from interest on bonds and savings held overseas
- income from dividends on profits from overseas investment
- overseas aid transfers (inflows) for poorer countries.

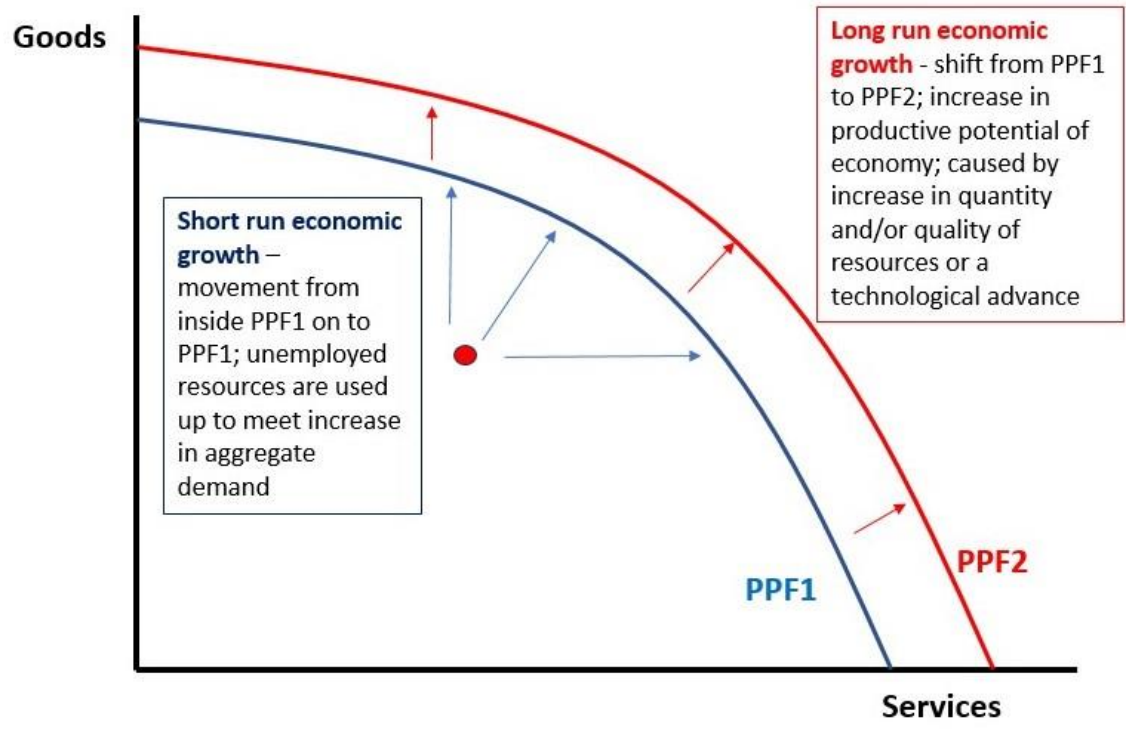
(NB: GNI can be lower than GDP if these flows are reversed)

Purchasing Power Parity (PPP)

Purchasing power parity (PPP) is used when assessing relative living standards between countries. Real GDP needs to be converted into same currency for comparison, but the market exchange rate does not reflect differences in the cost of living/purchasing power of income in the countries.

PPP is calculated by comparing the price of a basket of comparable goods and services in different countries/ PPP measures the total amount of goods and services that a single unit of a country's currency can buy in another country.

Using a PPF diagram to show economic growth



Causes of economic growth

Short run v long run growth

Long run growth: an increase in an economy's potential output
Short run growth: an increase in real GDP, driven by an increase in AD that draws unemployed resources into use.

Factors which cause short run economic growth

Any event or policy that **increase components of AD** (i.e. C+I+G+X-M) stimulates an extension in AS and uses up some unemployed resources; movement from a point inside the economy's PPF to a point on the PPF.

Factors which cause long run economic growth

The **productive potential of the economy** increases if there is an increase in:

- The ***quantity*** of the factors of production
- The ***quality*** of the factors of production
- **Technological advances**

There is an outward shift of the economy's PPF ie LRAS shifts right.
Examples could be:
Land (natural resources): finding and mining a new cobalt find; reclaiming land from the sea; fertilising agricultural land
Labour/enterprise (human resources): immigration to increase quantity and quality (filling in skills gaps); education & training
Capital (man-made resources): investment increases quantity but also quality as new technology is integrated

Actual v potential output

Actual output: the current level of production (real GDP) in an economy. Some resources may be unemployed.
Potential output: the economy's productive capacity or the largest output that could be produced, given the prevailing state of technology and stock of available resources.

Factors that can constrain growth

There are many factors that can **constrain growth**; some may be more significant in developing economies than developed ones. Some **examples** are: economic shocks (e.g. pandemic, Brexit, financial crisis), poor macroeconomic management, political instability, poor productivity growth, lack of investment, inadequate infrastructure (transport, energy and communication networks), small export base/primary product dependency, shortage of human capital, brain drain, poor access to finance, high food prices, weak financial and legal institutions etc.

International trade and export-led growth

Export led growth: a significant part of the expansion of real GDP, jobs and per capita incomes flows from successful exporting of goods and services
Exports are an **injection into the circular flow** and may also stimulate more investment, another injection. Industries supporting the increase in exports e.g. logistics will also grow (an export and investment **multiplier effect)**

Balanced growth

Balanced growth: when output and the capital stock grow at the same rate. Also refers to balanced expansion of components of aggregate demand and/or the different sectors in an economy

Output gaps

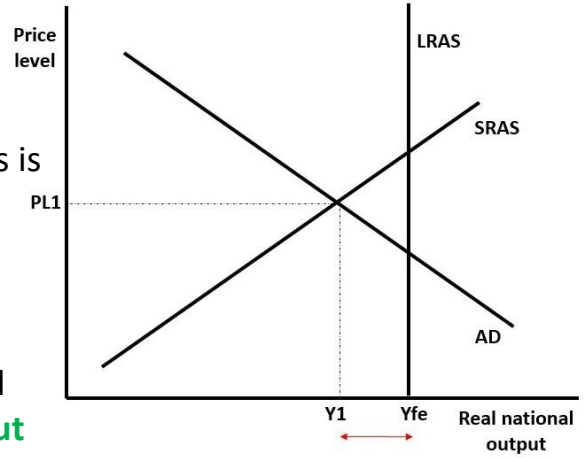
Negative output gap: actual GDP is below potential GDP. This means that there is **spare capacity** in the economy. Some resources are not fully employed. We would expect **some unemployment**. There is not enough demand in the economy for all resources to be fully utilised.
Positive output gap: actual GDP is above potential GDP. This puts **resources in the economy under strain**. Demand growth exceeds supply growth. Firms may find it hard to recruit workers with the right skills and they may find they have to **compete for other resources**, such as raw materials, that are in short supply. This puts upwards pressure on wages and other costs and may lead to **inflation**. Consumers may buy more **imports** if domestic suppliers cannot meet their demand, increasing the **trade deficit**.

Output gaps

Negative output gap – Classical model

Using the classical AD/AS model:

- Equilibrium income is at Y1, where AD=SRAS. This is the actual output.
- Yfe represents the economy's potential output.
- The gap between Y1 and Yfe is the **negative output gap**

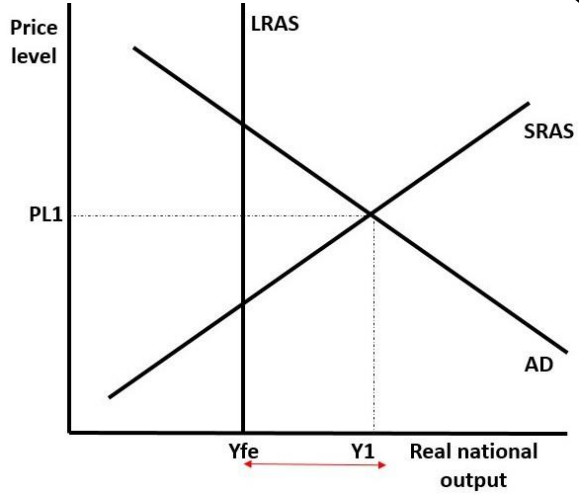


There are some unemployed resources. A rise in AD could help close the gap

Positive output gap

Using the classical AD/AS model:

- Equilibrium income is at Y1, where AD=SRAS. This is the actual output.
- Yfe represents the economy's potential output.
- The gap between Y1 and Yfe is the **positive output gap.**

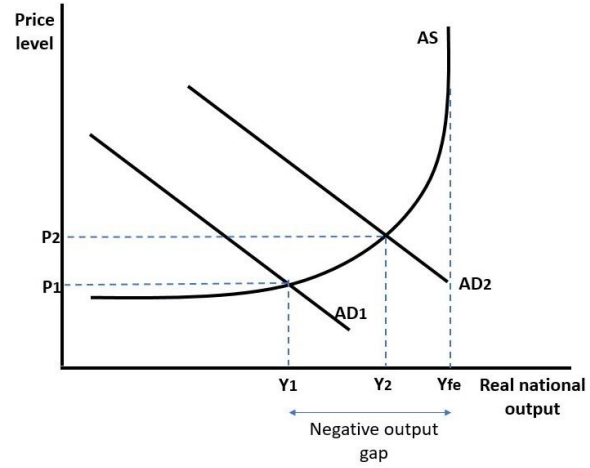


A positive output increases the competition for scarce resources; wages and other business costs start to rise, SRAS will shift left until the economy returns to Yfe. (Cost-push inflation)

Negative output gap – Keynesian model

Using the Keynesian AD/AS model:

- Equilibrium income is at Y1, where AD=SRAS. This is the actual output.
- Yfe represents the economy's potential output or full employment income
- The gap between Y1 and Yfe is the **negative output gap**
- An increase in AD to AD2 reduces the size of the negative output gap from Y1Yfe to Y2Yfe



Difficulties measuring the output gap

Measuring the output gap in an economy is challenging:

- It involves determining potential output, which is not directly observable
- It is influenced by evolving factors like technological changes and demographic shifts
- Accurate data on current output levels is often subject to revisions
- Economic uncertainty means it is hard to make precise measurements

Sustainable growth

- Growth which can continue into the long run
- Growth without using up non-replaceable resources
- No natural resources depletion or degradation (environmentally-friendly)
- Growth which does not compromise future generations

Inclusive growth

- Growth where all citizens experience an increase in their income/living standard
- Income inequality does not cause some groups to miss out on the benefits of growth
- Most economists do not believe that the benefits of growth will 'trickle down' from rich to poor without government intervention

Economic Performance – economic growth and standard of living

Standard of living

Standard of living – a measure of economic welfare and wellbeing
While more income typically increases the standard of living the relationship is not exact.
Other factors that affect the standard of living include: access to good healthcare, access to good education and skills, quality of housing, quality of job, access to good quality public services, quality of environment, a sense of fairness, life satisfaction, personal freedom, political freedom....

Limitations of using GDP to compare living standards between countries and over time

Economists use **real GDP per capita** as a proxy/rough guide for the ***standard of living***
Real – takes inflation into account; Per capita – takes population change into account
BUT real GDP per capita is still an ***average*** and it does not effectively take into account many other factors that influence the standard of living

- the distribution of income
- the value of unpaid work (housework, childcare, DIY..., voluntary work)
- environmental degradation and depletion/impact on natural capital
- negative externalities of consumption of goods that are bad for us (e.g. tobacco, alcohol) and production (e.g. pollution, congestion)
- shadow market activity/unofficial work
- impact on standard of living of changing working hours/conditions/leisure time/quality of jobs
- the changing quality of goods/services over time
- impact of technological improvements on the standard of living

GDP data is also ***not necessarily accurate*** - difficulties collecting data and making accurate calculations ; GDP measures looks backwards; GDP data often needs to be revised ; Some countries are likely to be more accurate than others

National wellbeing and subjective happiness

Subjective happiness refers to **'self-reported' levels of happiness** with one's life, usually determined using questionnaire which consider **emotions**, rather than asking about material well-being.
Factors that tend to affect your happiness include: your personality and genetics, social influences (e.g. friends), income and wealth (to a smaller degree than you might expect), health, and leisure time.
Easterlin Paradox: life satisfaction does rise with average incomes but only up to a point. Beyond that the **marginal gain in happiness** declines.

Human Development Index (HDI)

The HDI is calculated by the United Nations as an indicator of economic development and broader measure of the standard of living. It looks at:

- ***Health*** – life expectancy at birth
- ***Education*** – mean years of schooling and expected years of schooling
- ***Living standards*** – GNI per capita

Advantages of using HDI – broader measure; better measure of development; better measure of standard of living and wellbeing
Disadvantages – still does not take all aspects of wellbeing into account; weighting of the three categories is arbitrary

Other measures of standard of living

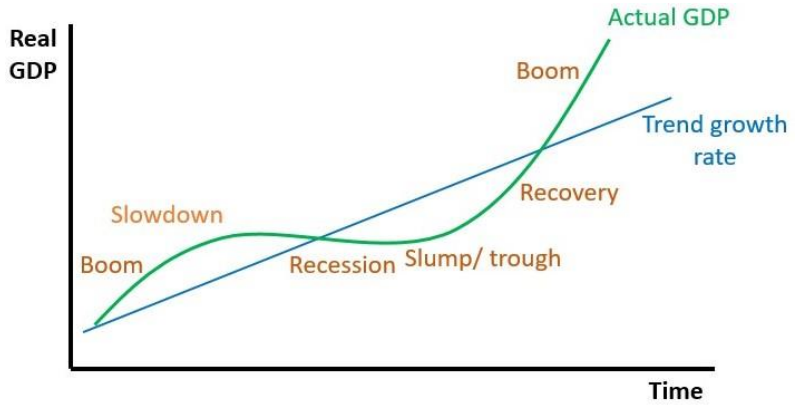
Other measures include the Happy Planet Index, the Social Progress Index, the ONS Well-being dashboard etc.
All include more factors that affect economic welfare, but become more complex; real GDP per capita often 'track's these broader measures with varying degrees of accuracy

The Economic Cycle

Economic cycle

Economic cycle or trade cycle, also known as a business cycle, refers to the fluctuation of economic activity in an economy over time.
It involves **alternating periods of expansion and contraction** in real economic output, employment, and other key economic indicators.
Economic cycles are characterised by several **key phases**:
Rapid Expansion (Boom) - Slowdown - Peak - Recession - Trough - Economic Recovery

The economic cycle



Phases of the economic cycle

Boom – a period when the rate of growth of real GDP is fast and higher than the long run trend
Slowdown – a weakening of the rate of growth; real GDP is still rising but at a slower rate
Recession – a period of at least six months when an economy suffers a fall in real GDP
Recovery – a phase after recession when real GDP starts to rise and unemployment begins to fall
Depression – a prolonged downturn where real GDP falls by at least 10%

Causes of an economic slowdown

- *Interest rate rise:* central banks might respond to an increase in inflation by raising interest rates to cool down the economy, reduce AD growth and prevent excessive inflation.
- *Tighter fiscal policy:* government may put up taxes or cut public spending to improve public finances, reducing AD growth
- A *slowdown in global economic growth* or the emergence of trade tensions can negatively impact a country's exports and economic prospects
- Global *geopolitical events* can slow growth

Causes of a recession

A **recession** is typically marked by **two consecutive quarters of negative real GDP growth**.

- *Lower consumer confidence* as disposable incomes decrease
- *Fall in business confidence:* less investment; job loss
- *Higher unemployment:* as businesses lay off workers, consumer confidence falls
- *Negative demand/supply-side economic shocks* – e.g. a credit crunch, a sudden rise in energy prices, a trade shock
- *Poor choice of macroeconomic policy:* e.g. Too much austerity; keeping interest rates too high for too long

Causes of an economic recovery

An **economic recovery** is the phase of the business cycle that follows a recession where **national output recovers to where it was before a recession.**
economic events in other countries.

- *Cuts in interest rates* (monetary policy): to stimulate AD
- *Fiscal stimulus:* such as tax cuts or an increase in government spending or borrowing
- *Business and consumer confidence* may increase boosting AD
- *Positive demand/supply-side shock* – e.g. a fall in energy prices
- *More rapid global growth:* boosts exports and economic prospects

Causes of a boom

A **boom** occurs when the economy is growing at an unsustainable rate

- *Over confidence:* 'animal spirits' cause a rapid increase in AD when there is little/no spare capacity
- *Loose fiscal and/or monetary policy;* allows AD to grow too rapidly

Economic cycle & economic shocks

Features of a recession

Falling real GDP: a sustained decline in a country's GDP over at least two consecutive quarters (six months). Economic output shrinks as businesses produce less, consumers spend less, and investment declines.

Rising unemployment: businesses reduce production and cut back on hiring, leading to job losses and a rise in **cyclical** unemployment.

Disinflation: falling demand and a weaker labour market often leads – perhaps with a time lag – to a reduction in the rate of price inflation.

Reduced business investment: businesses tend to scale back their investment during a recession because of weak or falling demand.

Risk to government finances: government borrowing and national debt may rise as government spends to support the economy.

Economic scarring

Economic scarring: can reduce the medium/long run potential output of the economy

- Businesses may scrap unused/obsolete capital
- Workers who lose their jobs may also lose some skills reducing their productivity (labour hysteresis)
- Increase in business failures
- Fall in the financial capacity to lend

Depression v recession

An **economic depression** is a more severe and prolonged economic downturn than an economic recession.

- It can persist for several years
- Unemployment rates can reach very high levels and remain elevated for an extended period.
- Long-term unemployment and underemployment are common features
- Depressions can include severe banking and financial crises, with widespread bank failures, credit contractions, and disruptions to the financial system.

Economic shocks

Economic shock: unexpected and significant events that lead to a sudden and substantial impact on key indicators, such as GDP growth, inflation, unemployment, interest rates, and exchange rates.

Demand-side shock: a sudden change in AD

Supply-side shock: a sudden change in AS

Positive shock: a shock that boosts the economy

Negative shock: a shock that causes a recession or increase in unemployment or inflation

External shock: a shock that comes from global events outside the economy

Internal shock: a shock that is comes from within an economy

Demand & supply side shocks

Demand-side - negative

- Economic downturn in a major trading partner
- Unexpected tax increases/cuts in welfare
- Financial crisis causing a credit crunch
- Bigger than expected rise in unemployment

(NB: Opposite for positive AD shocks)

Supply-side - negative

- Steep rise in energy and/or commodity/raw material prices
- Lockdown due to a pandemic
- Natural disasters
- Unexpected breakthroughs in production technology (could be positive)

(NB: Opposite for positive AS shocks)

Examples of shocks

Global financial crisis 2007-9; pandemic; volatile global energy & commodity prices; slowdown in China; climate change & extreme weather events; increased protectionism, Brexit, currency volatility

Evaluation of shocks

Impact of the economic shock depends on:

- The size of the shock & the scale of the shock (regional, global?)
- Likely multiplier effects (positive/negative depending on the shock)
- How temporary/permanent the shock is
- Who the winners and losers are
- How effectively the government responds to the shock
- opportunities v threats created by the shock

Impact of economic growth

Benefits of economic growth

*Economic growth can lead to **benefits for all economic agents** – consumers, producers, workers & the government*

Higher standards of living: growth often leads to higher per capita incomes, which in turn can improve the standard of living for a nation's citizens

Greater profits for firms: allows expansion and can create jobs

Job creation: growth can help reduce unemployment rates and provide individuals with greater financial stability

Reduced poverty: growth increases access to education, healthcare, and necessities leading to progress in reducing extreme poverty and improvements in human development outcomes (HDI Index) such as higher life expectancy

Greater income equality: more jobs, less poverty reduce inequalities and the associated social problems

Increased government revenue: a growing economy generates higher tax revenues – **a fiscal dividend** - that can then be used to fund better public services such as education & healthcare.

Investment opportunities: growth attracts domestic and foreign investment leading to innovation, increased productive capacity (LRAS), and further job creation

Improvement in environment: more efficient, green and cleaner technology is used

Costs of economic growth

*Economic growth can lead to **costs that affect all economic agents** – consumers, producers, workers & the government*

Inflation: rapid growth can lead to demand-pull and cost-push inflation, eroding real purchasing power and potentially leading to economic instability.

Environmental costs: fast growth of GDP can lead to overexploitation of scarce non-renewable natural resources, causing resources degradation and depletion, compromising sustainability.

Income Inequality: benefits of growth may disproportionately accrue to certain segments of the population, leading to increased income & wealth inequality as measured by the Gini Coefficient.

Financial Instability: if rapid growth is fuelled by excessive borrowing and speculative investment, this can result in financial bubbles and subsequent crashes.

Wider trade deficit: rapid growth means consumers/businesses will buy from abroad if home supply cannot grow fast enough increasing imports.

Sacrificing current consumption: the opportunity cost of producing more capital goods to boost productive capacity is a loss of the production of consumer goods

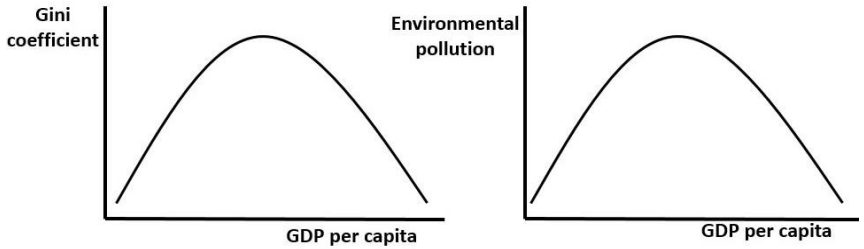
Human costs: growth may lead to less leisure time or more stress/mental health issues for workers

Kuznets curve

Kuznets curve suggests that economic inequality tends to increase during the early stages of economic development, but then decreases as a country becomes more developed.

Environmental Kuznets curve suggests that environmental pollution tends to increase as a country's income increases during the early stages of economic development, but then decreases as a country becomes more developed.

Kuznets curve diagrams



Economic Performance – Employment & Unemployment

Labour market terms

Working population: the total number of individuals who are of working age, typically considered to be those who are capable of and available for work. It includes both employed and unemployed individuals.
Labour force: those who are either employed or actively seeking employment. It is a subset of the working population and represents the pool of people available for and actively engaged in productive work.
Economic inactivity: not being engaged in the labour force, includes pensioners, students, homemakers, discouraged workers and others who are neither employed nor actively seeking employment.
Labour force participation rate: workers in the labour force compared to the number of people in the working population.
Employment rate: the proportion of people of working age who are in employment (employees, self-employed, full time & part time.

Unemployment terms

Unemployed: someone of **working age**, **willing and able to work**, and **actively seeking work**, but cannot find a job.
Unemployment rate the percentage of the labour force that are unemployed (NB Labour force includes those in work and the unemployed).

Key measures of unemployment

Labour Force Survey - This survey asks 60-70,000 UK households to self-classify as being employed, unemployed or economically inactive.
Claimant Count - This counts the total number of recipients of Job Seeker's Allowance (JSA) added to those looking for work to claim Universal Credit (UC).

Labour market 'flows'

People working age can be employed, unemployed or economically inactive; over time they may 'flow' in and out and between these categories

Types of unemployment

Regional unemployment: unemployment rate varies across regions
Long term unemployment: people unemployed for over 12 months
Mass unemployment: 1 in 10 of the labour force are unemployed
Youth unemployment: unemployment rate (the proportion of the economically active population who are unemployed) for all 16–24-year-olds
Discouraged workers: inactive work-seekers who have ceased to seek work because they believe there are no suitable available jobs
Hidden unemployment: people who do not have work but who are not counted in government reports, for example, people who have stopped looking for a job and people who work less than they want to
Underemployment: where individuals are employed, but their employment is insufficient in terms of hours worked, skill utilisation, or income to fully meet their economic needs or potential.

Gig economy

The **gig economy** is a work arrangement where people perform short-term, flexible, and often freelance work, typically through online platforms or apps, e.g. rideshare drivers, virtual assistants, and food delivery workers.
It is linked to **zero-hour contracts** - employment arrangements where workers are hired without a guarantee of work hours.

Technological unemployment

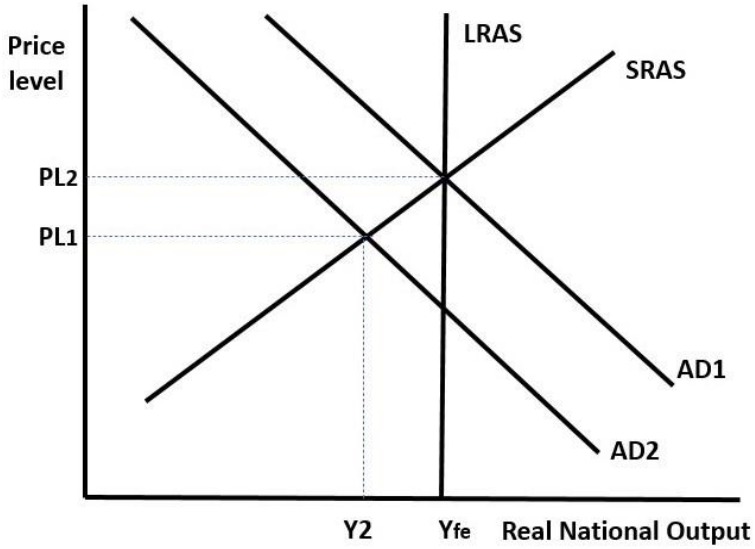
Technological unemployment: the displacement of human workers by machines, automation, and technology, such as AI.
Rapid advances in technology raises concerns about the potential for job loss, economic inequality, and the need for retraining and upskilling workers to adapt to evolving job markets.

Economic performance – employment and unemployment

Causes of unemployment

Frictional unemployment: short-term unemployment caused by people moving between jobs, moving to a new location, or re-entering the workforce after a break.

Cyclical unemployment: the unemployment rate rises during an economic downturn; it is caused by fluctuations in the business cycle. Sometimes called *demand-deficient* unemployment. **AD shifts left from AD1 to AD2; new equilibrium Y2 is below full employment income Yfe; some unemployed resources at Y2**



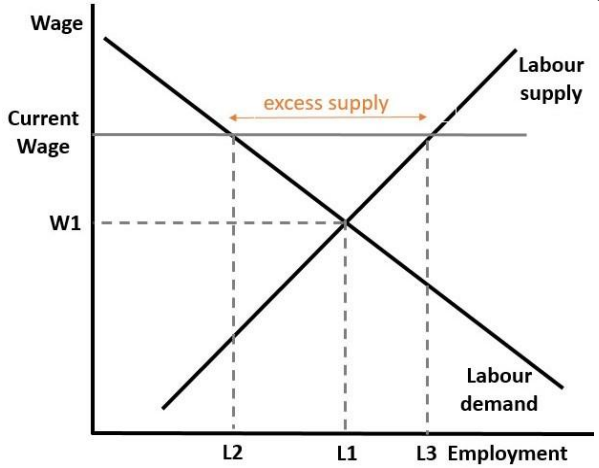
Structural unemployment: caused by changes in the economy, like the decline of certain industries or the rise of automation. It happens when there's a *mismatch between the skills & location of workers* and the needs of employers. A lack of *geographical and occupational mobility of labour* contributes.

Seasonal unemployment: seasonal workers, such as construction workers, retail assistants, might be without paid jobs due to the time of year when there is less need for their work

Causes of unemployment

Real wage unemployment: caused by wages being too high relative to the productivity of workers; minimum wages and trade union activity can push the wage above its market equilibrium

Current wage is above market-clearing wage W1, causing an excess supply of labour = real wage unemployment



Full employment

- An absence of cyclical unemployment (the output gap is closed)
- Number of job vacancies = number of people actively seeking work

There will always be some unemployment – frictional as people move between jobs

Costs of unemployment

Economic costs - loss of output foregone, fall in real incomes, lower standard of living, lower tax revenue, higher welfare costs, larger budget deficit, loss of workers to other countries (emigration)

Social costs - increase in poverty and welfare dependency, increase in physical and mental health increasing healthcare costs, link between persistent unemployment and social problems (e.g. vandalism, low level crime, shoplifting etc.)

Benefits of some unemployment

- Reduced risk of inflation – lower wage demands & price discounts
- Pool of unemployed available for growing businesses
- Increase in self-employment start-ups, more entrepreneurship/innovation

Economic performance - inflation

Inflation

Inflation – a sustained increase in the general price level
Deflation – a sustained decrease in the general price level
Disinflation – a reduction in the rate of inflation (the inflation rate falls but the price level is still rising, but at a slower rate)
Cost-of-living - a measure of changes in the average cost for a household of buying a basket of different goods and services
Inflation target – a target set by the government which the central bank should aim to achieve e.g. in UK it is CPI inflation = 2% +/- 1% point

Calculating inflation using the Consumer Price Index (CPI)

The 'headline' rate of inflation is **the annual % change in the CPI**
The CPI tracks changes in the ***prices of a basket of goods and services*** purchased by an average household. It is expressed as an index number.
The formula for calculating CPI inflation is:
CPI Inflation Rate = [(Current CPI - Previous CPI) / Previous CPI] × 100
Basket of goods and services = things a typical household buys; updated each year to keep it relevant
Price survey – prices of the goods and services in the basket are monitored each month
The price of each representative good/service in the basket is ***weighted*** according to the proportion of income a typical household spends on it

Other measures of inflation

CPIH = similar to CPI but also monitors owner occupier housing costs (OOH), in its basket. These are the costs associated with owning, maintaining and living in one's own home.
RPI – retail price index - the basket of goods/services includes some items not in the CPI, such as council tax & mortgage interest payments; it is often used to calculate increases in welfare benefits, pensions, index-linked bonds and wage negotiations; in a period of rising interest rates it typically gives a higher rate of inflation than the CPI.
'Core' inflation – sustained increase in prices of goods in the basket, excluding goods such as energy, food, alcohol and tobacco which can be volatile.

Limitations of the CPI inflation measure

- CPI inflation is only calculated for an 'average' family;
- It does not consider quality of goods/services
- Needs regular updating to reflect changes in patterns of spending
- International comparisons may not be accurate if other countries do not calculate inflation in the same way

Costs of inflation

Shoe leather costs: costs of shopping around when prices change rapidly
Menu costs: costs of redoing menus, parking changes, price labels & lists
Fall in real incomes: if wages do not keep pace with prices, real incomes fall
Uncertainty: consumers and businesses may reduce their spending causing unemployment and weaker growth
Redistributional effects: savers get a lower real rate of return, those on fixed incomes lose out, workers in the gig economy may not be able to negotiate real wage increases; fiscal drag increases tax paid if thresholds are frozen
Loss of international competitiveness: weaker current account on the Balance of Payments as exports become relatively more expensive and imports relatively cheaper
Increase in inflation expectations – people will aim for bigger pay rises if they expect higher inflation, which can add to business costs and prices
Danger of wage-price spiral – if workers demand big pay rises

Benefits of a low rate of inflation

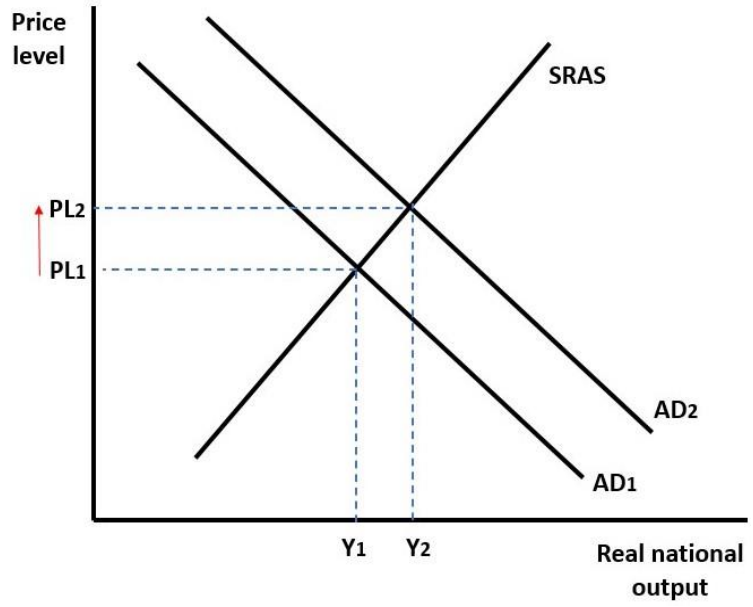
- A low but steady rate implies aggregate demand is running ahead of aggregate supply, incentivising business investment and growth
- Reduces the real value of debt
- Allows negative interest rates
- Helps labour markets work more efficiently without a need to cut nominal wages because real wages can fall
- Makes malign deflation less likely

Economic performance - inflation

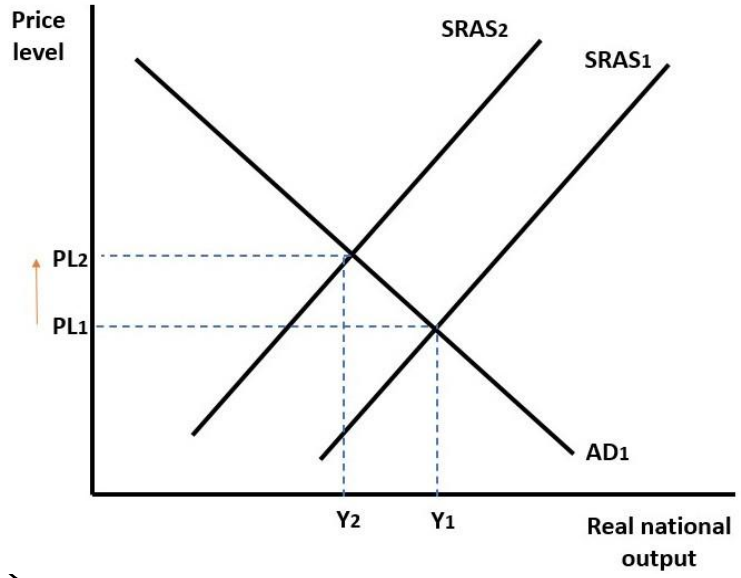
Causes of inflation – demand pull

Demand-pull inflation
Inflation caused by excess AD in the economy.
Producers can raise prices and increase their profits

AD shifts right causing the price level to rise from PL1 to PL2



Causes of Inflation – cost-push



Cost-push inflation
Inflation caused by increases in the costs of production in the economy
Can cause **stagflation** – when economy stagnates as price level rises

SRAS shifts left causing the price level to rise from PL1 to PL2

Causes of demand-pull inflation

- Lower interest rates
- Lower income tax
- Rapid income growth
- High consumer confidence
- Positive wealth effects
- Easy credit (cheap and accessible credit)
- Depreciation of the currency

Causes of cost-push inflation

- Rapid wage rises/higher labour costs
- Skill shortages
- Increasing input costs (raw material, energy)
- Higher commodity prices
- Food price inflation
- Indirect tax rises
- Depreciation of currency (imported inflation)

Causes of inflation - growth of the money supply

Monetarists argue inflation is caused by excessive growth of the money supply - 'too much money chasing too few goods'.
Firms and consumers may spend their excess money raising AD; the demand for labour could rise because it is derived from demand for goods increasing wages and costs of production.

Anticipated v unanticipated inflation

Inflation tends to be more damaging when is it unanticipated; the costs of inflation to economic agents are higher when there is an inflation shock e.g. a sudden sharp increase in energy or food prices

Economic performance - deflation

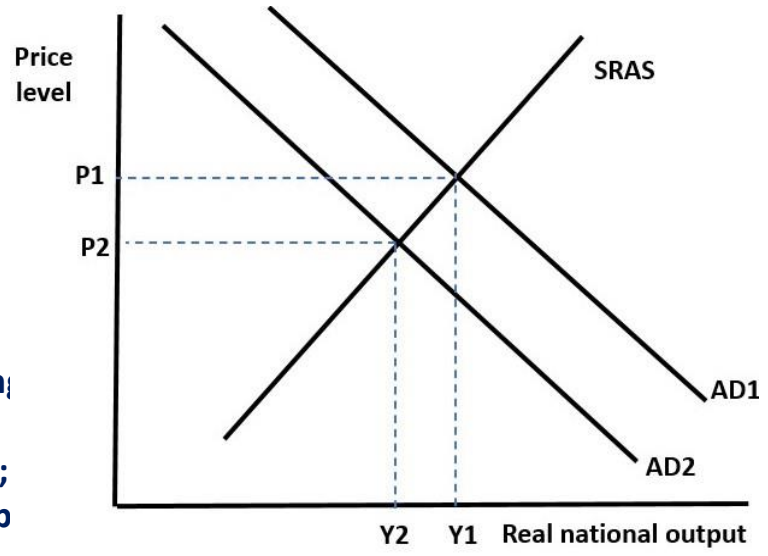
Causes of demand-side deflation – fall in AD

Deflation caused by fall in AD

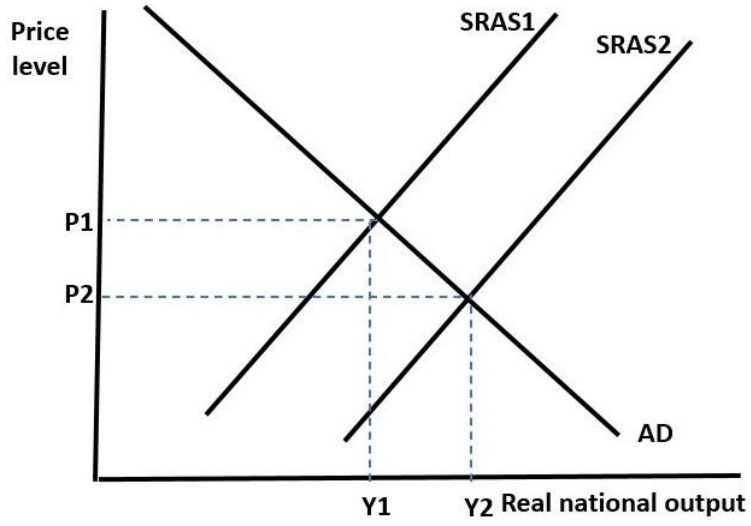
Inflation caused by a lack of AD in the economy.

Producers have to reduce prices and their profits fall

AD shifts left causing the price level to fall from PL1 to PL2; larger negative output gap



Causes of supply-side deflation – increase in AS



Deflation caused by an increase in short run or long run aggregate supply

Deflation caused by decreases in the costs of production in the economy;

SRAS shifts right causing the price level to fall from PL1 to PL2.
LRAS could also shift right

Costs of deflation

- Lower AD causes over-supply
- Lower prices for goods and services cuts cash flow and profits for businesses; consumers may delay their spending; businesses may cut investment
- Businesses reduce production; cyclical unemployment rises
- Rise in real value of debt
- Real interest rates may rise reducing consumption and investment

Causes of 'malign' deflation

- Negative demand shock (eg credit crunch in global financial crisis 2008-9)
- Global recession
- Appreciation of currency causing fall in net exports
- Falling asset prices (negative wealth effect)
- Contractionary fiscal and/or monetary policy

Causes of 'benign' deflation

- Technological advances
- Improvements in productivity
- Falling price of commodity prices
- Falling price of energy prices
- Globalisation/economies of scale
- Cheaper/more skilled labour (perhaps from immigration)

Benefits of deflation

- Falling prices for consumers
- Increase in real incomes
- Increased spending power for those on fixed incomes
- Improved international competitiveness
- Falling asset prices could may housing more affordable for first time buyers

Economic performance – Balance of Payments on current account

Balance of Payments terms

Balance of Payments: a record of all the flows of money between the residents of one country and the rest of the world

Import: an overseas produced good/service purchased by UK citizens resulting in an **outflow of income** from the UK

Export: a UK produced good/service sold overseas resulting in an **inflow of income** into the UK

Current account on the balance of payments: the section of the balance of payments that records international trade in goods, services, primary income & secondary income

Balance of trade in goods and services: the *value* of exports of goods & services minus the *value* of imports of goods and services. If this is positive, there is a **trade surplus**, if it is negative there is a **trade deficit**

Current account on the balance of payments

The current account records the exports and imports (inflows and outflows) for these categories:

Trade in goods – oil, energy, raw materials, food, manufactures, semi-manufactures, components, capital goods

Trade in services – finance, insurance, business services, consulting, travel/tourism, telecommunication and information

Primary income – net investment income – the inflow of interest, profits and dividends on UK assets held abroad less the outflow of interest, profits and dividends of foreign-owned assets in the UK

Secondary income – net current transfers between countries such as foreign aid, gifts, payments to and from EU (due as part of the TCA)

Current account balance: the value of exports less the value of imports for goods, services, primary and secondary income

Running a current account deficit

- Suggests a lack of international competitiveness/supply-side weakness
- Withdrawal from the circular flow (X<M) reducing AD, slows growth
- Loss of jobs in home-based industries (regional & structural unemployment)
- May cause a depreciation of the currency & some inflationary pressure
- Foreigners may own more UK assets
- More imports can add to the standard of living
- Imports of capital goods can help boost development

Running a current account surplus: *the outcomes of a current account deficit can be reversed.*

Causes of a current account deficit

Cyclical causes

- Overvalued exchange rate
- Boom in domestic demand
- Recession in key export industries
- Slump in global prices of exports
- Increased demand for imported technology
- Increase in global energy/commodity prices (for net importers)

Structural causes

- Under-investment
- Relatively low productivity
- Persistently high relative inflation
- Inadequate R&D, innovation
- Emergence of low-cost competition (emerging markets)
- Increase in global energy/commodity prices (for net exporter)

Global interconnectedness through international trade

- Most countries trade with China and the USA, the two biggest global economies, and their nearest neighbours the most
- Countries connect through trading blocs, such as EU, USMCA, CPTPP
- The WTO monitors and promotes tariff-free international trade
- Globalisation has made international supply chains more integrated

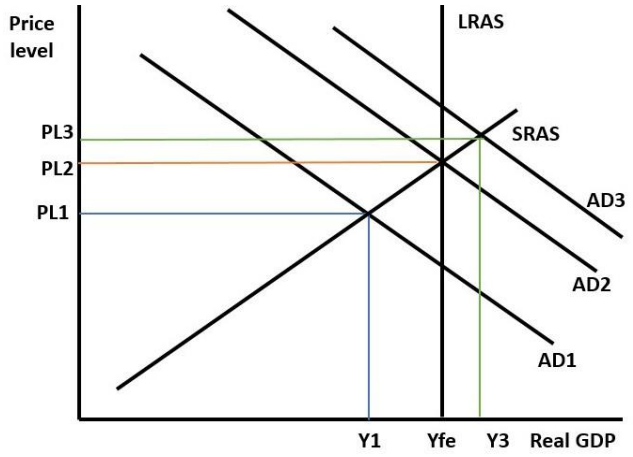
Possible macroeconomic objectives & conflicts

Macroeconomic conflicts or trade-offs

It can be difficult for all macroeconomic objectives to be met at the same time – there are **trade-offs**, improving one may worsen another. For example:

- Faster growth can fuel demand-pull inflation and widen a deficit on the current account; income inequality may rise if the growth is not inclusive
- Low unemployment can increase real wages and cause cost-push inflation
- Polices to reduce inflation can slow growth and cause unemployment
- Reducing government borrowing and the national debt can slow growth and cause living standards to stagnate
- Faster growth can deplete/degrade the natural resources e.g. climate change though investing in green energy could promote growth and environmental improvements

The importance of the size of the output gap in trade offs

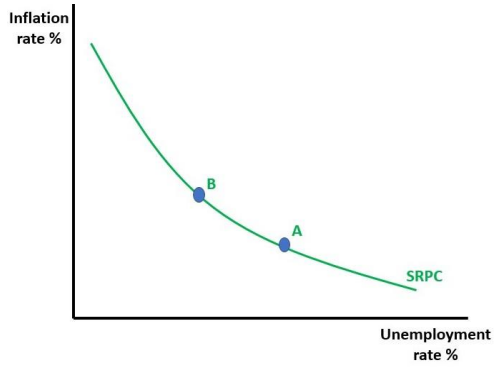


At AD1, price level is PL1 and real GDP is Y1; there is a negative output gap of Y1Yfe, implying some unemployment.
AD increases to AD2. The negative output gap closes; unemployment falls, but there is some demand-pull inflation.
Rising AD reduces unemployment when there is a negative output gap.

AD increases further to AD3; there is a positive output gap. This is unsustainable because resources are being overstretched; there will be upward pressure on wage costs and other input costs; SRAS will shift left until AD3=LRAS. The price level will rise, inflation increases. **Rising AD causes inflation when there is a positive output gap.**

Phillips curve

The **Phillips Curve** is an economic model that shows the possible **inverse** non-linear relationship between the **unemployment rate** and **the rate of inflation**



Explaining the Phillips curve

At A: When unemployment is high, inflationary pressures in an economy tend to be weak; there is lots of spare capacity (negative output gap) in the economy, so reducing unemployment does not put much upward pressure on wages and prices.
At B: As unemployment falls further, then wage pressures and price pressures may start to accelerate – the gradient of the curve steepens If unemployment falls even lower, the risk of a significant increase in inflation goes up - the output gap is likely to be positive and factor markets are experiencing shortages.

Challenges to the Phillips curve

Stagflation – when both unemployment and inflation are high (a **stag**nant economy with in**flation**)
The short run Phillips curve could shift out if **expectations of inflation** increase, or inwards if expectations of inflation decrease
Some monetarist economists do not believe the inflation-unemployment trade-off exists in the long run (the long-run PC Is vertical), meanwhile Keynes though it was possible to have differing levels of unemployment at the same inflation rate.

Monetary policy – interest rates

Monetary policy

Demand-side monetary policy: use of interest rates, changes in the money supply and/or changes in the exchange rate to affect AD – run by the independent Bank of England (BoE) in the UK.

Bank base rate: the main interest set by the Bank of England; it is the rate at which commercial banks can borrow from the BoE.

Market interest rates: rates of interest available to borrowers and savers which vary depending on risk, amount borrowed/saved, access to savings etc; they typically follow the Bank base rate up/down.

Quantitative easing or QE: the BoE's asset purchase scheme to increase the money supply (it is called quantitative tightening or QT when it is reversed).

Inflation target

Inflation target: in the UK CPI inflation target = 2% +/- 1 % point

Monetary policy adjusted AD to control inflation, meet the target and achieve price stability

Nominal v real rate of interest: nominal is the actual rate paid; real rate is the nominal rate *adjusted for inflation* eg nominal = 5%, inflation rate = 3%, real rate is approximately 2%

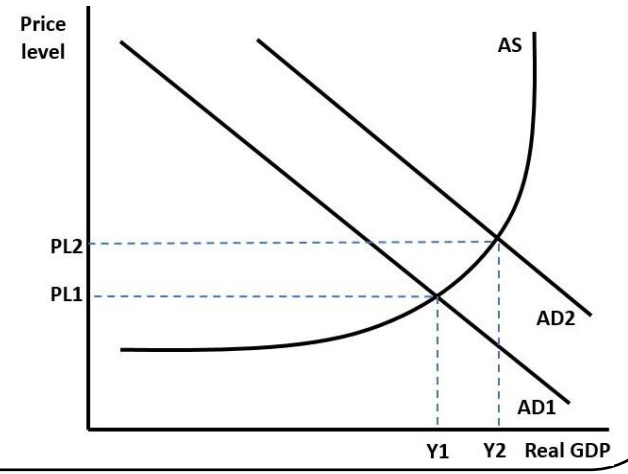
Monetary policy transmission mechanism

How interest rate changes feed through to AD and influence inflation:

- Higher interest rates raise the cost of borrowing, which slows consumer spending C and business investment I.
- This reduces AD aggregate demand for goods and services, which in turn eases upward pressure on retail prices.
- Higher interest rates lead to an appreciation of the currency making imports cheaper which then helps to reduce inflation.
- Higher interest rates increase the return on savings, which encourages saving and helps to reduce inflationary pressures from excess aggregate demand.
- Central banks might also think that an increase in the cost of borrowing sends a message to businesses and unions when negotiating pay settlements.

Using monetary policy to influence the economy

- If deflation is a threat, the BoE can **cut interest rates to boost AD** from AD1 to AD2, increasing the price level from PL1 to PL2 and increasing real GDP (Y1 to Y2)
- If inflation is above target, the BoE can **increase interest rates to reduce AD** from AD2 to AD1, reducing the price level from PL2 to PL1, but this could slow growth as real GDP falls (Y2 to Y1) and cause some unemployment



Bank of England Monetary Policy Committee (MPC)

Central bank: the monetary authority and major regulatory bank in a country. A central bank is responsible for operating monetary policy and maintaining financial stability e.g. the UK's BoE

The MPC consists of **nine members** who meet eight times a year to set the base rate and decide if QE (or QT) is needed. The Governor of the Bank has the casting vote.

Factors considered by the BoE MPC when making bank base rate decisions

- Rate of growth of real GDP and the estimated size of the output gap
- Forecasts for price inflation
- Rate of growth of wages and other business costs
- Movements in a country's exchange rate
- Rate of growth of asset prices such as house prices
- Movements in consumer and business confidence
- External factors such as global energy prices and inflation in other countries
- Financial market conditions including the rate of growth of credit / money

Monetary policy - QE

Quantitative easing (QE)

Quantitative easing or QE: the BoE's asset purchase scheme to increase the money supply (It is called quantitative tightening or QT when it is reversed). QE:

- increases the supply of money in the banking system
- encourage commercial banks to lend at cheaper interest rates to small & medium sized businesses
- is a form of **expansionary** monetary policy
- has been used as a technique to **stimulate aggregate demand** at a time when nominal interest rates have fallen to historically low levels

How QE works

Central bank creates new money electronically to make **large purchases of assets (bonds)** from the private sector

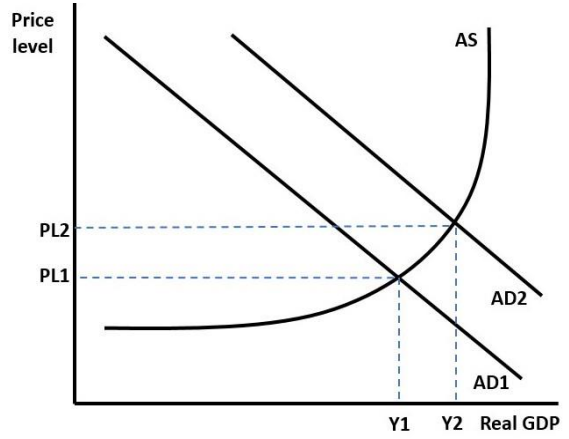
- Commercial banks receive cash from BoE asset purchases, and this increases their **liquidity** and might encourage them to lend out to customers which will help to stimulate an increase loan-financed consumption C & investment I
- Increased demand for government bonds increases the market price of bonds.
- Higher bond price causes a fall in the yield on a bond (there is **an inverse relationship between bond prices and yields**).
- Lower bond yields/long term interest rates may cause the currency to depreciate, which can increase net exports (X-M)
- Those who have sold bonds may use the extra cash to buy assets with relatively higher yields such as shares of listed businesses and corporate bonds; if asset prices rise this can create a positive wealth effect on C

When has QE been used

Many countries have used QE e.g UK, USA, Japan, Eurozone...particularly after the Global Financial Crisis 2007-9 and during the pandemic.
The UK did £375bnof QE 2009-12, £60bn after Brexit vote in 2016, BoE further increased QE in COVID up to a total of £895bn by March 2021

Using QE to influence AD and the economy

- The GFC caused a prolonged recession and interest rates were brought down to a very low level but there was still a fear of deflation
- The BoE began to QE **to boost AD** from AD1 to AD2 because interest rates could not really be cut more, helping to increase the price level from PL1 to PL2 and promoting economic recovery in real GDP (Y1 to Y2)



Expansionary v contractionary monetary policy

Expansionary (reflationary/looser): cut interest rates, increase the money supply via QE to **stimulate AD growth** to prevent deflation; a depreciation on the currency can boost AD too
Contractionary (deflationary/tighter): raise interest rates, decrease the money supply via QT to **slow AD growth** and help control inflation; an appreciation on the currency can slow AD too

Some strengths and weaknesses of demand-side policies

- Monetary and fiscal policy can **conflict** as well as complement each other e.g. government pursued austerity in 2010 (tighter fiscal policy) while BoE loosened monetary policy
- **Time lags:** some fiscal policy can affect AD quite quickly e.g. a cut in income ta, but changes in the base rate take 18-24 months to influence inflation
- Interest rates have **less impact** because home ownership is low in the UK and more mortgage holders fix their interest than in the past
- Loosening fiscal policy to boost AD can increase the **budget deficit and National Debt**, especially if growth does not pick up
- Both fiscal and monetary demand-side policies can have an impact on the **distribution of income**; there may be winners and losers

Monetary policy – exchange rate

Exchange rate

Exchange rate: the price of one currency in terms of another – in other words, the purchasing power of one currency against another.

Bilateral exchange rate: one currency in terms of one other currency e.g. £1 = $1.05

Multilateral exchange rate: one currency in terms of a group of other currencies e.g. the effective or trade-weighted index

Trade-weighted index: a weighted average exchange rate expressed as an index (base year =100)

Nominal exchange rate: the price of the domestic currency (say the UK pound) in another foreign currency

Real exchange rate: nominal rate adjusted for relative inflation rates; i.e. the product of the nominal exchange rate (the dollar cost of a euro, for example) and the ratio of prices between the two countries.

Exchange rate movements

Depreciation: A currency depreciation happens inside a floating exchange rate system and means that one currency buys less of another currency. It falls in value.

Appreciation: A currency appreciation happens within a floating exchange rate system and is an increase in the external value of one currency in relation to another currency. It rises in value.

Devaluation: devaluation happens inside a fixed or semi-fixed exchange rate system; the central bank reduces the official peg currency anchor price for official trading.

Revaluation: revaluation happens inside a fixed or semi-fixed exchange rate system; the central bank increases the official peg currency anchor price for official trading.

Effects of a depreciation/devaluation

When a currency depreciates or is devalued there is:

- An increase in import prices
- A decrease in export prices

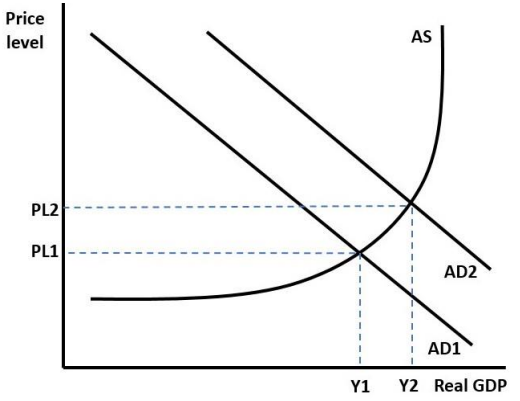
This can lead to an increase in X and a fall in M, increasing net X demand (X-M_ and increasing AD, ceteris paribus

The increase in import prices may add to business costs, especially if raw materials, energy, components are imported from abroad.

An appreciation or revaluation has the opposite effects

Using exchange rates to influence AD and the economy

- A depreciation/devaluation of the currency **boosts AD** from AD1 to AD2 promoting economic recovery in real GDP (Y1 to Y2) but causing some demand-pull inflation PL1 to PL2
- The increase in import costs could cause a **left shift in AS** as the costs of production of businesses increase. This can cause some cost-push inflation and may contribute to a slowdown in growth
- *An appreciation/revaluation is likely to reduce AD (net X fall) but may bring production costs down; these would help reduce inflation*

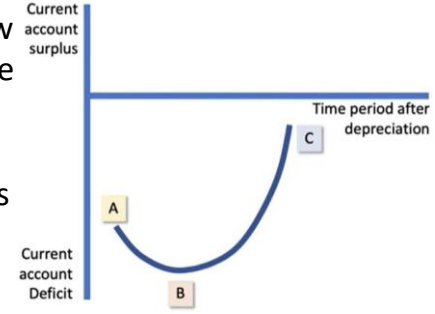


Short run v long run effects of currency movement

A depreciation/devaluation may not increase net export demand if the PED for exports and the PED for imports is low

- In the *short run*, PEDs may be inelastic because there are already many contracts in place that need to run through. The trade balance may worsen initially.
- In the *long run*, the elasticities increase as new contracts can now be made at the new exchange rate. Net export demand picks up and the trade balance improves.

This time lag effect is called the **J-curve effect**



Fiscal policy

Fiscal policy

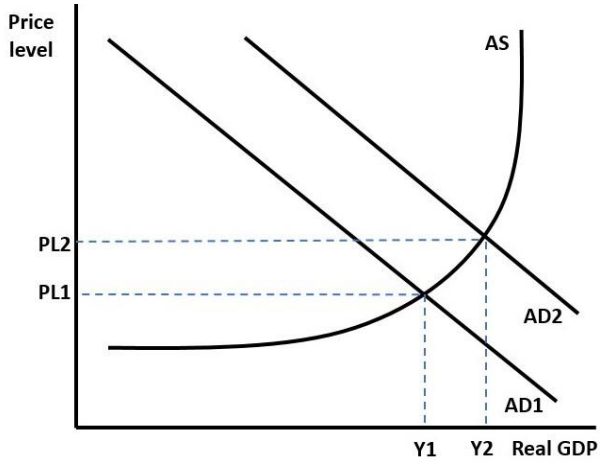
Fiscal policy: use of taxation, government spending and government borrowing to influence the economy.
Demand-side fiscal policy: fiscal policies that aim to manipulate aggregate demand (AD) to achieve the macroeconomic objectives
Supply-side fiscal policy: fiscal policies that aim to improve the supply-side of the economy

Fiscal policy: taxation

Direct tax: a tax on income/wealth e.g. income tax, employee NICs, corporation tax, capital gains tax
Indirect tax: a tax on spending e.g. VAT, excise duties
Progressive tax: a tax that takes a higher proportion of income from those on higher incomes
Proportional tax: a tax that takes the same proportion of income whatever the level of income
Regressive tax: a tax that takes a lower proportion of income from those on higher incomes

Using demand-side fiscal policy to influence the economy

Initial equilibrium at Y1 and PL1.
Government cuts income tax, stimulating a rise in consumer spending which shifts AD from **AD1 to AD2**, ceteris paribus.
Real GDP increases from **Y1 to Y2.** Short run **economic growth**, helps to close the negative output gap, drawing **unemployed resources into use**, but there may be some demand-pull **inflation** (PL1 to PL2).
A **fiscal multiplier effect** could further stimulate AD growth and real GDP may increase further.



Public spending

Public spending: spending by the government to influence AD
Current spending: government consumption G = spending on the say-today costs of running public services e.g. wages of teachers, energy bills for hospitals; directly affects AD
Capital spending: government investment in the economy's infrastructure e.g. building hospitals & housing, new roads/railways

Using demand-side fiscal policy to influence the economy

Increasing public spending adds to the G component of AD (same shift as in diagram on income tax cut; if government increases its spending on capital projects, this increases the I component of AD (and in the long-term, if successful, could also shift AS to the right)

Government borrowing

Budget deficit or fiscal deficit: the annual amount the government borrows to make up the gap between its income (mostly tax revenue) and its spending. A net injections into the circular flow G>T; it is a flow
National debt (public sector net debt): a stock of the total accumulation of budget deficits (government borrowing) that is still to be repaid
Balanced budget: G=T
Budget surplus: a net withdrawal from the circular flow G<T; the government may be able to pay back some of its debt

Using demand-side fiscal policy to influence the economy

Increasing the budget deficit is a **net injection i**nto the economy; it adds to AD; if the government borrows to invest this also adds to AD (and can add to AS too). AD shifts right as in the diagram.
A **fiscal multiplier** may kick in further stimulating growth.

Supply-side policies

Supply-side policies (SSPs)

Supply-side policies: policies that focus on increasing the supply of goods and services in an economy to encourage greater productivity and faster economic growth.

Main aims of SSPs

- Improve **incentives** to work and invest in people's skills (human capital)
- Increase labour and capital **productivity**
- Increase occupational and geographical **mobility of labour**
- Increase **capital investment** and **research and development** spending
- Promote **contestability** and stimulate **innovation** (**dynamic efficiency**)
- Encourage **start-ups** and expansion of new businesses especially those with significant **export potential**/promote **economic diversification**
- Improve **price & non-price competitiveness** in global markets
- Improve the ***trend rate of sustainable growth*** **of real GDP** to help support improved **living standards &** better **regional economic balance**

Laissez-faire/market-based SSPs

Laissez-faire or market-based SSPs remove unnecessary government intervention to free up markets, competitive forces & incentives to increase the long run trend growth rate

Tax cuts (fiscal SSPs): Lowering income, corporate, and capital gains taxes provides individuals and businesses with more disposable income and greater after-tax profits, thereby **incentivising** work, investment, and entrepreneurial activities

Deregulation/privatisation: Reducing regulations/bureaucratic red tape can **lower compliance costs** and make it easier for firms to operate, expand, and innovate. Firms may enter markets to make them **more contestable/competitive**. Private ownership may **increase competitiveness** via the profit-incentive

Trade liberalisation: Reducing trade barriers, such as tariffs and quotas, can stimulate international trade and stimulate investment in exports; promotes **international competitiveness**

Intellectual Property protection: Strong intellectual property rights protection encourages **innovation and entrepreneurship** by ensuring that creators and inventors can profit from their ideas and inventions.

Labour market reform: more flexibility to reduce costs of hiring and firing; opening up to inward skilled migration; reducing trade union power

Problems with market-based SSPs

Income inequality: Tax cuts that may benefit high-income earners and reductions in social safety nets can lead to a wider wealth/income gap

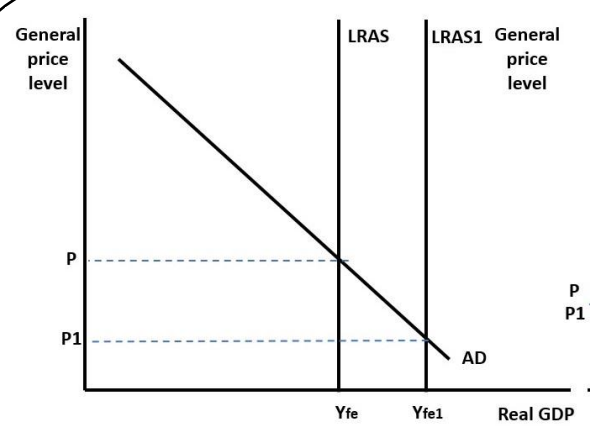
Reduced social safety nets: Critics argue these policies can lead to reduced public services, including healthcare, education, and welfare programmes and may increase poverty

Underinvestment in public goods: underinvestment in critical public goods like infrastructure, healthcare, and education may cause slower long-term economic growth.

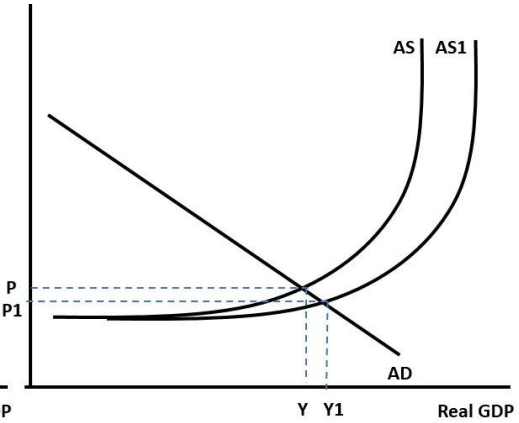
Market failures: Free markets are not perfect and can lead to market failures, such as externalities (costs or benefits imposed on third parties) and public goods problems (goods with non-excludable and non-rivalrous consumption).

Financial instability: Deregulation and lack of oversight in financial markets can contribute to financial instability e.g prior to GFC

SSPs in the AD/AS model



In the classical model, successful SSPs shift LRAS to the right (LRAS to LRAS1); allows AD to grow faster without inflation pressure building



In the Keynesian model, successful SSPs shift AS to the right (AS to AS1); also allows AD to grow faster without inflation pressure building

Supply-side policies

Interventionist SSPs

Interventionists SSPs: Interventionists believe the government can directly intervene to improve the long-term supply-side of the economy.

Types of interventionist SSPs

Investment in infrastructure: Government investment in capital such as the transport, energy & communication networks in the economy, building more social housing, which can also help private sector businesses.

Interventions to reduce poverty: Enables those on very low incomes to find work and contribute to the economy more fully; opportunities for more entrepreneurship and improved labour productivity if skills are built up.

Provision of key public and merit goods: Government can invest in human capital by providing healthcare and education/training; spending on public goods such as defence and internet provision can improve security and communication encouraging more investment and FDI; these are supply-side fiscal policies.

Investment in ideas: the government can help fund R&D projects that lead to more innovation, dynamic efficiency and competitiveness at home and abroad.

State ownership of key businesses: nationalisation of, for example, water, energy & transport industries can help an economy develop and, if provided effectively, can encourage private sector businesses to invest and grow.

Policies to tackle labour market failure: the government can provide more education/training to increase occupational mobility, use regional policy to improve geographical mobility & set up an immigration system that ensures skills gaps and labour shortages are not a problem.

Ideas for evaluation of market-based & interventionist SSPs

Time lags: there is often a significant short-term cost (opportunity cost) while the benefits come through in the long term, especially for interventionist SSPs

Income distribution: interventionist SSPs often reduce inequality, while market-based SSPs may increase it; there may be winners and losers depending on which *economic agents' perspectives* are being considered

Potential for government failure: & unintended consequences as government lacks perfect information

Problems with interventionist SSPs

Bureaucracy and inefficiency: Government intervention can lead to bureaucratic inefficiencies, which may slow down economic processes and result in the misallocation of resources.

Crowding out private sector: Interventions, e.g., those involving public ownership/control of industries, may crowd out private investment and entrepreneurship.

Reduced incentives: High taxation and extensive regulation can reduce individuals' and businesses' incentives to work, invest, and innovate.

Ineffective redistribution: High levels of taxation can lead to capital flight and tax evasion, undermining the intended redistribution.

Costly and inefficient state enterprises: State-owned enterprises can become inefficient and financially burdensome, as they may not operate with the same degree of cost-efficiency and innovation as private companies.

Examples of market-based & interventionist SSPs

- Privatisation – Royal Mail in 2016 (Channel 4 has been proposed)
- Deregulation of the UK retail energy market
- Creation of new 8 Free Ports and Regional Enterprise Zones
- Tax free childcare: £500 every 3 months (up to £2,000 a year) for each child
- Creating 20 Institutes of Technology, roll-out of T Levels, new National Skills Fund
- Unemployment: Kickstart scheme for long term unemployed, Apprenticeship Levy on Firms
- Reforms to the UK immigration system (moving to a points-based system)
- Super-deduction tax incentive for business capital investment (125% tax allowance)
- Major infrastructure projects (+ creating the new UK Infrastructure Bank)
- Lower Thames Crossing, London Super-Sewer
- Funding for rollout of electric vehicle charging infrastructure
- UK Gigabit Programme and the Shared Rural Network.
- Relaxation of planning for renewables (off-shore wind) / UK Emissions Trading Scheme

Nature & Purpose of Economic Activity and Scarcity, Choice and Allocation of Resources

The Purpose of Economic Activity

To produce goods and services to meet our needs and wants
Need: something you must have to survive or to do something
Want: something you desire but it is not essential

Basic Economic Problem

The **basic economic problem** is that there are infinite wants and finite resources. Resources are **scarce** in relation to wants.
Choices need to be made about how to **allocate** resources among competing uses: **What to produce? How to produce? For whom to produce?**

Resources = factors of production

Resources are used in the production process:
Land – natural physical resources
Labour – human input
Capital – man-made resources, eg machinery
Enterprise/Entrepreneurship - the ability and willingness to organize, coordinate, and take risks in the production process

Rewards to factors of production

Land = rent
Labour = wages
Capital = interest
Enterprise = profit

Microeconomics v Macroeconomics

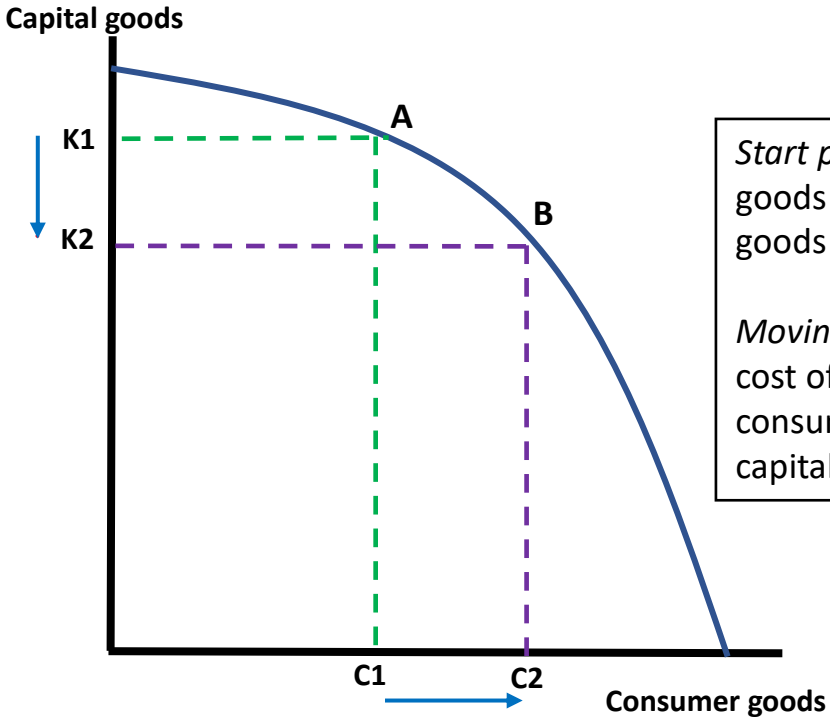
Microeconomics is a branch of economics that studies the behaviour of individuals and firms in the market.
Macroeconomics considers the economy as a whole

Economic agents and rational decision-making

What rational economic agents aim to maximise:
Consumers: total utility
Workers: wages and benefits from work
Producers: profit
Government: social welfare

Opportunity Cost

Opportunity cost is the value of the next best alternative foregone (given up) when a ***choice*** is made



Start point A: K1 capital goods and C1 consumer goods are produced.

Moving to B: The opportunity cost of producing C1-C2 more consumer goods is the K1-K2 capital goods foregone

Positive and normative statements

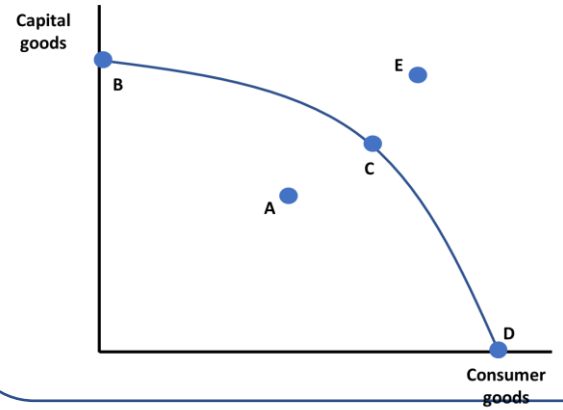
Positive statements describe the world as it is, without making any value judgements. They are based on **objective facts**, and they can be proven or disproven.
Example: A rise in the minimum wage decreases employment.

Normative statements express an opinion about what ought to be. They are subjective statements - i.e. they carry **value judgements**.
Example: The government should increase spending on healthcare.

Production possibility diagrams

Production possibility frontier (PPF)

A **production possibility frontier (PPF)** shows the maximum possible output combinations of two goods or services an economy can achieve when all resources are fully and efficiently employed



PPFs are usually curved because of the **Law of Diminishing Returns** – the marginal (extra) output of consumers goods diminishes as more factor resources are allocated to it.

PPFs and productive efficiency

Using the diagram above:

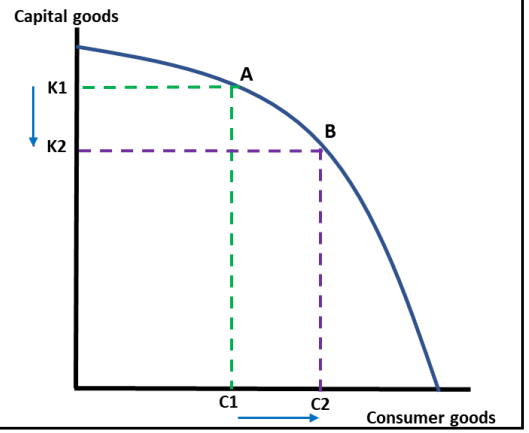
- Point A – inefficient, some resources unemployed
- Points B, C & D – efficient, all resources fully employed
- Point E – unattainable with current resources and state of technology

Movements along the PPF and opportunity cost

Start point: K1 capital goods and C1 consumer goods are produced.

The **opportunity cost** of producing C1C2 more consumer goods is the K1K2 capital goods foregone

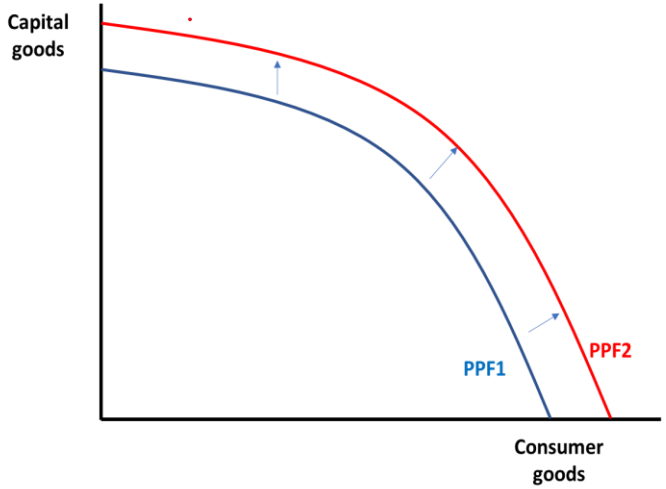
Opportunity cost increases as more consumers goods are produced



Shifts in PPFs

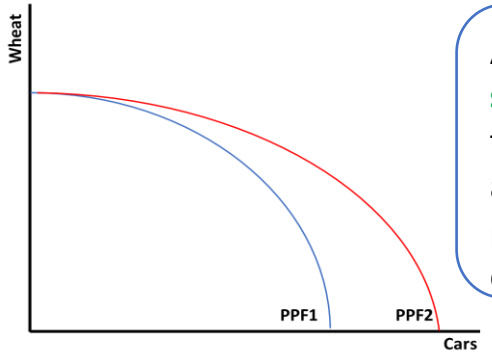
What causes an outward shift in the PPF?

- An increase in the quantity of the factors of production: eg discovery & extraction of new natural resources
- An increase in the quality of the factors of production: eg increase in labour productivity due to better management
- An advance in technology: eg a new innovation in resource use



What causes an inward shift in the PPF?

- A decrease in the quantity of the factors of production: eg war or conflict or natural disasters
- A decrease in the quality of the factors of production: eg capital scrapping or labour hysteresis (loss of workers' skills) in a prolonged recession



A **non-parallel shift**: a technological advance in car production only

A **straight line** PPF indicates resources are equally efficient at producing both goods shown on the PPF axes – opportunity cost is constant

Individual economic decision-making

Consumer behaviour

Rational consumer behaviour: decision-making process that is based on making choices that maximise utility. This assumes:

- Consumers make all choices *independently*
- Consumers have fixed and *consistent preferences*
- Consumers have *full information*
- Consumers always make the *optimal choice* given their preferences

Law of Diminishing Marginal Utility

Total utility – the total satisfaction the consumer gets from purchasing units of a good. Rational consumers aim to maximise their total utility.

Marginal utility - the change in total utility from consuming an extra unit of a product.

Law of Diminishing Marginal Utility – as a consumer buys and consumes more units of a good, the extra satisfaction gained diminishes. This means at higher quantities, consumers are less willing to pay a higher price, helping to explain the downward sloping demand curve.

Importance of the margin when making choices

Rational consumers make decisions by calculating the marginal cost (change in total cost when one more unit is bought) and marginal benefit (change in total when one more unit is consumed)

Imperfect information

Information failure occurs when people have inaccurate, incomplete, uncertain or misunderstood data and so make potentially 'wrong' choices

Information gaps exist when either the buyer or seller does not have access to the information needed for them to make a fully-informed decision, leading to a misallocation of scarce resources = market failure

Important information failure terms

Symmetric information – for markets to work, buyers and sellers need to have the same perfect information

Asymmetric information – buyers and sellers have different amounts of information e.g. buyers often know less than sellers when buying second-hand cars; buyers often know more than sellers when buying car insurance

Adverse selection - people taking out insurance are often those at highest risk e.g. a person leading an unhealthy lifestyle is more likely to take out health insurance, meaning more payouts for insurance company

Moral Hazard – being insured can make you more careless e.g. banks made risky decisions before the global financial crisis aware that they would likely receive bail-outs

Principal-agent problem – goals of the principals, those who lose/gain from a decision, are different from the agents, those making the decisions e.g. managers (agents) may have more information than shareholders (principals)

Policies to address information failure/gaps

Government policies can ***improve information*** to help producers and consumers value the actual costs and benefits more accurately, reducing or eliminating the market failure. Remember that the government may act on poor/incomplete information so there may be ***government failure.***

- Compulsory labelling on products
- Improved nutritional information on food/drinks
- Hard-hitting anti-speeding advertising
- Campaigns to raise awareness of risks of drink-driving/drug abuse/ smoking/vaping
- Campaigns on dangers of gambling addiction
- Performance league tables for schools/school inspections
- Consumer protection laws
- Industry standards and guarantees for selling used products

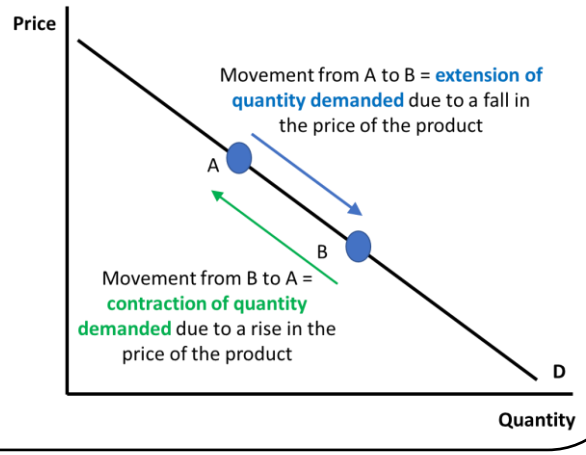
Demand

Demand concepts

Effective demand – demand supported by intention and ability to buy
Latent demand – willingness to buy but not yet ability to buy
Joint or complementary demand – demand for one good is closely linked to the demand for another, ie two or more goods that go well together
Competitive demand - two or more goods that are close substitutes for each other
Derived demand – when demand for one product drives the demand for another (eg demand for factors of production driven by demand for final goods)
Composite demand – good is demanded for more than one use
Individual demand – a consumer's demand for a good/service
Market demand – all consumers' demands in the market summed together

Movements along the demand curve

Law of Demand – as price falls, the quantity demanded increases and vice versa. **D**emand slopes **d**ownwards to the right
Extension in demand – a movement along the demand curve from A to B (lower P, higher Qd)
Contraction in demand – a movement along the demand curve from B to A (higher P, lower Qd)



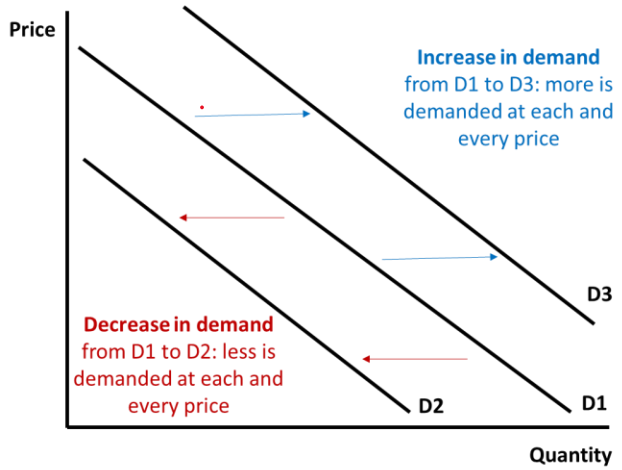
Ceteris Paribus

Ceteris paribus – all other influencing factors are held constant
The demand curve is drawn "ceteris paribus". Other factors affecting demand, such as income and tastes, are held constant to show how demand varies with price.

Shifts in demand (non-price determinants of demand)

Factors causing a shift in demand:

- Change in tastes/preferences
- Change in incomes
- Change in the price of related goods (complements or substitutes)
- Change in size/structure of the population
- Changes in interest rates
- Changes in the law
- Changes in expectations



Why the demand curve slopes downwards

Substitution effect – consumers substitute in favour of the good that become relatively cheaper; if price of good X falls, consumers buy more of good X
Real income effect – if the price of good X falls, the consumer buying good X will gain purchasing power; this extra 'income' available for spending can be used to buy more X

Consumer irrationality/behavioural economics

When using demand, economists assume consumers are rational but they may be **irrational** because:

- Bounded rationality and bounded self-control
- Biases in decision making – rules of thumb, anchoring, availability & social norms
- The importance of altruism & perceptions of fairness
- Choice architecture & framing
- Nudges
- Default choices, restricted choice & mandated choice

Price Elasticity of Demand (PED)

Price Elasticity of Demand

Price elasticity of demand – the responsiveness of quantity demanded of a good to a change in its price

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

Values for PED

PED is ***negative*** because the quantity demanded is inversely related to price.

The values of PED ranges from 0 to – infinity. The mid-value is -1

Inelastic demand: quantity demanded is not responsive to price changes; the % change in Qd is < the % change in P; value is between 0 and -1

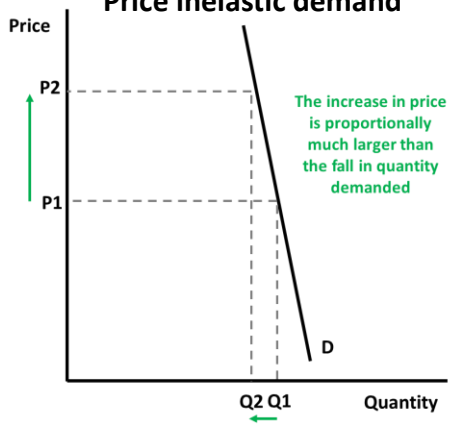
Elastic demand: quantity demanded is very responsive to price changes; the % change in Qd is more than the % change in P; value is between -1 and -∞

Unit or unitary demand: PED = -1; the % change in Qd is the same as the % change in P

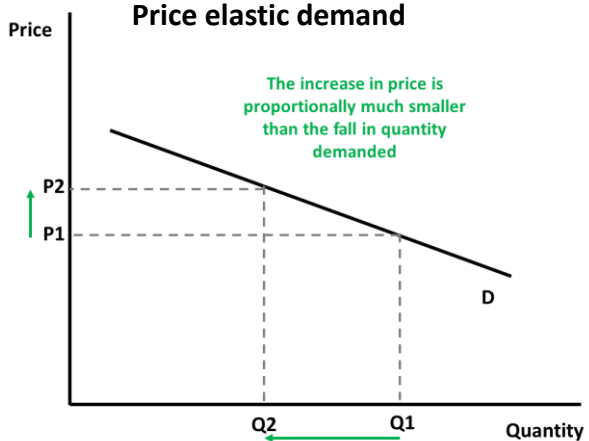
Perfectly elastic demand: PED = -infinity

Perfectly inelastic demand: PED = 0

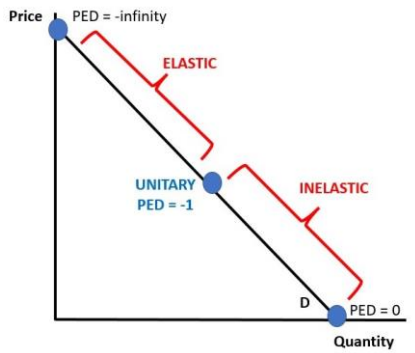
Price inelastic demand



Price elastic demand



PED along a straight-line demand curve



PED is NOT the gradient or slope of the demand curve

- PED = -1 at the mid-point of the demand curve
- PED is elastic at high prices
- PED is inelastic at low prices
- PED varies all the way along the demand curve

PED and total revenue (TR)

When PED is elastic:

- a rise in P leads to a more than proportionate fall in Qd, so TR falls
- a fall in P leads to a more than proportionate rise in Qd, so TR rises

When PED is inelastic:

- a rise in P leads to a less than proportionate fall in Qd, so TR rises
- a fall in P leads to a less than proportionate rise in Qd, do TR falls

When PED = unitary, TR will not change when price changes

Factors influencing PED

- Availability of close substitutes
- Cost of switching suppliers
- Breadth of product definition
- Degree of necessity
- Time frame when making choice
- Brand loyalty
- %of income spent on product
- Habitual demand

Uses of PED

- Determination of pricing policy/impact on revenue
- Indication of competition faced (number/closeness of substitutes)
- Price setting in price discrimination
- Government decision on which goods to tax indirectly

Income elasticity of demand (YED) and cross price elasticity of demand (XED)

Income Elasticity of Demand (YED)

Income elasticity of demand – the responsiveness of demand for a good to a change in income

$$\text{YED} = \frac{\%\text{ change in demand}}{\%\text{ change in income}}$$

Values for YED

YED is ***positive*** for normal goods (when income rises, the Qd increases)
YED is ***negative*** for inferior goods (when income rises, the Qd decreases)

Interpreting values of YED

Positive YED between 0 and +1: as income rises, there is only a relatively small increase in demand (and vice versa); this typically indicates the good is a necessity

Positive YED between +1 and + infinity: as income rises, there is a relatively large increase in demand (and vice versa); this typically indicates the good is a luxury

Negative YED: as income rises, there is a fall in the quantity demanded (and vice versa); this typically indicates the good is an inferior good

Normal v inferior goods

Normal goods are products or services for which demand increases as consumer income rises.

- When people's incomes go up, they tend to buy more of these goods.
- Examples of normal goods include restaurant meals, vacations, and higher-end electronics.

Inferior goods are products or services for which demand decreases as consumer income rises.

- When people's incomes increase, they typically buy less of these goods and may shift to higher-quality alternatives.
- Examples of inferior goods often include lower-quality or generic foods, used or older-model cars, and certain low-cost, generic products.

Cross elasticity of demand (XED)

Cross elasticity of demand – the responsiveness of demand for a good to a change in the price of a related good

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

Values for XED

XED is ***positive*** for **substitute goods** (when price of good B rises, the demand for good A increases and vice versa)
YED is ***negative*** for **complementary goods** (when the price of good B rises, the demand for good A decreases and vice versa)

Interpreting values of XED

Positive XED between 0 and +1: goods are weak substitutes

Positive XED between +1 and + infinity: goods are strong substitutes

Negative XED between 0 and -1: goods are weak complements

Negative XED between -1 and - infinity: goods are strong complements

Substitutes and complements

Substitutes are goods that can be used in place of each other to satisfy a similar need or desire, eg tea and coffee

Complements are goods that are typically consumed or used together because they enhance each other's value, eg tennis rackets and tennis balls

Uses of YED

- Effect of recession/growth on demand
- Business planning for product range
- Helps firms anticipate future demand

Uses of XED

- Marketing strategies, eg selling complements together / in bundles
- If a competitor changes its price, firms can work out the effect on their demand

Supply

Supply concepts

Joint supply – two or more goods that derive from a single production process; a change in the supply of one good leads to a change in the supply of a by-product

Individual supply – a producer's supply of a good/service

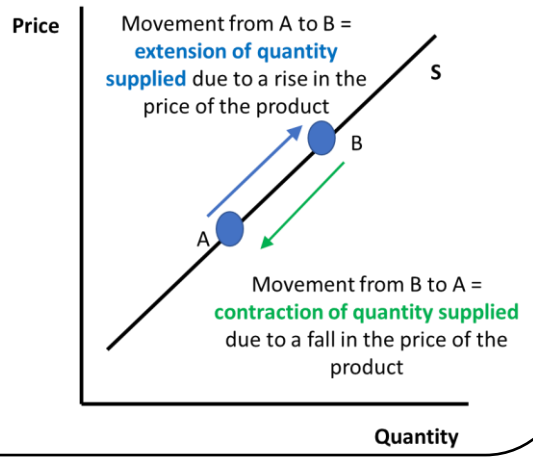
Market supply – all producers' supplies to the market summed together

Movements along the supply curve

Law of Supply – as price falls, the quantity supplied decreases and vice versa. Supply slopes upwards to the right

Extension in supply – a movement along the supply curve from A to B (higher P, higher Qs)

Contraction in supply – a movement along the supply curve from B to A (lower P, lower Qs)



Why the supply curve slopes upwards

Higher market prices motivate firms to supply more as they expect more profit.

Producing more increases the marginal cost of production so firms need. higher prices to cover these costs (assumes Law of Diminishing Returns)

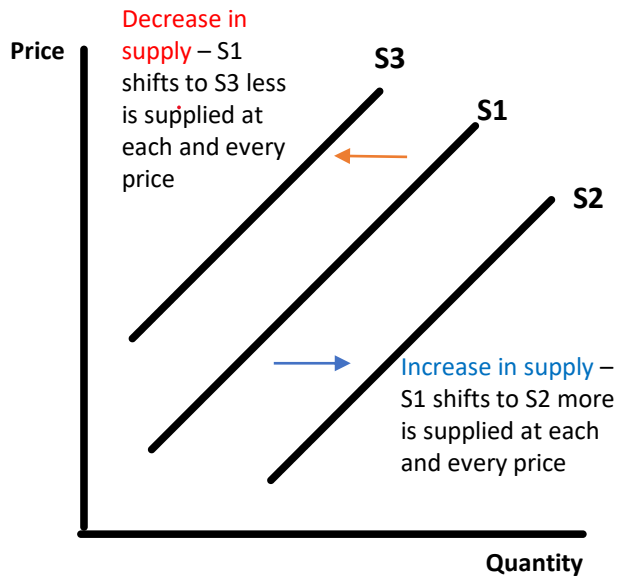
Ceteris Paribus

Ceteris paribus – all other influencing factors are held constant. The supply curve is drawn ceteris paribus. Other factors affecting supply, such as costs of production, are held constant to show how demand varies with price

Shifts in supply (non-price determinants of supply)

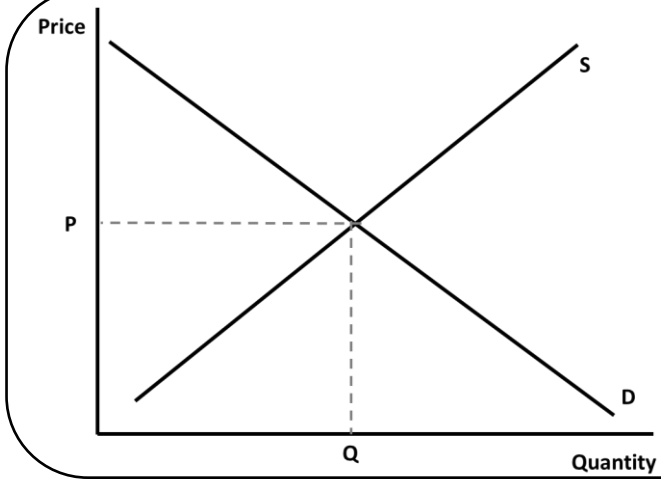
Factors causing a shift in supply:

- Change in the costs of production (raw materials, wages, energy....)
- Change in production technology
- Change in weather/climate
- Events such as strikes, pandemic
- Changes in indirect taxes
- Changes in producer subsidies
- Changes in the price of substitutes in production
- Changes in the number of firms supplying to the market



The Market

The market is created by the interaction of buyers (demand) and sellers (supply)



Equilibrium = a state of rest

- At equilibrium E1, there is one unique price P1, where the plans of producers match the plans of consumers
- The quantity demanded equals the quantity supplied at P1
- This is sometimes called the *market-clearing* price.

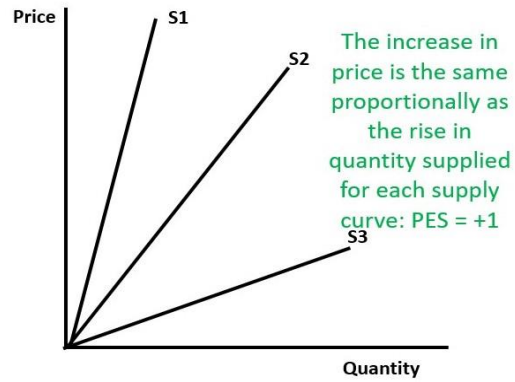
Price Elasticity of Supply (PES)

tutor2u

Price Elasticity of Supply

Price elasticity of supply – the responsiveness of quantity supplied of a good to a change in its price

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



Any straight line supply curve that starts at the origin has PES = +1

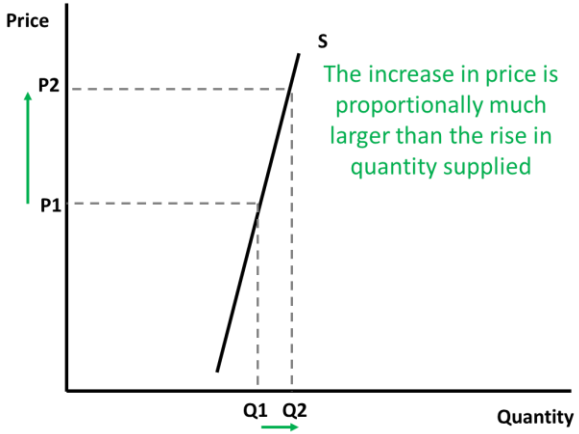
Values for PES

PES is ***positive*** because the quantity supplied is positively related to price
The values of PES ranges from 0 to + infinity. The mid-value is +1.
Inelastic supply: quantity supplied is not responsive to price changes; the % change in Qs is less than the % change in P; value lies between 0 and +1.
Elastic supply: quantity supplied is very responsive to price changes; the % change in Qs is more than the % change in P; value lies between +1 and +∞
Unit or unitary supply: PES = +1; the % change in Qs is the same as the % change in P
Perfectly elastic supply: PES = + infinity
Perfectly inelastic supply: PES = 0

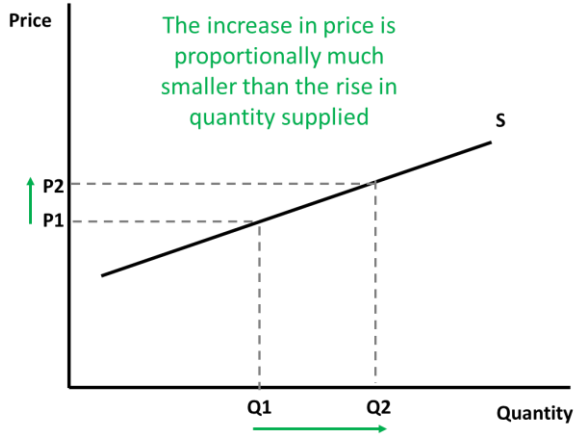
Factors influencing PES

- Time period
- Bottlenecks in supply
- Breakdowns in supply chains
- Spare capacity
- Stock levels
- Availability of producer substitutes
- Ease of entry into the market

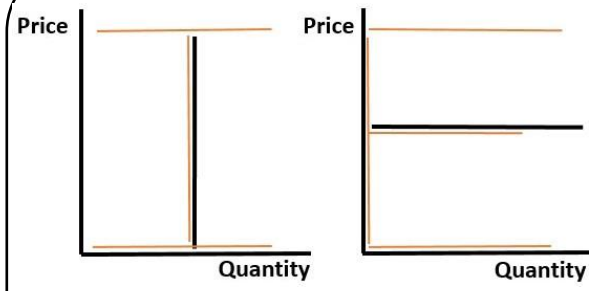
Price inelastic supply



Price elastic supply



Elasticity diagram tips

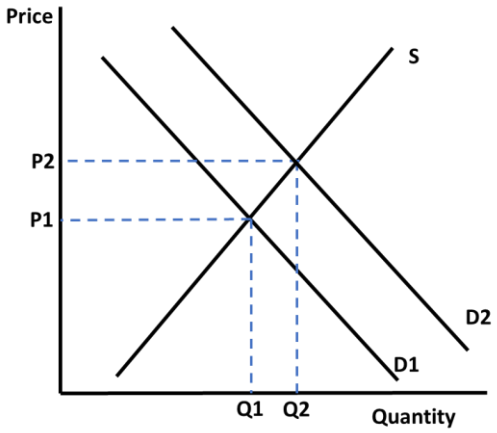


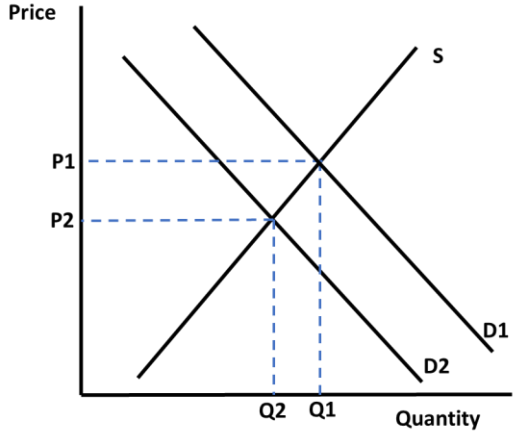
Sketch a line across the top of your diagram
This creates an I for the Inelastic curve and an E for the Elastic one.
Applies to both demand and supply

Steep curves are relatively inelastic, shallow curves are relatively elastic

Market: shifts in demand and supply, & interrelated markets

Shifts in demand





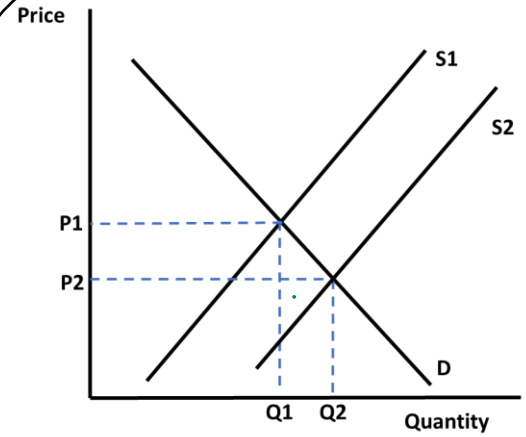
Increase in demand

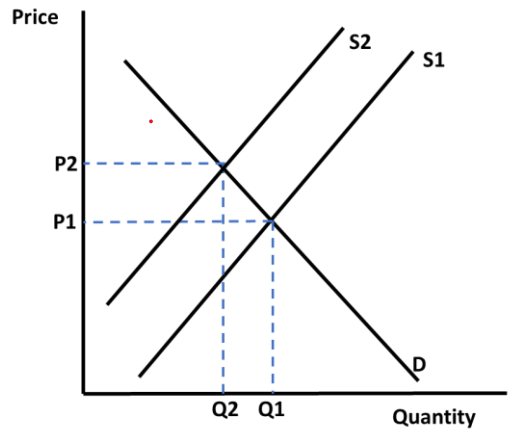
- Demand shifts right from D1 to D2
- At original price P1, there is now an excess demand.
- This signals to producers to increase price and extend their supply from Q1 to Q2 to restore the market equilibrium.
- The new equilibrium is at P2 and Q2

Decrease in demand

- Demand shifts left from D1 to D2
- At original price P1, there is now an excess supply.
- This signals to producers to reduce price and contract their supply from Q1 to Q2 to restore the market equilibrium.
- The new equilibrium is at P2 and Q2.

Shifts in supply





Increase in supply

- Supply shifts right from S1 to S2
- At original price P1, there is now an excess supply, so price falls.
- This signals to consumers to extend their demand from Q1 to Q2 to restore the market equilibrium
- The new equilibrium is at P2 and Q2.

Decrease in supply

- Supply shifts left from S1 to S2
- At original price P1, there is now an excess demand, price rises.
- This signals to consumers to contract their demand from Q1 to Q2 to restore the market equilibrium
- The new equilibrium is at P2 and Q2.

Interrelated markets

Substitutes - if supply of a good shifts left, this increases the market price, so the demand for a substitute will shift to the right

Complements/joint demand – if the supply of a good shifts right, this decrease its market price, which will cause demand for the complement to shift right

Composite demand – if the demand for a good increases, the quantity increases, this causes supply to shift left in the market for the good that is in composite demand

More interrelated markets

Joint supply – if the demand for a good decrease (left shift), then the market equilibrium quantity falls, so the supply of a good in joint supply will decrease (shift left).

Derived demand – if the demand for a final good increases, then the demand for the factors of production used to produce it will also increase.

ALL EXAMPLES CAN BE DONE 'VICE VERSA' and all assume CETERIS PARIBUS

Functions of Price & Consumer and Producer Surplus

Functions of Prices

Prices in markets help ***ALLOCATE*** the scarce resources between their competing uses via their signalling, incentivising and rationing functions.

Signalling

SIGNAL – prices provide key information to buyers and sellers; if the price changes because of a shift in demand, this signals to producers to adjust their output levels; if the price changes because of a shift in supply, this indicates to consumers to re-think how much they will purchase.

Incentivising

INCENTIVISE – higher prices can incentivise producers to extend supply as they anticipate more profit; lower prices can incentivise consumers to extend demand as they pay less for a good yielding the same utility (and vice versa)

Rationing

RATION – if supply is limited, the price rises, which rations the good to those who are most willing and able to pay;

When the functions of prices may not work effectively

Signalling - can fail if there are externalities; if the government imposes a maximum or minimum price; if the price set by producers is not at the equilibrium; if there is imperfect information
Incentivising – may be missing for public goods
Rationing – may not work if the government sets the price

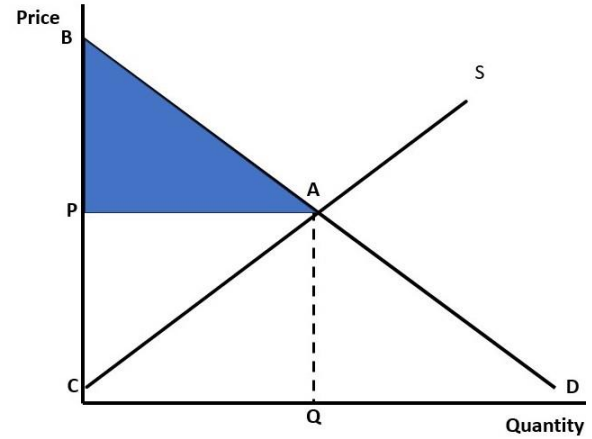
Consumer Surplus

Consumer surplus – the difference between the total amount that consumers are willing and able to pay for a good or service (indicated by the demand curve) and the total they pay (the market price). It is a measure of consumer welfare.

Producer surplus

Producer surplus - the difference between what producers are willing and able to supply a good for (indicated by the supply curve) and the price they actually receive (the market price). It is a measure of producer welfare.

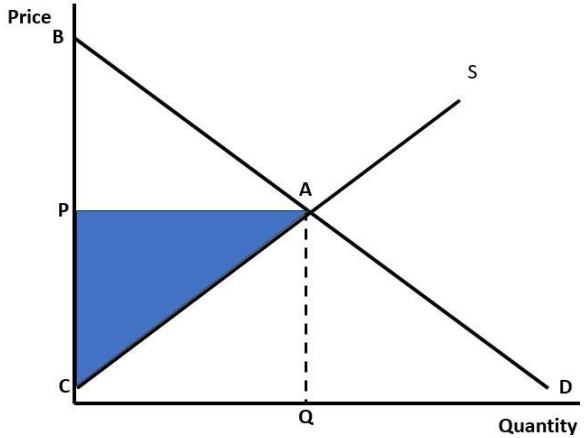
Diagram for consumer surplus



The consumer surplus is area APB.

If supply increases ie shifts right, the market price falls and the consumer surplus will increase (and vice versa)

Diagram for producer surplus



The producer surplus is area APC.

If demand increases ie shifts right, the market price rises and the producer surplus will increase (and vice versa)

Production and productivity, Specialisation, Division of Labour and Exchange

Production and productivity

Production converts inputs (the factors of production) into output
Factors of production – the resources used as inputs = land, labour, capital and enterprise
Short run - the time period where at least one factor of production is fixed
Long run – the time period when all factors of production are variable
Productivity measures the efficiency of a factor input
Labour productivity – output per worker or per labour hour
Total factor productivity – output per unit of input

Importance of productivity

Higher productivity can lead to:

- Higher profit
- Higher wages
- Lower unit costs
- Greater international competitiveness
- Better trade performance
- Faster economic growth

Specialisation & division of labour

Specialisation - the concentration of individuals, firms, or nations on producing a limited range of goods or services.
Specialisation can occur at household, firm, region and country level.
The **division of labour** - a form of specialisation where the tasks needed to produce an item are divided among workers.
Adam Smith argued that specialisation leads to increased productivity and economic growth in the *Wealth of Nations (1776)*

Advantages and disadvantages of specialisation and the division of labour

Advantages

Increased Productivity

- greater output from same resources
- allows workers to become more skilled & experienced in specific tasks, leading to higher efficiency
- develop specialist machinery, more automation

Lower Costs

- reduced training time and waste

Economies of Scale

- mass production possible including assembly lines
- larger quantities of identical goods can be produced more efficiently.

Disadvantages

Higher staff turnover

- workers may find repetitive tasks monotonous & unrewarding, leading to job dissatisfaction.

Dependency

- overreliance on one work/task/factory makes units vulnerable to staff illness or economic shocks.

Structural unemployment

- workers trained in fewer skills
- machines can replace some labour tasks (technological unemployment)

Lack of variety

- Mass produced goods can reduce consumer choice

Money and its role in exchange

Money – anything generally accepted in payment of a debt; removes the needs to barter, avoiding the double coincidence of wants
Characteristics of money: acceptable to all, portable, durable, easily divisible, uncounterfeitable and scarce in supply.

The Four Functions of Money

Medium of exchange –money facilitates transactions between buyer and seller; specialisation and the division of labour requires a means of exchanging goods and services; money promotes this.
Unit of account - a nominal unit of measure used to value/cost/price products, assets, debts, incomes and spending
Store of Value – an asset that holds value over time
Standard for deferred payment – the accepted way in each market to settle debt

Economic Systems: Free Market Economies

Economic system

Economic system is a network of individuals, organisations and institutions used by a society to resolve the basic problem of **what, how much, how** and **for whom** to produce.

Characteristics of a free market economy

Also known as a laissez-faire, market or capitalist economy:

- Private ownership of resources
- Owners of resources and producers are free to buy/sell
- Economic agents are motivated by self-interest
- Consumers have sovereignty – they determine what is produced by being willing and able to buy goods and services
- Income depends on the market value of an individual's work
- Resources are allocated by the **price mechanism** (market mechanism)

Free market economies still require the allocation of property rights and a legal system to protect them.

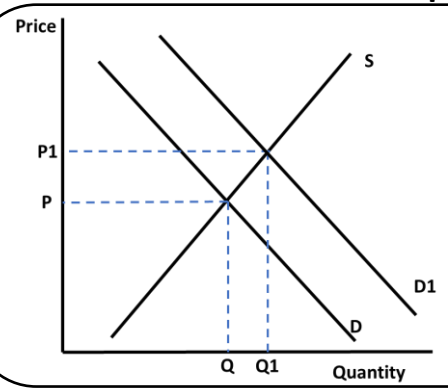
Advantages of free market economy

- Resources can be bought and sold
- Consumer sovereignty
- Freedom of choice
- Profit-motive and self-interest incentivises
- Incentive to worker harder for higher wages; productivity rises
- Firms face competitive forces driving down prices
- Incentive to innovate and invest in new ideas (dynamic efficiency)

The invisible hand

Adam Smith's 'invisible hand' - if economic agents act in their own best interests, the forces of demand and supply in the market can promote an efficient allocation of scarce resources for society

The price mechanism in action



- If consumers exercise their sovereignty and are willing and able to buy more of a good, the market demand curve shifts right
- Suppliers are incentivised to extend supply to meet the demand and can increase price to reduce the excess demand
- This causes the market price and quantity to increase
- The market has allocated more scarce resources to the production of this good – the quantity has increased.

Disadvantages of a free market economy

- Income/wealth inequality, and poverty
- Market failure can reduce social welfare
- Lack of provision of public goods
- Over-provision of goods with negative externalities
- Under-provision of goods with positive externalities
- Information gaps may cause market failure
- Unemployment/worker exploitation/low pay for some
- Environmental depletion/degradation
- Resources may be wasted on advertising and marketing
- Firms may develop monopoly power and push up prices
- Macroeconomic instability

Friedrich Hayek

Hayek came from the *Austrian School* of economics. He had a strong belief in the individual in an economy rather than government. In the 1930s **Keynes** supported active government intervention to stimulate growth, whereas Hayek did not. Hayek favoured market economies – he thought a small group of individuals in government would never have enough information to meet people's needs.

Economic Systems: Command Economies & Mixed Economies

tutor2u

Characteristics of a Command Economy (centrally planned)

- Government owns and allocates resources deciding what, how and for whom to produce
- Government sets productions targets and growth rates according to its view of people's wants
- Goods are allocated through rationing
- Workers are given job by the government
- Market prices do not inform resource allocation
- Queuing is used to ration scarce goods

Advantages of a Command Economy

- Resources are allocated by the government to maximise social welfare
- Relatively even distribution of income/wealth
- Workers are given jobs by the state; there is no unemployment
- Adequate provision of public goods
- Government should take externalities into account in decision-making
- Environmental protection possible
- Government can invest in economy's infrastructure easily
- Policies to manage the macroeconomy
- Welfare safety net
- National interest considered rather than individual profits

Karl Marx

In his *Communist Manifesto*, **Marx** defined a command economy as *'common ownership of the means of production'* . **Marx** argued free markets are chaotic and there is often surplus labour; labour specialisation and population growth push wages down – workers are exploited (not paid the value they add to production). He argued that capitalism would eventually push workers towards revolution against the capital owners. Communism is not the same as Socialism, but both favour more government intervention in the economy.

Disadvantages of a Command Economy

- Danger of government failure
- Difficult for the government to set and correct output planning targets and fix prices appropriately
- Government may not have enough information to make good decisions eg malinvestment by state
- Very bureaucratic – lots of red tape which reduces efficiency
- Underemployment
- Lack of choice for consumers
- Lack of incentives to be innovative and entrepreneurial
- Lack of incentives to work hard, causing lower productivity
- Corruption is likely to develop
- Shadow market activity can flourish

Mixed economy

There is a **mix** of private and public (government) sectors
Resources are allocated by the **price mechanism,** when it works efficiently, but the **government intervenes** to correct market failures
Aims to achieve the best aspects for both free market and command economies while avoiding their disadvantages.

Traditional Economies

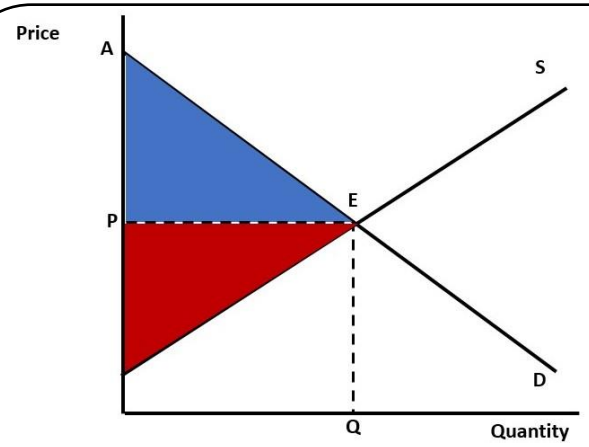
Traditional/subsistence economies are those characterised by family groups, low productivity, little specialisation, barter trade and no surplus production for investment
eg in world's most underdeveloped regions

Transition Economies

Transition economies are in the process of moving from a command economy to a mixed/free market economy. Markets are liberalised, state assets are privatised, state subsidies are removed. This can cause some short-term problems such as inflation and unemployment
eg Cuba, Eastern European countries

Market failure

Markets and the allocation of resources



In the absence of market failure, the price mechanism is a very efficient method of allocation scarce resources amongst competing uses. Social welfare (the consumer surplus plus the producer surplus) is maximised at the market equilibrium.

Allocative efficiency

Allocative efficiency occurs when **price = marginal cost.**

P>MC: If the value consumers place on the unit of the good exceeds the cost of producing that unit, it is efficient to allocate scarce resources to the production of that good.

P<MC: If the value consumers place on the unit of the good is less than the cost of producing that unit, it is efficient to allocate scarce resources to the production of that good.

Market failure

Market failure exists when the competitive outcome of markets is not efficient (or equitable) from the point of view of the economy as a whole, ie resources are not allocated as efficiently as they could be.

Complete market failure

Complete market failure occurs when the market does not supply products at all – there is a **missing market**.

Examples: public goods, some information failure such as asymmetric information, when there is a lack of property rights

Partial market failure

Partial market failure occurs when the market functions/exists, but it supplies the wrong quantity of a product.

Examples:

- Negative externalities from production and consumption
- Positive externalities from production and consumption
- Some information gaps
- Market concentration and frictions
- Irrationality (linked to behavioural economics).
- Inequality (some groups are not able to express their preferences through effective demand)
- Volatile prices
- Market pirices is deemed too high or too low by the government
- Merit goods
- Demerit goods

Rationale for government intervention in markets

Market failure provides a **rationale for the government to intervene** to correct the market failure (or at least reduce it).

There are a range of policies available for the government to use.

Examples:

- Indirect taxes
- Subsidies
- Regulations
- Bans
- Free provision at point of use
- Price controls (maximum or minimum prices)
- Competition policy
- Redistributive policies

If the government fails to improve the allocation of resources or makes it worse this is known as **government failure**.

Market failure: public goods

Characteristics of private goods

Private goods are goods and services supplied and sold through markets by private sector businesses. They are:

- **Excludable** – buyers can be excluded from benefiting from the good if they are not willing or able to pay for it
- **Rival** - one person's consumption of a product *reduces* the amount left for others to consume and benefit from
- **Rejectable** - can be rejected by the consumer if their needs and preferences or their budget changes

Characteristics of public goods

Public goods are defined by their characteristics:

- **Non-excludable** – once a good is provided it is impossible to prevent people from using and benefiting from it; non-payers can enjoy the benefits for free creating a **'free rider'** problem.
- **Non-rival** (or non-diminishable) - consumption of a good by one person does not prevent or reduce the benefits to another person consuming the good.
- **Non-rejectable** – the collective supply of a pure public good means it cannot be rejected by people.

Pure public goods v quasi public goods

Pure public good: non-excludable and non-rival all of the time, e.g. national defence, security, mass vaccination

Quasi public good (semi-public goods): has some, but not all public good characteristics i.e. it has one or other characteristics, or has both some of the time, but not all of the time. e.g. TV & radio broadcasting, toll bridge

Technological advances can change a pure public good into a quasi-public good or a quasi-public good into a private good

Public 'bads'

Public bads are non-excludable and non-rival, but provide dis-satisfaction to people who consume, eg flytipping, air pollution

The free rider problem

Free rider - someone who consumes a good without paying for it.

Because public goods are non-excludable, it is difficult to charge consumers once a good has been provided – there is a **free rider problem.**

- Consumers *do not reveal their preferences* if they think they can free ride
- This means there is *no demand curve* in the market
- There is *no incentive for producers* to supply the good because it will not be profitable
- The *market is missing* – resources are not allocated to produce public goods, even though consumers may actually want them

The free market will fail to provide pure public goods *(complete market failure).*

For quasi-public goods, under=provision is still likely to occur *(partial market failure).*

Possible solutions to market failure of public goods

Government provision – collective provision through taxation

Government funding – the government could fund private provision financed through taxation or charges (eg TV licence)

Voluntary/charitable donations – eg RNLI

Communities may act altruistically – and pay collectively eg private road

Advantages and disadvantages of government provision

- Equity – all people, whatever their income have access to public goods
- Efficiency – collective provision allows economies of scale
- Overcomes the free rider problem/missing market
- Public sector investment is higher
- Government may lack the information needed to provide best amount of public goods
- Possible diseconomies of scale
- Government funding of private sector provision is often costly & wasteful
- Government corruption issues

Market failure: negative externalities

Negative externalities

Negative production externality – a third party or spillover external cost arising from the production of a good for which no compensation is paid e.g. pollution

Negative consumption externality - a third party or spillover external cost arising from the consumption of a good for which no compensation is paid e.g. tobacco consumption causing passive smoking (often called demerit goods)

Important externality terms

Social benefit = private benefit + external benefit

Social cost = private cost + external cost

MPC = marginal private cost – all the costs of producing one more unit of the good to the producer

MSC = marginal social cost – all the costs of producing one more unit of the good to society

MPB = marginal private benefit – all the benefits of consuming one more unit of the good to the consumer

MSB = marginal social benefit – all the benefits of consuming one more unit to society

In a perfect market, **allocative efficiency** is achieved when **P = MC**, but if externalities exist, then the **social optimum** is achieved when **MSC = MSB**

Policies to address negative externalities

Government policies can help reduce negative externalities, so the **externalities are internalised** e.g. the ***polluter pays principle***, reducing or eliminating the market failure. It is important to remember that there may be ***government failure*** if the policies worsen the allocation of resources.

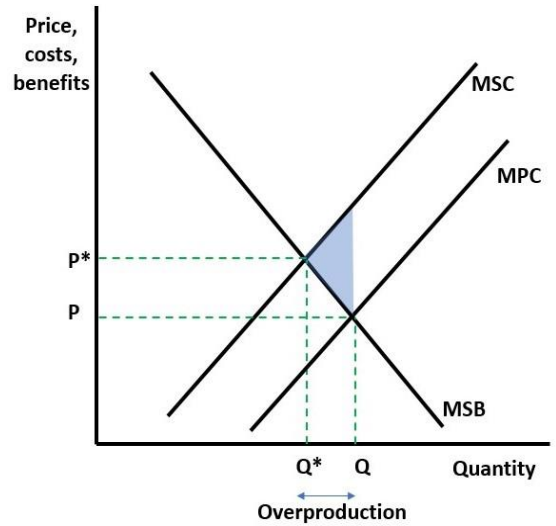
Policies that could be used include indirect taxes, tradeable pollution permits, banning/restricting output, legislation/regulations, 'nudge' policies

Negative production externality diagram

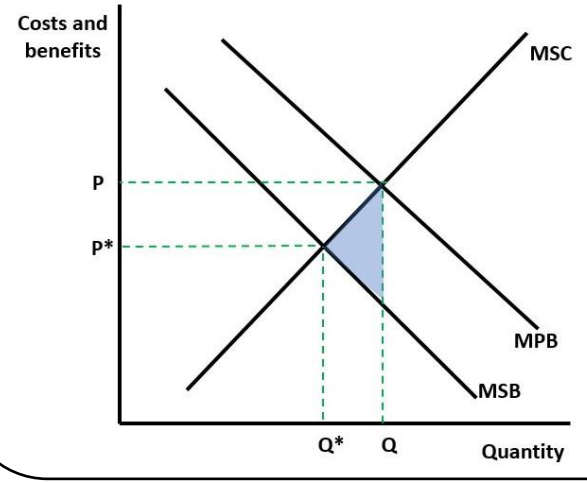
The market only considers private costs and benefits with equilibrium at P and Q.

The *negative production externality* means **MSC>MPC.** The social optimum will be where MSC=MSB, at Q*.

The market **overproduces** by Q*Q. There is a **net welfare loss** (shaded area) at the market equilibrium.



Negative consumption externality diagram



For a negative consumption externality, MSB<MPB. The market will over-provide & over-consume by QQ*; too many scarce resources are allocated to the production and consumption of the good; there is a ***net welfare loss*** (shaded area) in the market. There is a case for government intervention to correct the market failure.

Examples of negative externalities

Negative production externalities: air, noise & water pollution, environmental damage

Negative consumption externalities: tobacco, alcohol, gambling, obesity, congestion

Market failure: positive externalities

Positive externalities

Positive consumption externality: a third party or spillover external benefit arising from the consumption of a good for which no compensation is paid e.g. vaccination, healthcare & hygiene, public transport.

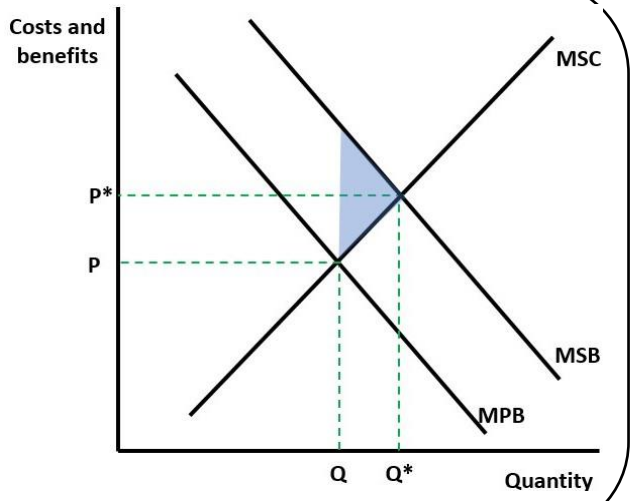
Positive production externality: a third party or spillover external benefit arising from the production of a good for which no compensation is paid e.g. R&D, training and education.

Positive consumption externality

The market only considers private costs and benefits with equilibrium at P and Q. The *positive consumption externality* means **MSB>MPB.** The social optimum will be where MSC=MSB, at Q*.

The market **under-provides** by Q*Q.

There is a **net welfare loss** (shaded area) at the market equilibrium.



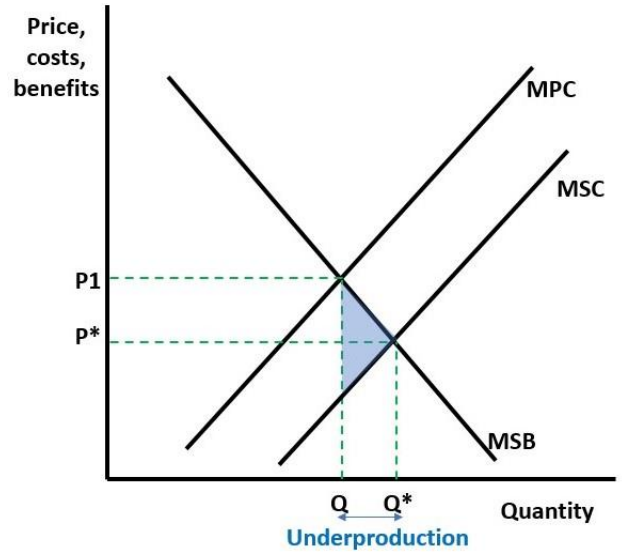
Policies to address positive externalities

Government policies can help reduce positive externalities, so the **externalities are internalised.** It is important to remember that there may be ***government failure*** if the policies worsen the allocation of resources.

Policies could include subsidies, government provision free at the point of use, legislation/regulations, make it compulsory, 'nudge' policies

Positive production externality

For a positive production externality, **MSC<MPC**. The market will under-produce by QQ*; too few scarce resources are allocated to the production and consumption of the good; there is a *net welfare loss* (shaded area) in the market. There is a case for government intervention to correct the market failure.



Examples of positive externalities

Positive production externalities: fish industry benefitting from a dam built to store water (reservoir); honey producer benefitting from being near an apple orchard

Positive consumption externalities: healthcare, education, dental care, green spaces/parks

Evaluation of government policies to reduce/eliminate externalities

Success of the policy intervention depends on:

- Size of externality
- The extent to which the externality can be measured
- Whether there are unintended consequences from the policy
- Whether there is government failure (this could be an information failure)
- Opportunity cost of policy – some interventions are expensive
- How the policy affect the distribution of income – are there winners and losers?

The government needs to judge whether the benefits of intervening are sufficiently high relative to the costs to make it worthwhile for social welfare.

Market failure: Merit & Demerit goods

Merit goods

Merit goods are those goods/services that the government judges that people will **under-consume**, and which ought to be **subsidised** or provided **free at the point of use.**

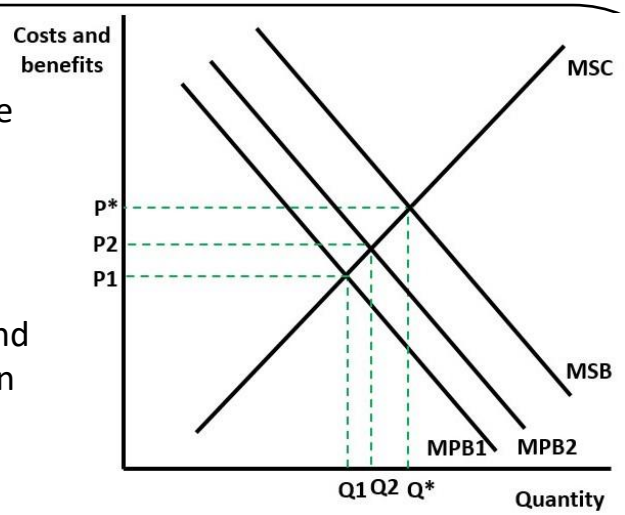
- People do not fully understand the private benefits of their consumption.
- Consumption of merit goods also often generates positive externalities - where the social benefit exceeds the private benefit.

Examples: healthcare, dental care, education

A ***value judgement*** must be made to classify a good as a merit or demerit good.

Merit good diagram

This diagram shows a merit good where there is information failure and some positive externalities.
The market underprovides by Q1Q*.
Q1Q2 is underprovided because consumers do not fully understand the benefits, with full information demand would be MPB2 not MPB1)
Q2Q* is underprovided because the market does not take into account the positive externalities (MSB>MPB2)



NB:

- Merit goods suffer from information failure
- They may have positive externalities
- Not all goods with positive consumption externalities are merit goods

Demerit goods

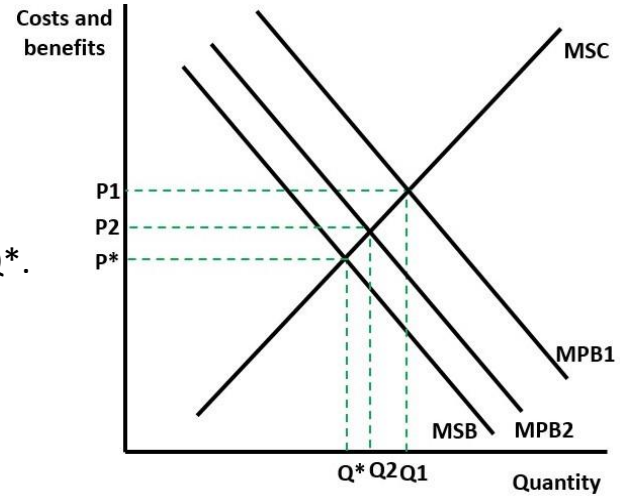
Demerit goods are those goods/services that the government judges that people will **over-consume**, and which ought to be **taxed** or **regulated.**

- People do not fully understand the private costs of their consumption.
- Consumption of demerit goods also often generates negative externalities - where the private benefit exceeds the social benefit.

Examples: tobacco, alcohol, gambling

Demerit good diagram

This diagram shows a demerit good where there is information failure and some negative externalities.
The market overprovides by Q1Q*.
Q1Q2 is overprovided because consumers do not fully understand the costs, with full information demand would be MPB2 not MPB1)
Q2Q* is overprovided because the market does not take into account the negative externalities (MSB>MPB2)



NB: Demerit goods suffer from information failure

- They may have negative externalities
- Not all goods with negative consumption externalities are merit goods

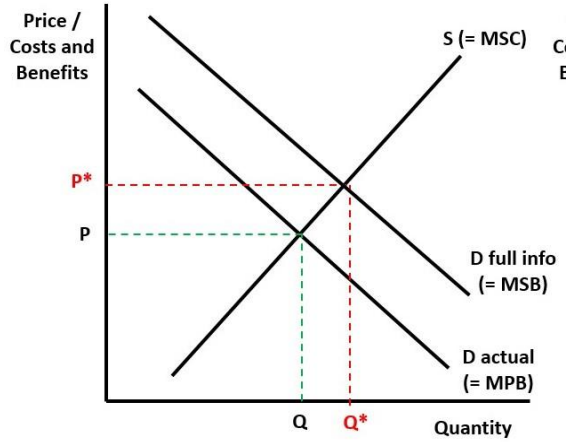
Behavioural economics can help explain why consumers face information gaps; consumers do not always act on full information even when they have it

Market failure: market imperfections

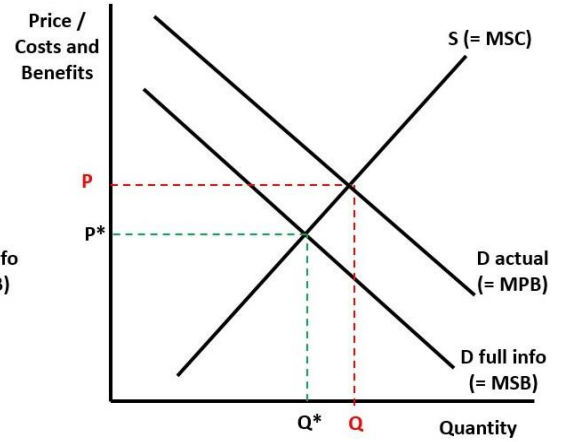
Information gaps

Information gaps exist when either the buyer or seller does not have access to the information needed for them to make a fully-informed decision, leading to a misallocation of scarce resources = market failure

Information gap diagrams



If consumers had full information, they would demand more because they are aware of the extra societal benefits; the *information gap* causes under-consumption at Q



If consumers had full information, they would demand less because they are aware of the extra societal costs; the information gap causes over-consumption at Q

Examples of information failure

- Risks from using tanning salons
- Addiction to painkillers and other drugs
- Complexity of pension schemes
- Uncertain quality of second-hand goods
- Knowledge of the nutritional content of food
- Cowboy builders and other rip-off merchants
- Tourist bazaars or buying and selling antiques

Factor immobility

Factor mobility occurs when factors of production can easily be moved from one use to another.

Geographical immobility of labour – in practice, labour may not be fully mobile because of regional house price variation, family & social ties, children in school etc.

Occupational immobility of labour – can occur because of insufficient education and training, a lack of transferable skills, inability to afford training etc.

Land is not geographically mobile but can be occupationally mobile, eg land used for agriculture or housing.

Capital can be both occupationally and geographically mobile, eg hand tools or vehicles, but heavy industry capital, eg a blast furnace, may not be mobile at all.

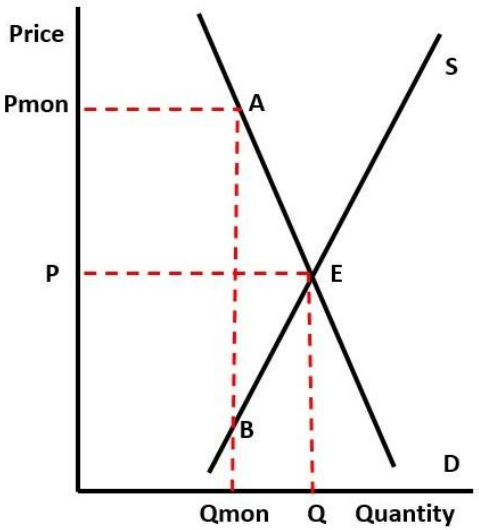
Factor immobility can cause structural unemployment and regional inequality which leads to market failure

Monopoly and monopoly power

A monopoly can use its market power to restrict output to increase price to maximise its profits

The monopoly price Pmon is higher than the market price P and the monopoly output Qmon is less than the market equilibrium output.

The monopoly causes a **loss of social welfare** of ABE. Both consumer and producer surpluses are reduced by this monopoly behaviour causing ***market failure.***



Market failure: environmental economics

Tragedy of the Commons

Tragedy of the Commons: When no one owns a resource, it may get over-used, for example fish stocks and deforestation - people use and benefit from a common pool resource such as grazing land without regard to the effects on others.
Our natural resources are often over-used, leading to ***environmental degradation and depletion.***

Green tax e.g. carbon tax

Carbon tax on carbon emissions – an indirect tax on producers that raises the price of emissions

Advantages

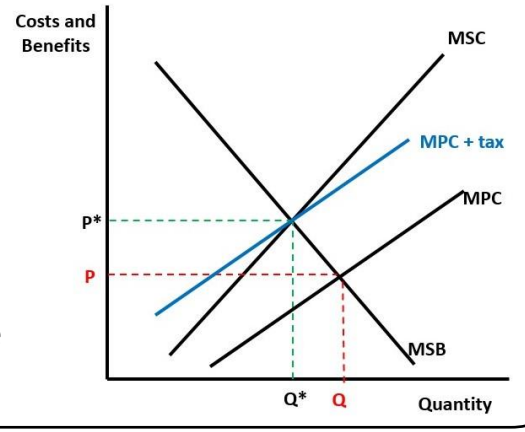
- Mandates a specific price on carbon
- Makes the polluter pay and internalises the externality
- Incentives firms to lower their emissions and for consumers to change their behaviour
- Revenue generated can be 'ringfenced' (hypothecated) and spent on other environmental initiatives

Disadvantages

- Problems determining the size of the tax; hard to assess the true cost of CO2 emissions and climate change
- Demand may be price inelastic so tax may have little impact on pollution
- Reluctance to impose if it could cause a loss of international competitiveness
- Could be regressive
- Costs of compliance and rise of tax evasion
- Countries may 'free ride' – let others tax and yet gain benefits

Diagram of green tax

- Environmental damage means MSC>MPC
- Carbon tax shifts MPC up
- Market equilibrium changes from P and Q to P* and Q*
- Q* is the social optimum (where MSB=MSC)
- The carbon tax has eliminated the welfare loss, internalised the externality and made the polluter pay

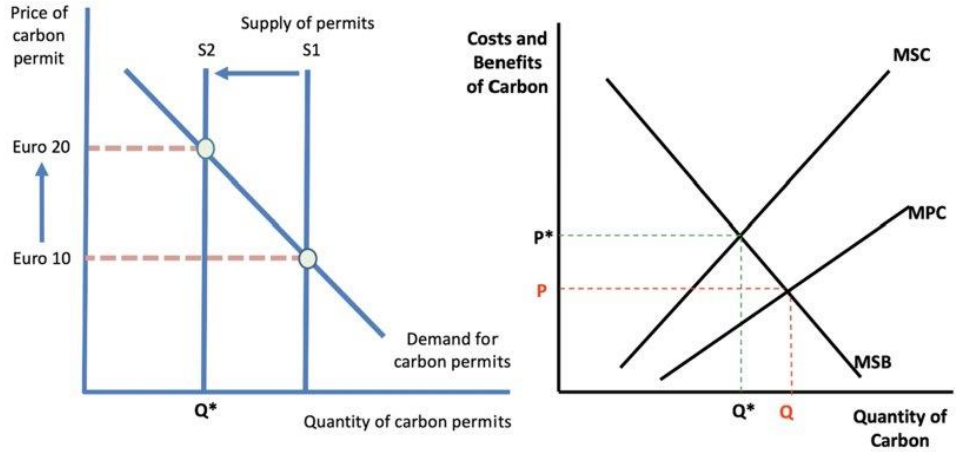


Tradeable permit scheme

Carbon emissions trading, also known as **cap-and-trade**, is a market-based system for reducing greenhouse gas emissions.

- Under a cap-and-trade system, the government sets a limit, or cap, on the total amount of emissions that can be produced in a given period
- Companies are then issued permits, or allowances, to emit a certain amount of CO2
- If a company emits less than its allotted amount, it can sell its surplus allowances to another company that has exceeded its limit
- This incentivises firms to emit less because they can increase their revenue by selling permits and/or because if they pollute they will have to buy more permits adding to their costs

Diagram for permits



Other green policies

Other green taxes – fuel duty, air passenger duty, landfill tax etc
Subsidies – for green energy, fitting heat pumps, home insulation
Regulations – targets for net zero, electric vehicles, renewable energy; energy labelling for homes/appliances
Behavioural changes – waste reduction & circular economy, nudges (e.g lower default temperature on boiler/showers)
Voluntary carbon footprint offsetting emissions – e.g. tree planting

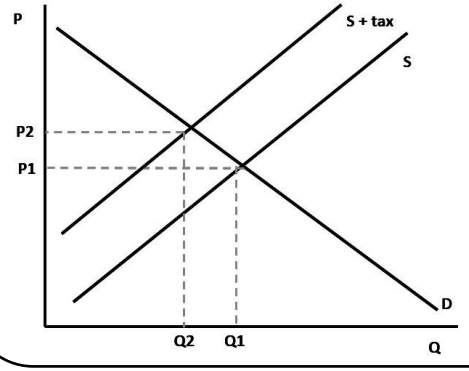
Government intervention: indirect tax

Indirect tax

Indirect tax- tax imposed on producers (suppliers) by the government; producers may be able and choose to pass on some or all an indirect tax to their customers by raising prices. Indirect taxes are a form of ***government intervention*** in markets often with the aim of addressing **market failure.**

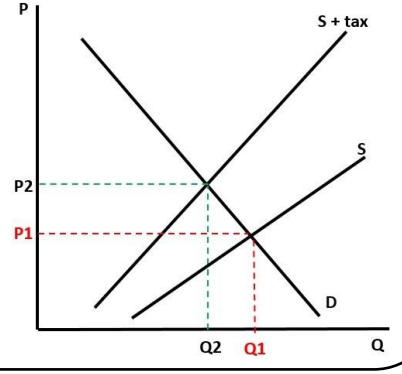
Examples include duties on cigarettes, alcohol and fuel, the sugar levy, VAT and carbon taxes

Specific (unit) tax v. ad valorem tax

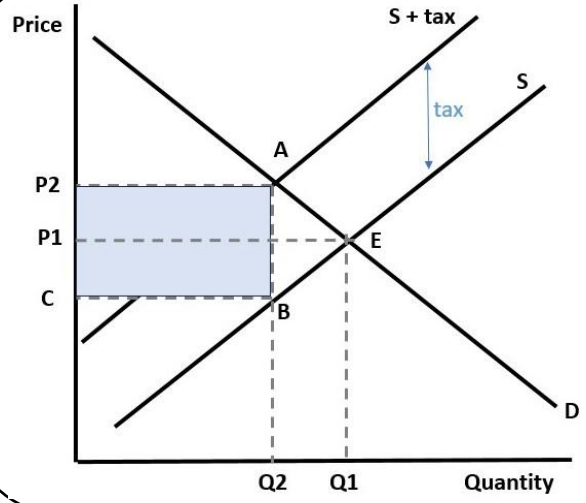


Specific tax – a parallel shift

Ad valorem tax – a pivotal shift



Impact of indirect tax on the market

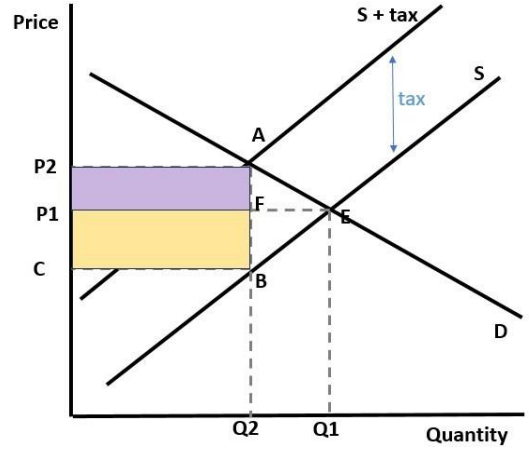


- Starting equilibrium at E, price = P1, quantity = Q1
- Indirect tax shifts supply up from S to S+tax
- New equilibrium at A; price rises to P2 and quantity falls to Q2
- Tax revenue raised = tax per unit AB x quantity sold after tax Q2 or shaded area ABCP2

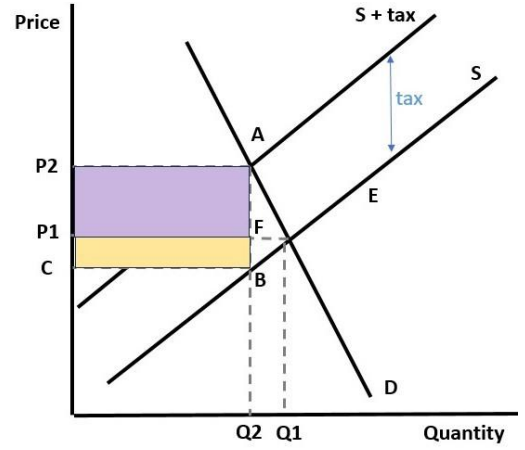
The incidence of the tax

Tax incidence: How the final burden of a tax is shared between the producers and the consumers.

If demand for a good is **price elastic**, then the tax will fall mainly on the producer (area P1FBC) as they will be unable to put prices up without losing a lot of demand. The consumer only pays area P1P2AF



If demand for a good is **price inelastic**, then the tax may fall mainly on the consumer (area P1P2AF) as the producer can put prices up without losing a lot of demand. The producer only has to absorb area P1FBC.



Tip: Find the area the consumer pays by looking at the increase in the market price – this is tax incidence on the consumer

Advantages and disadvantages of indirect taxes

Advantages

- Corrects market failures e.g. negative externalities, information failures that lead to over-provision
- Deters consumption of goods that are bad for us, e.g. tobacco, sugar
- Source of revenue for government
- Helps tackle climate change

Disadvantages

- Regressive
- Hard to determine best size of tax
- Compliance costs
- Possible tax avoidance/evasion
- Shadow market activity
- Government failure/unintended consequences

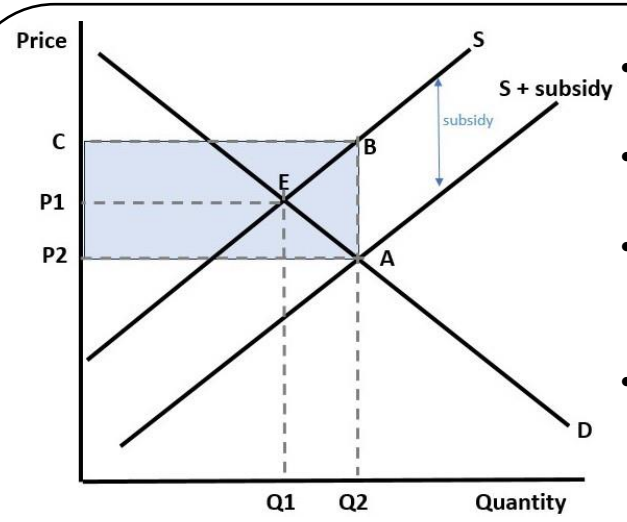
Government intervention: subsidies

Subsidies

Producer subsidies – payments to producers by the government to reduce the costs of production e.g. subsidies for renewable energy; shifts supply right

Consumer subsidies – payments to consumers to allow them to purchase more of a good/service e.g. childcare vouchers; shifts demand right

Impact of a producer subsidy



- Starting equilibrium at E, price = P1, quantity = Q1
- Subsidy shifts supply down from S to S+subsidy
- New equilibrium at A; price falls to P2 and quantity rises to Q2
- Total cost of subsidy = subsidy per unit AB x quantity sold after subsidy Q2 or shaded area ABCP2

Advantages and disadvantages of producer subsidies

Advantages

- Corrects market failures e.g. positive externalities, information failures that lead to under-provision
- Encourages consumption of goods that are good for us, e.g. healthcare; fresh fruit
- Encourages firms to invest & innovate
- Helps protect producer incomes & jobs
- Supports those on lower incomes
- Can help tackle climate change
- Can help make exports more competitive

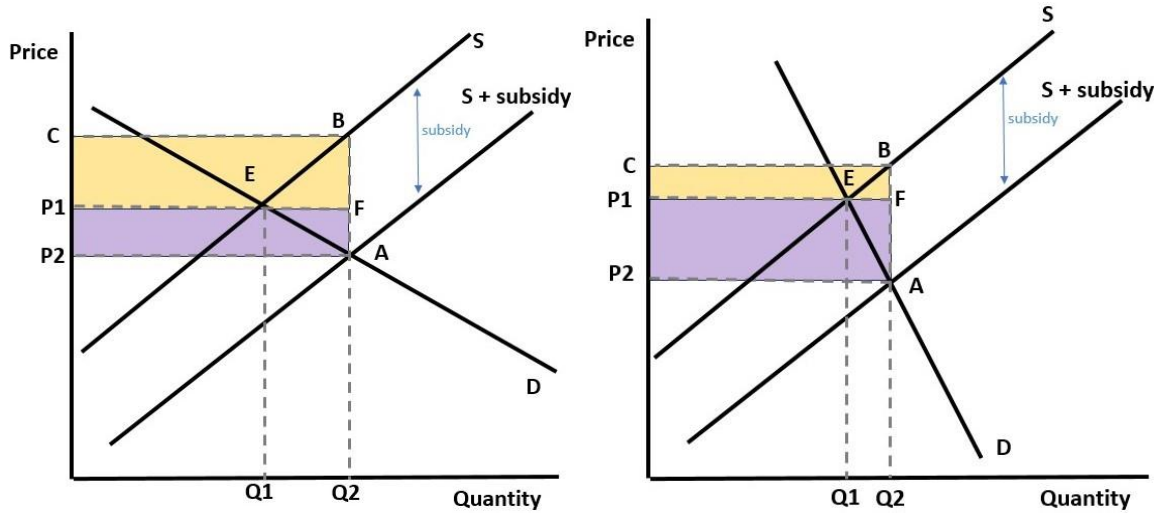
Disadvantages

- Cost to government (opportunity cost)
- Firms may become over-reliant on subsidy
- Firms have less incentive to be efficient and productive
- Firms may distribute extra profit to shareholders rather than re-invest
- May cause fraud/corruption
- Government failure/unintended consequences

The benefits of the subsidy

If demand for a good is **price elastic**, then the subsidy will mainly benefit the producer (area P1FBC) as they will not have to cut price much to gain more demand. The consumer only gains area P1P2AF

If demand for a good is **price inelastic**, then the subsidy mainly benefits consumers (area P1P2AF) as the producer has to put prices down a lot to gain a small increase in demand. The producer gains area P1FBC.



Tip: Find the area the consumer benefits by looking at the decrease in the market price as this indicates the benefit to consumers

Evaluation of subsidies

- Are the subsidies meeting their aims?
- Does the outcome depend on the size and scope of the subsidy? Or on the elasticity of demand or supply?
- Will the subsidy promote efficiency?
- What is the opportunity cost of the subsidy? Who will gain/loss from the subsidy cost?
- Does the subsidy help correct a market failure?
- Are there unintended consequences? Government failure?

NB: These ideas/questions could be applied to indirect taxes when evaluating too

Government intervention: maximum price

Price controls

If the market price is ***sub-optimal*** for social, environmental or political reasons, the government may decide to ***control the market price*** directly

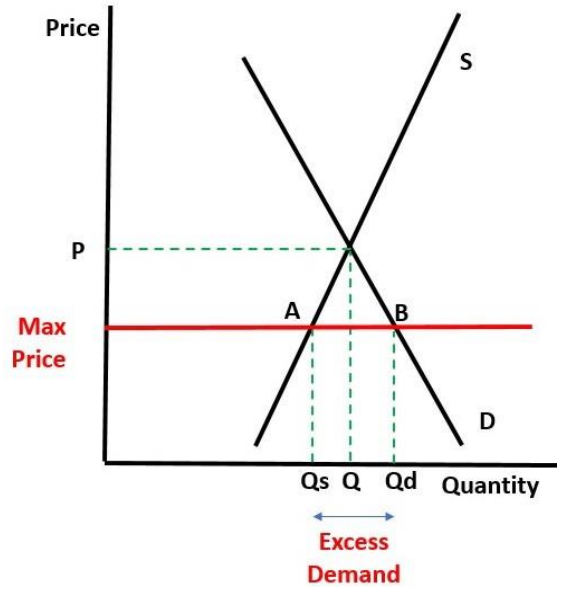
Maximum price

Maximum price –the government or an industry regulator can set a **maximum price** to prevent the market price from rising above a certain level. Also known as a **price cap** or **price ceiling**.

Rationale for maximum prices

- To make necessities more affordable, especially for those on low incomes (more equitable); reduces poverty/hardship
- To encourage consumption of goods that are good for social welfare, have positive externalities or where consumers may lack all information
- To prevent businesses profiteering at expense of consumers

Impact of a maximum price in a market



- Starting equilibrium at price = P, quantity = Q
- Maximum price is set ***below*** the market price
- New price = the max price
- New quantity demanded is Qd, the lower price causes an *extension* in demand
- New quantity supplied is Qs, the lower price causes a *contraction* in supply
- There is an **excess demand** of QsQd or AB at the maximum price

Consequences of maximum price

- The maximum price causes a ***shortage*** of the good.
- There is a ***disequilibrium*** at the maximum price.
- The price cannot rise to remove the excess demand – it has lost its ***rationing function***
- The quantity supplied will need to rationed in a different way, e.g. first come, first served; waiting lists; preferred customer priority; ration books; via shadow market activity
- There is potential for ***government failure*** and ***unintended consequences***.

Examples of maximum prices in markets

- Rent controls
- Energy price cap
- Cap on bonuses and CEO pay
- Cap on mobile phone roaming charges
- Price caps for water companies
- Cap on university tuition fees
- Bus fare price cap
- Cap on interest rates charged by pay day lenders
- Currency pegs
- Cap on annual charges for occupational pension plans
- Tickets prices for events

Problems with maximum prices

- Excess demand needs addressing; alternative rationing methods may not work well
- Suppliers may leave the market if they cannot charge a price high enough to make profit (which would increase any shortage created by the maximum price)
- There may be better alternative policies the government could use if it believes the market price is too high e.g. subsidies, provision of information, redistribution from rich to poor, government provision

Government intervention: minimum price

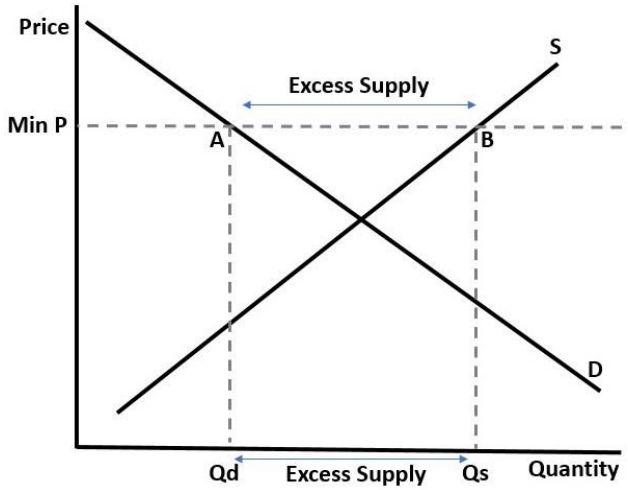
Minimum price

Minimum price –the government can set a **minimum price** to prevent the market price from falling below a certain level. Also known as a **price floor.**
Guaranteed minimum price – the government will buy up and excess supply to guaranteed the minimum price e.g. some agricultural minimum prices.
Legal minimum price – the government sets the minimum by law; there is a ban on sales below the price set; the government does not buy up any surplus e.g minimum price of alcohol.

Rationale for minimum prices

- To support the incomes and jobs of producers and encourage investment and innovation
- To discourage consumption of goods that are bad for social welfare, have negative externalities or where consumers may lack all information
- To prevent consumers abusing any monopsony power they have at expense of suppliers

Impact of a minimum price in a market



- Minimum price is set **above** the market price
- New price = the min price
- New quantity demanded is Qd, the higher price causes a *contraction* in demand
- New quantity supplied is Qs, the higher price causes an extens*ion* in supply
- There is an **excess supply** of QsQd or AB at the minimum price

Consequences of minimum price

- The minimum price causes a ***surplus*** of the good
- There is a ***disequilibrium*** at the minimum price
- The price cannot fall to remove the excess supply – it has lost its signalling and incentivising ***functions***
- For a ***legal minimum***, firms cannot sell more than Qd so they will reduce their supply (supply shifts left)
- For a **guaranteed minimum** the government will buy up the surplus at the minimum price (cost to government = QdABQs)
- There is potential for ***government failure*** and ***unintended consequences***

Examples of minimum prices in markets

- Minimum price for alcohol
- National minimum/living wage
- Minimum care worker price
- Agricultural support where price is guaranteed to farmers
- Guaranteed prices for renewable energy suppliers

Problems with minimum prices

- Excess supply needs addressing
- For legal minimum price – suppliers cannot sell any excess, so they will cut supply, output and jobs
- For guaranteed minimum price – intervening to buy up the surplus can be expensive (opportunity cost); surplus will need storing, selling on, destroying etc.
- There may be better alternative policies the government could use if it believes the market price is too low e.g. indirect taxes, provision of information, regulations, government ban/restriction; direct grants to support producers

Government Failure

Government failure

Government failure – government intervention worsens the allocation of scarce resources:

- It results in a greater net welfare loss
- The cost of the intervention outweighs the benefits gained
- The policy fails to generate a change in behaviour by economic agents and so the policy fails to achieve its aims

Causes of government failure

- Political self-interest
- Poor value for money
- Policy short-termism
- Regulatory capture
- Conflicting objectives
- Bureaucracy and red tape

Outcomes of government failure

- Greater inequality e.g effects on lower-income households
- High costs of compliance and implementation
- Possible unintended consequences
- Possible conflicts with other micro/macro objectives
- Poor policy choice/outcomes: information failures before a policy is introduced; government may lack information
- Policy may prove ineffective in changing behaviour

Law of Unintended Consequences

Unintended consequences – outcomes that were not foreseen and intended by the government action

- There may be at least one and often many unintended consequences – some may be good, but it is the bad ones that are a cause for concern
- It is impossible for the government to predict outcomes accurately for the economy – these are inevitable
- Unintended consequences can deepen any existing market failure

Examples of unintended consequences

- A minimum wage causes a reduction in non-wage benefits for workers
- An indoor smoking ban increases the use of environmentally-unfriendly patio heaters
- Tariffs to protect the steel industry increase costs for car makers and house builders
- Charging for plastic bags encourages a switch to canvas bag use, which could be worse for environment
- Targets for treating patients could lead to lower quality care
- Moral hazard from bail outs to banks after their risky behaviour

Arguments against government intervention in markets

If there is likely to be significant government failure after an intervention, there may be a ***case for no intervention***, especially if the market failure is not too severe:

- The price mechanism is very efficient and can promote innovation
- When resources are scarce, higher prices are potentially a good outcome
- Profit motive incentivises businesses and entrepreneurs

Arguments for government intervention in markets

There are many features an economy needs to function effectively where intervention is required:

- Allocation of property rights and legal system
- Provision of public goods
- Macroeconomic stability
- Measures to reduce inequality
- Rules about competition

Inaction by the government is possibly the biggest government failure

Behavioural Economics

Rationality

An underlying assumption in economics is that **economic agents are rational**:

- Consumers aim to maximise their utility from consumption
- Workers aim to maximise their wages and other work benefits
- Firms aim to maximise profit
- Governments aim to maximise social welfare

In the ***real world***, it is often the case that these assumptions do not hold.

Rational consumer behaviour

Rational consumer behaviour: decision-making process that is based on making choices that maximise utility. This assumes:

- Consumers make all choices *independently*
- Consumers have fixed and *consistent preferences*
- Consumers have *full information*
- Consumers always make the *optimal choice* given their preferences

Irrational consumer behaviour

Irrational consumer behaviour: when people make systematic and persistent deviations from rational choice. This is because:

- Humans are emotional, impulsive and can lack self-control
- Humans are social and belong to many networks
- Humans can be altruistic, generous and forgiving
- Humans have limited time, energy and brain power
- Humans have regrets and also have a strong sense of loss aversion

Bounded rationality is the idea that the cognitive, decision-making capacity of humans cannot be fully rational because of a number of limits that we face

Bounded self-control: consumers have good intentions but may consume more than is rational (eg at a restaurant or pub); this may be because they value the present more than the future; they want instant rewards

Irrational behaviour: influenced by others

Consumers may be irrational because they are **influenced by others**:

- Peer pressure (can be negative and positive); fads/fashion/trends; social networks; social norms & herd behaviour

Irrational behaviour: habit and default bias

Consumers may be irrational because they follow patterns of **habitual behaviour** or stick to what they know or is easiest (**default bias**) eg choosing the same dish off a restaurant

- **Default choices** are options selected automatically if no active choice is made.
- **Restricted choices** limit available options, allowing selection within a defined set.
- **Mandated choices** are obligatory selections enforced by a directive or requirement.

Irrational behaviour: human limitations

Consumers may be irrational because of **weakness at computation**:

- Limited brain power and limited time to use it; decisions sometimes have to be made quickly; may use a 'rule of thumb' for speed
- Limited ability to calculate or absorb complex information
- Emotional responses
- Can be 'misled' by framing and/or anchoring effects

Choice architecture: refers to how decisions are presented and influenced by the way options are organised, leading to certain decisions over others.

Framing: presenting information in a way that influences people's perceptions or decisions, often emphasising specific aspects to shape how a decision is made.

Anchoring: cognitive bias where an initial piece of information (the "anchor") influences how people make subsequent judgments or decisions, even if the anchor is irrelevant or inaccurate.

Irrational behaviour: risk aversion & time preference

There is evidence that humans are **risk averse**; rationality assumes that humans will have a *neutral attitude to risk*, but in practice they are more likely to prefer a certain reward over risking it for a bigger reward.

Humans are also **loss averse**: we emphasise losses more than potential gains – losses can be twice as painful as a similar gain.

There is evidence that humans are **time-sensitive**; rationality assumes that humans have a *neutral attitude to intertemporal decisions,* but in practice they typically prefer a reward earlier than at a later date; a desire for instant rewards!

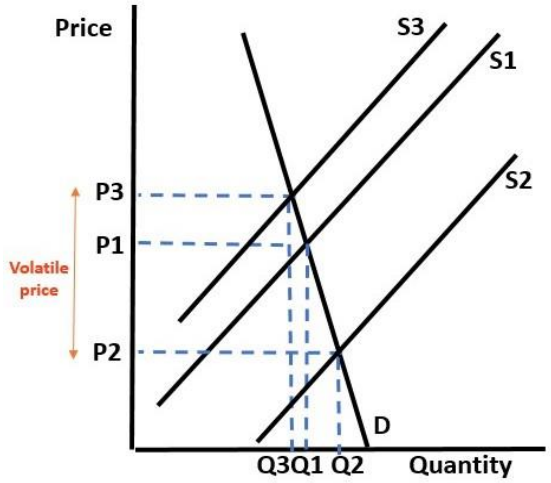
Nudges - subtle pushes or prompts (nudges) to influence and guide people toward making better decisions without limiting their choices or using direct enforcement.

Unstable markets & price volatility

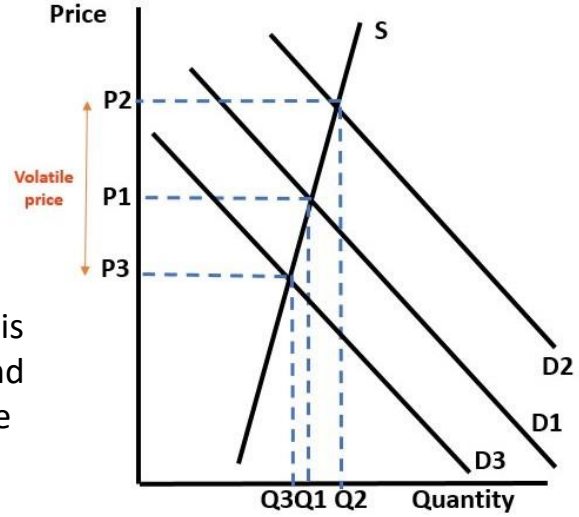
Unstable markets

Some markets have features that mean the price may be too high, too low or **too volatile** to achieve a good outcome for social welfare.
Governments can intervene with price controls and other policies to promote social welfare.

Causes of price volatility in markets



Price inelastic demand: when demand is price inelastic, any change in supply will have a big impact on price in the market.



Price inelastic supply: when supply is price inelastic, any change in demand will have a big impact on price in the market.

Time lag problems: time lags in supply, e.g. between planting a cereal crop and when has grown and ready to supply, can cause price fluctuations in a market.

Speculation – speculators can exacerbate changes in price making them more volatile, with boom-bust cycles.

Causes of price instability in markets

Key factors influencing demand:
- Globalisation
- Urbanisation
- Industrialisation
- Geopolitical events & pandemics

Short term influences:
- Speculation
- Fluctuating exchange rates
- Fluctuating interest rates

Cyclical factors influencing demand:
- Demand during growth/boom phase of cycle v recession
- Global growth cycle

Key factors affecting supply:
- Climate change
- Unpredictable weather
- Natural disasters
- Geopolitical events & pandemics

Problems with price volatility in markets

Unstable prices can cause problems for both *consumers and producers*, and there may be a case for government intervention.

For consumers:
- Unpredictable food & energy prices
- Reduces consumer confidence
- May cause poverty/hardship when prices rise rapidly

For producers:
- Unpredictable incomes
- May be forced to leave when prices are low; possible shortages
- May reduce investment and innovation; lower business confidence

Examples of markets that often have volatile prices

Oil and energy markets
Agricultural markets
Livestock & meat
Industrial metals
Precious metals
Fertilisers

A key issue with price volatility is that it is often present in markets for necessities and essential raw materials, affecting consumer budgeting and producer costs