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

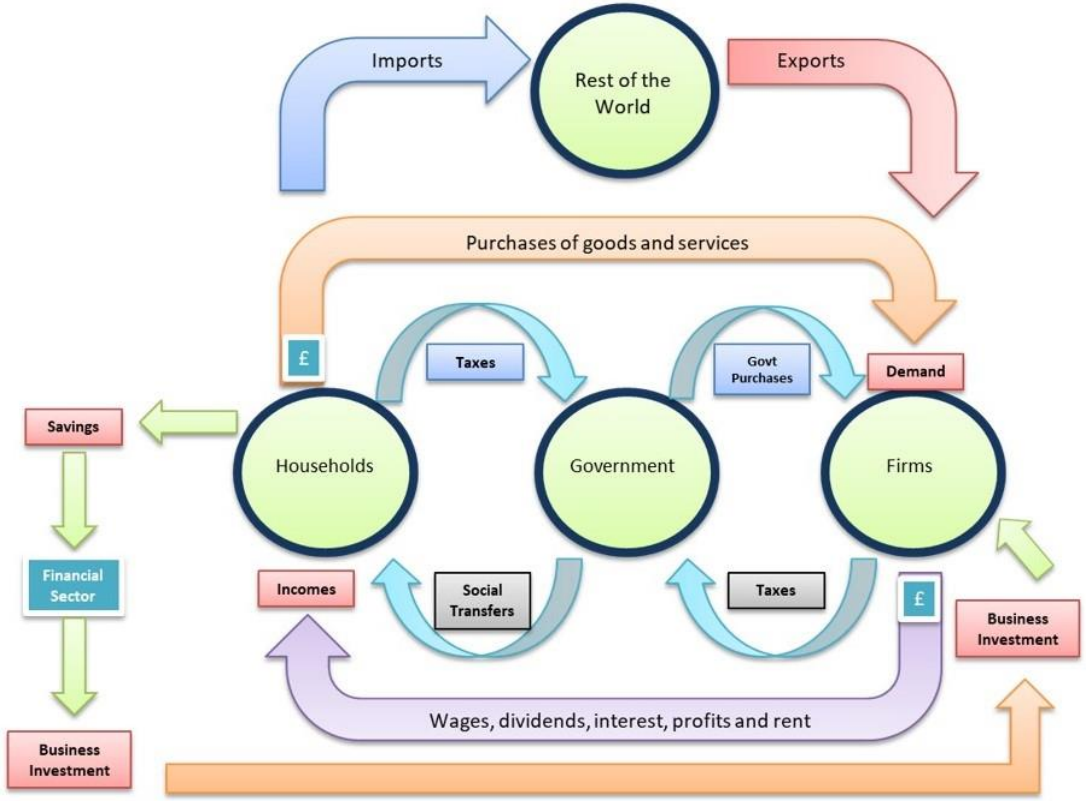
Households earn income by selling their factors of production to firms and use it to purchase goods and services produced by the firms, which use up these resources.

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).

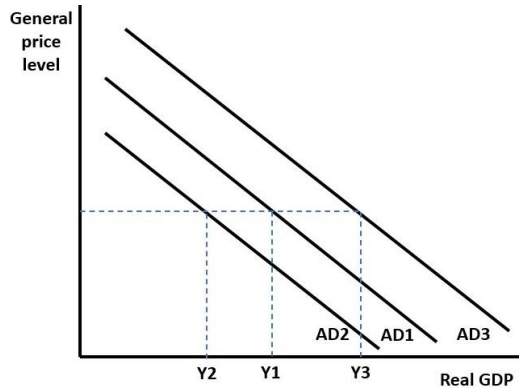
The relationship is INVERSE because:

- **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.

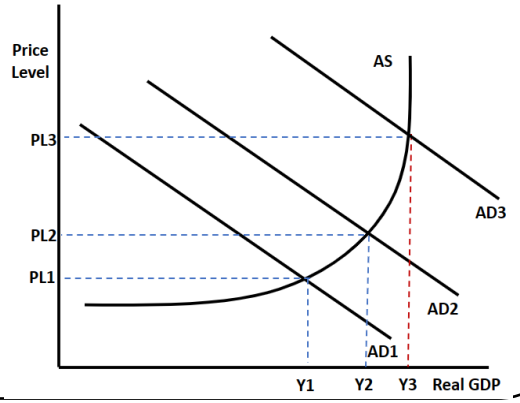
Showing the multiplier effect in a diagram

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

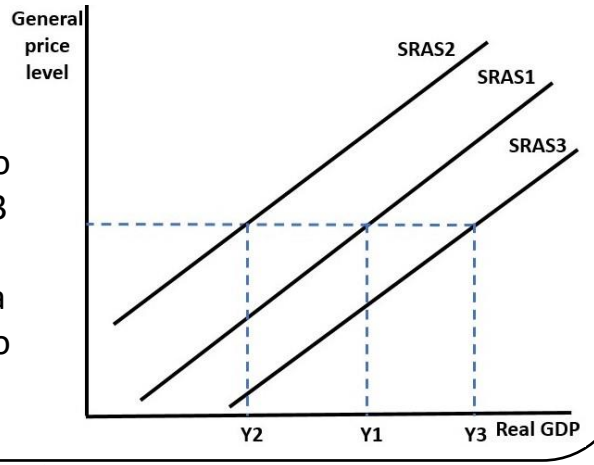
Short run aggregate supply SRAS: total **planned output** when the general price level can change but the prices and productivity of factor inputs are held constant. **In the short run**, the SRAS curve is assumed to be upward sloping

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.

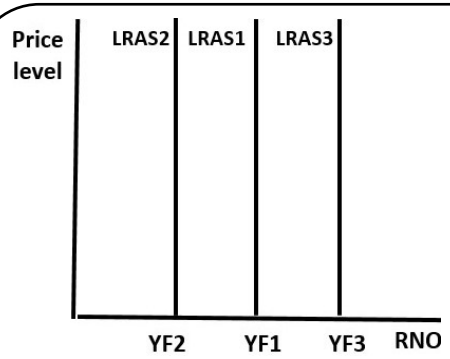
Shifts in SRAS

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

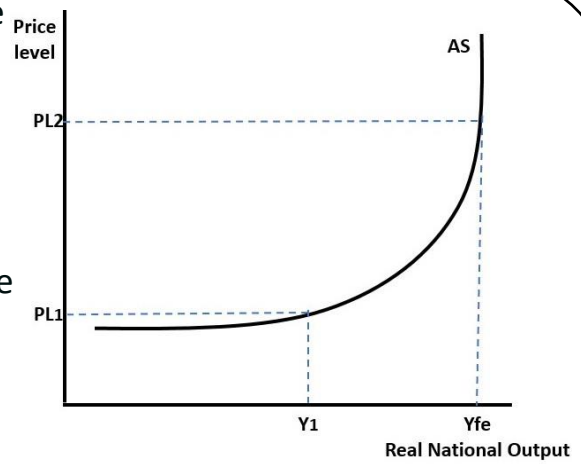
Aggregate supply AS - Keynesian

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.

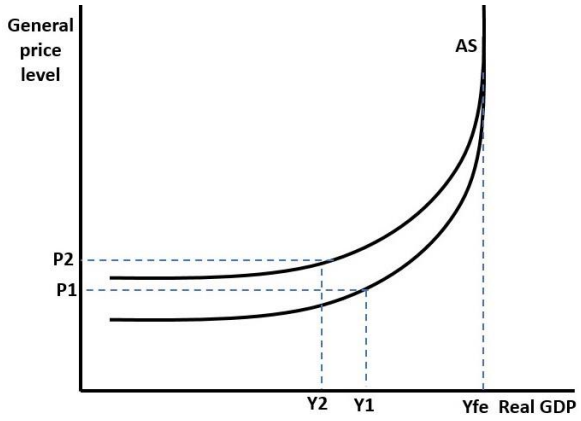
Below Y1L AS is very elastic; the economy has lots of spare capacity and any increase in AD can easily be met without inflation

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):

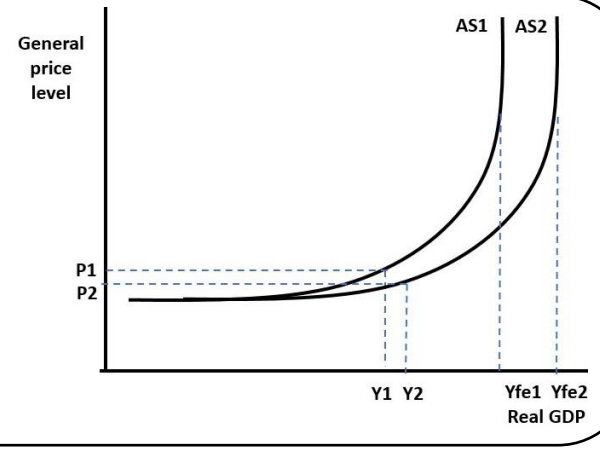
Any change that causes the costs of production in the economy to fall or rise will shift the AS curve 'up' or 'down' respectively.

(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

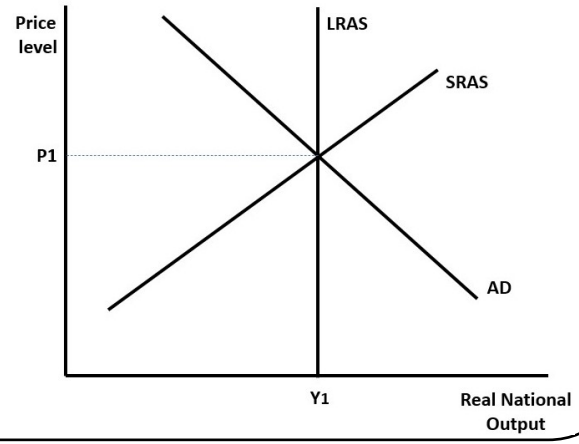
Factors that increase the economy's ***productive potential,*** or its **full employment** level of output. These are the same factors that shift the production possibility frontier to the right:

- 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

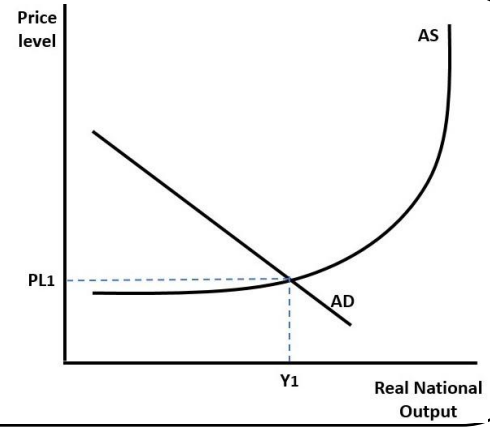
Equilibrium national income (Classical)

- 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

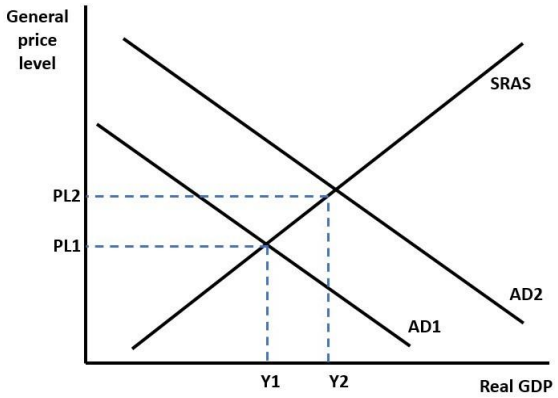


Equilibrium national income (Keynesian)

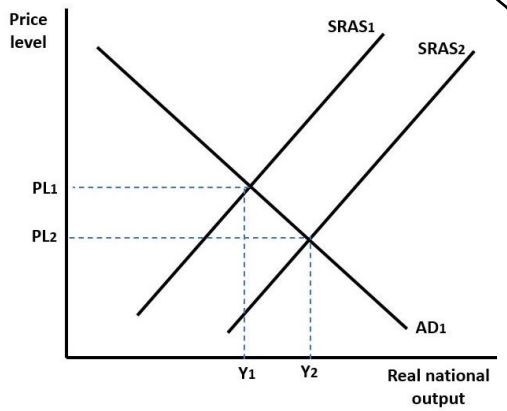
- Equilibrium national output level is the output where **AD = AS at Y1.**
- If AD is high enough, then the equilibrium can be at the full employment level of income (where the AS is vertical)



Increases in AD and SRAS

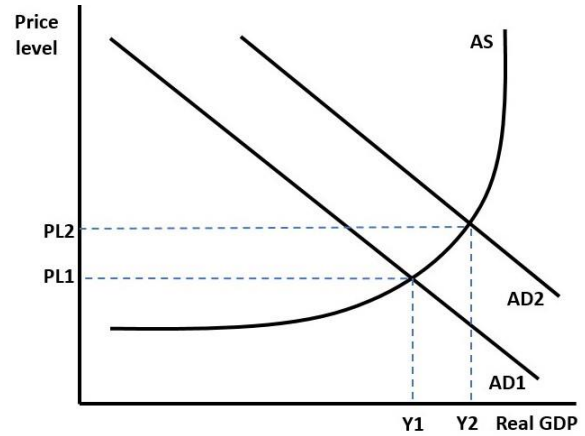


AD increases from AD1 to AD2. The equilibrium national output increases from Y1 to Y2. There is some demand-pull inflation as the price level rises from PL1 to PL2.



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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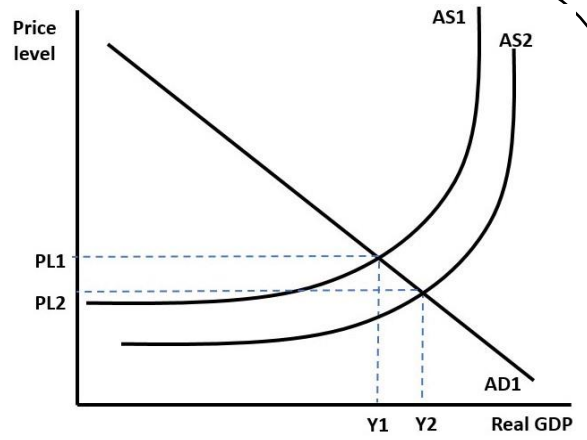


AS increases from AS1 to AS2. The equilibrium national output increases from Y1 to Y2. The price level falls from PL1 to PL2 suggesting some disinflation or deflation

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.

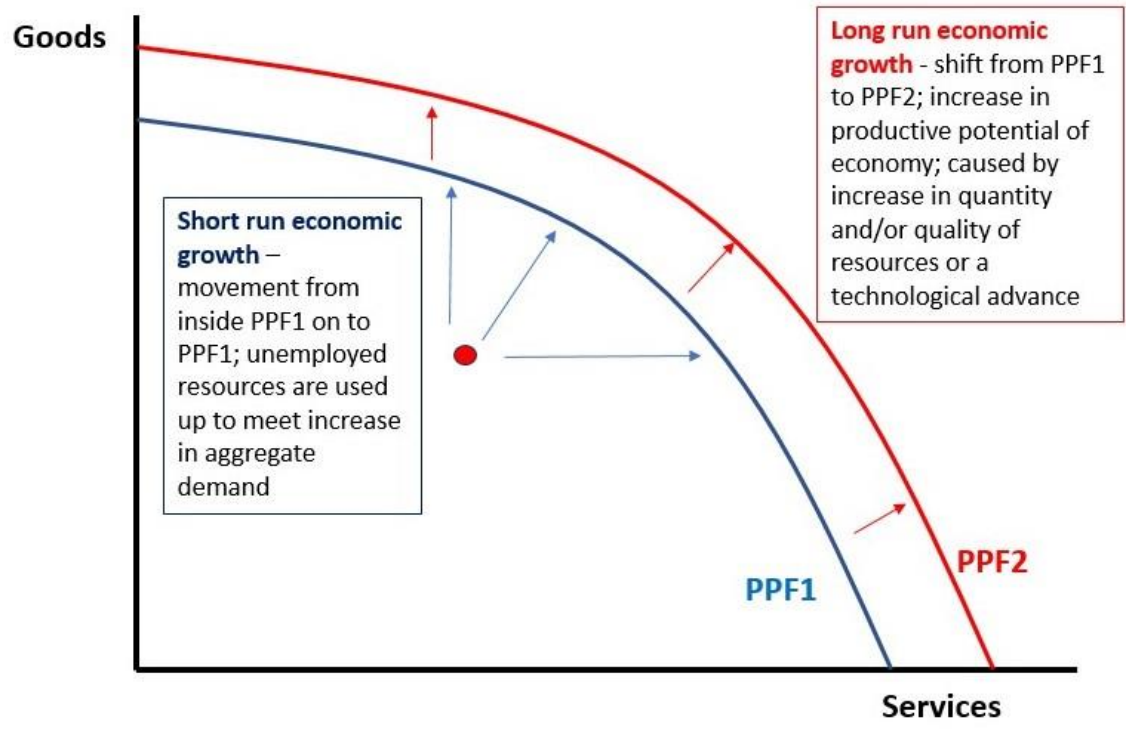
(NB: GNI can be lower than GDP if these flows are reversed)

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

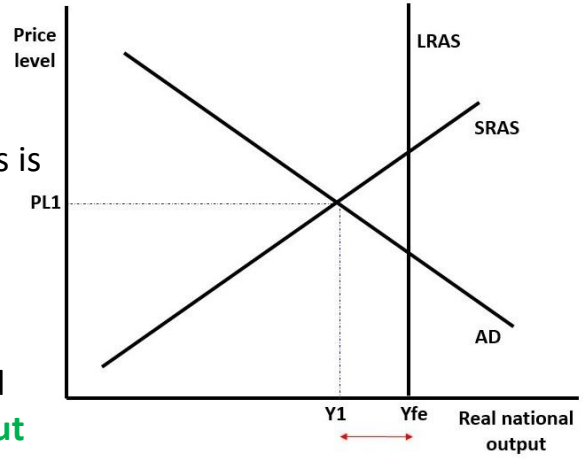
Negative output gap: actual GDP is below potential GDP. This means that there is **spare capacity** in the economy. Some resources are not fully employed. We would expect **some unemployment**. There is not enough demand in the economy for all resources to be fully utilised.
Positive output gap: actual 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**

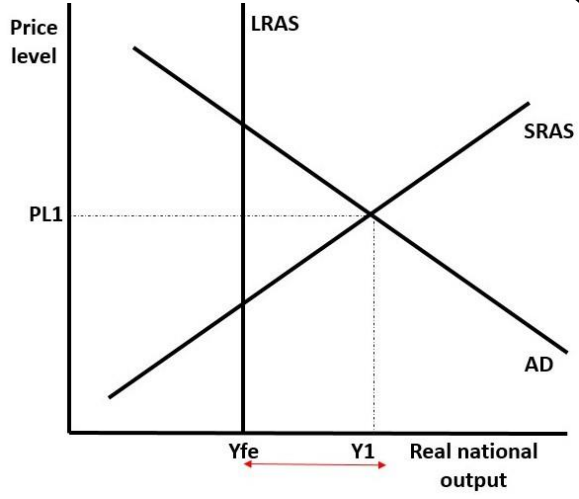


There are some unemployed resources. A rise in AD could help close the gap

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.**

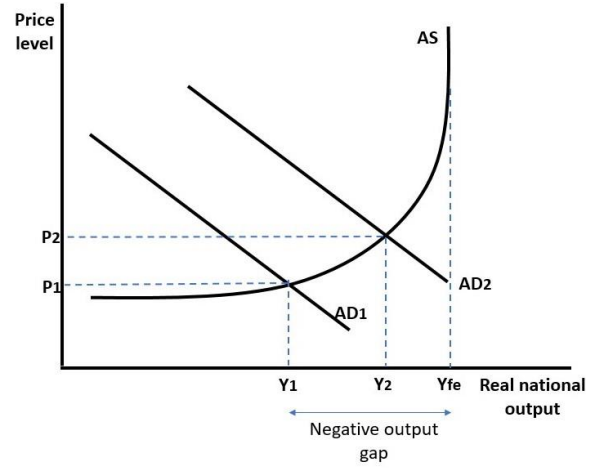


A positive output increases the competition for scarce resources; wages and other business costs start to rise, SRAS will shift left until the economy returns to Yfe. (Cost-push inflation)

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

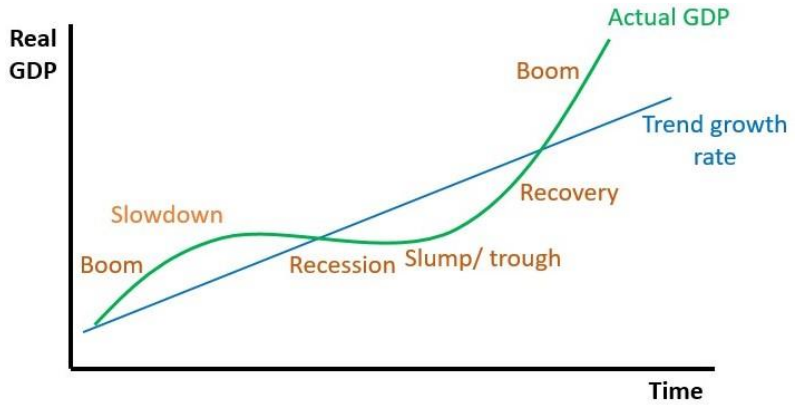
Other measures include the Happy Planet Index, the Social Progress Index, the ONS Well-being dashboard etc.
All include more factors that affect economic welfare, but become more complex; real GDP per capita often 'track's these broader measures with varying degrees of accuracy

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

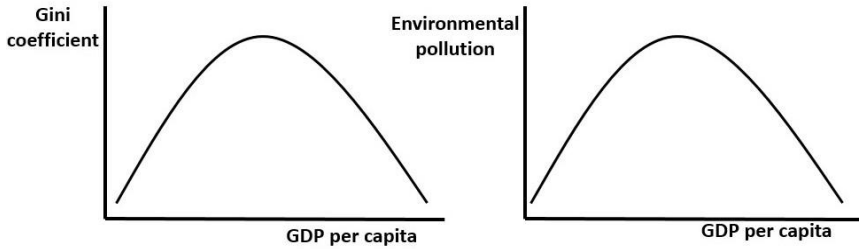
Human costs: growth may lead to less leisure time or more stress/mental health issues for workers

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

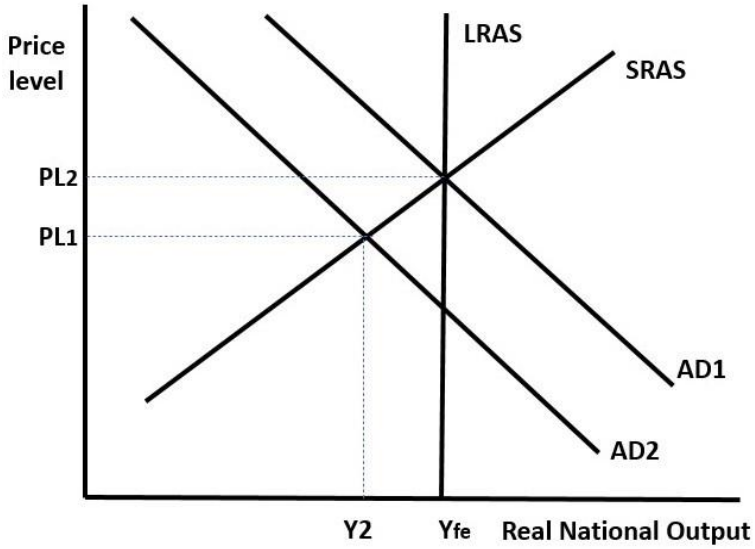
Technological unemployment: the displacement of human workers by machines, automation, and technology, such as AI.
Rapid advances in technology raises concerns about the potential for job loss, economic inequality, and the need for retraining and upskilling workers to adapt to evolving job markets.

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**



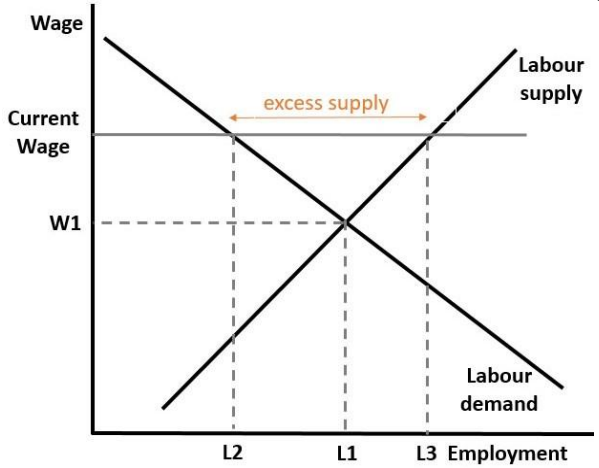
Structural unemployment: caused by changes in the economy, like the decline of certain industries or the rise of automation. It happens when there's a *mismatch between the skills & location of workers* and the needs of employers. A lack of *geographical and occupational mobility of labour* contributes.

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

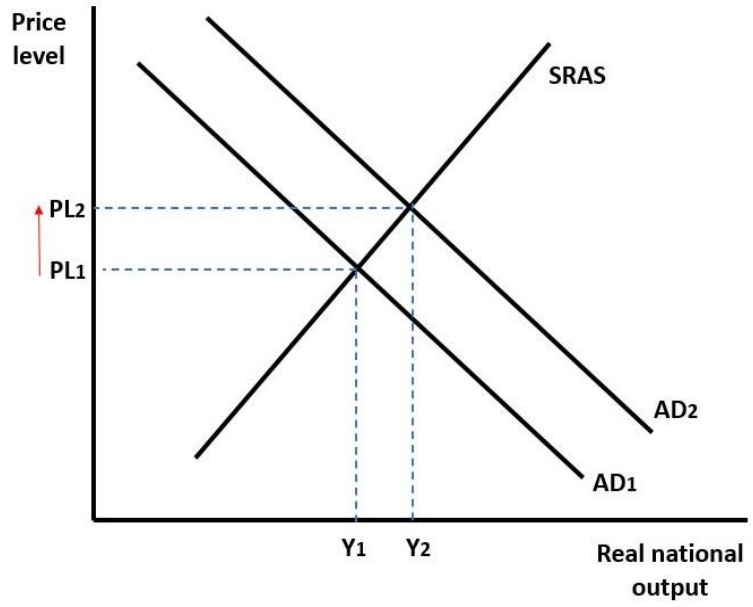
- A low but steady rate implies aggregate demand is running ahead of aggregate supply, incentivising business investment and growth
- Reduces the real value of debt
- Allows negative interest rates
- Helps labour markets work more efficiently without a need to cut nominal wages because real wages can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

Economic performance - inflation

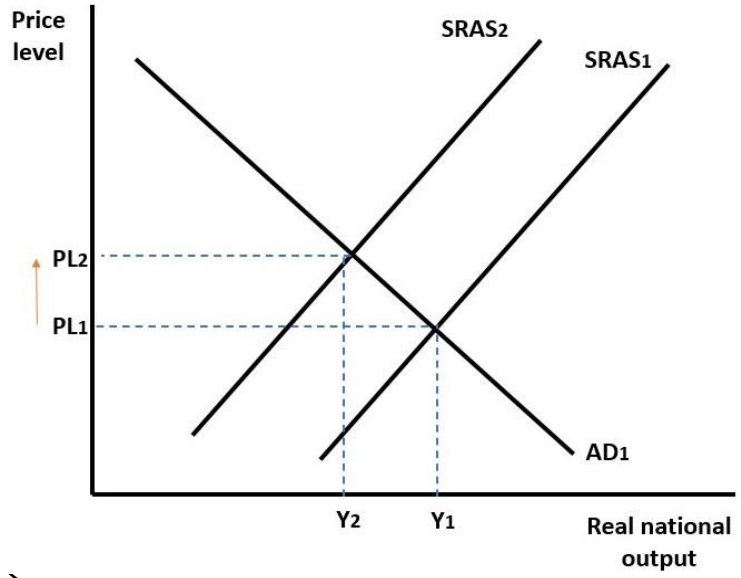
Causes of inflation – demand pull

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

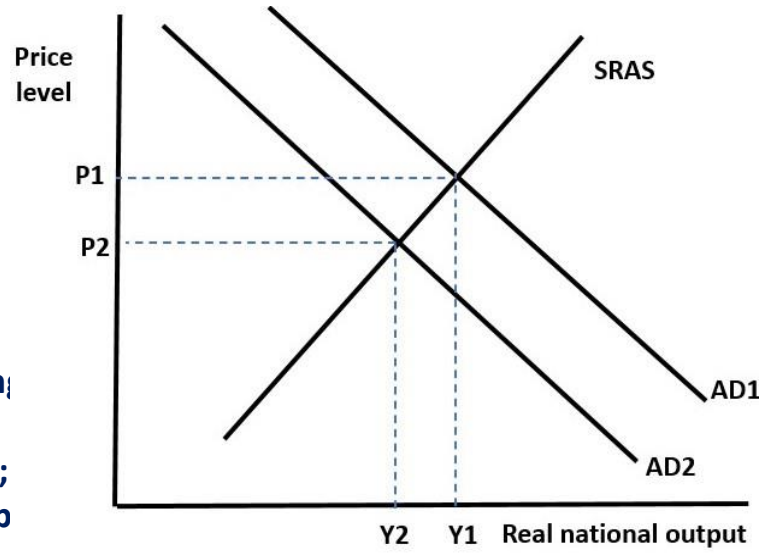
Causes of demand-side deflation – fall in AD

Deflation caused by fall in AD

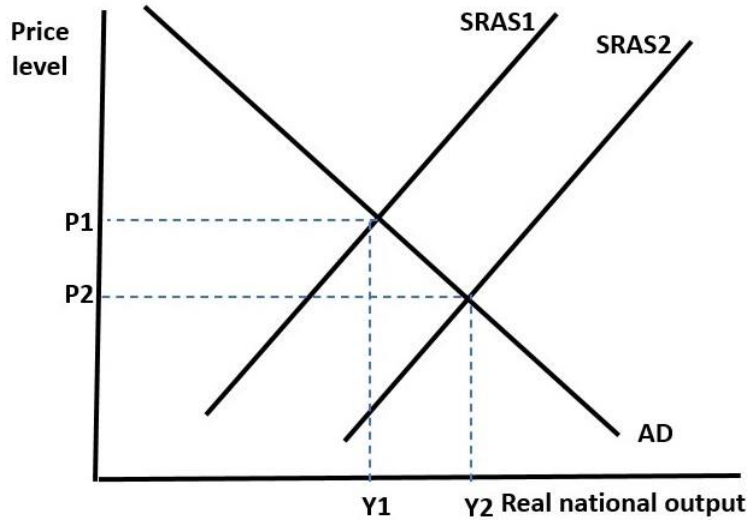
Inflation caused by a lack of AD in the economy.

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

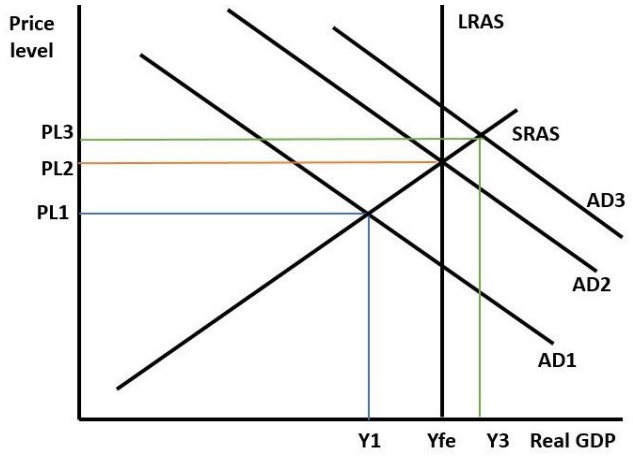
Possible macroeconomic objectives & conflicts

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

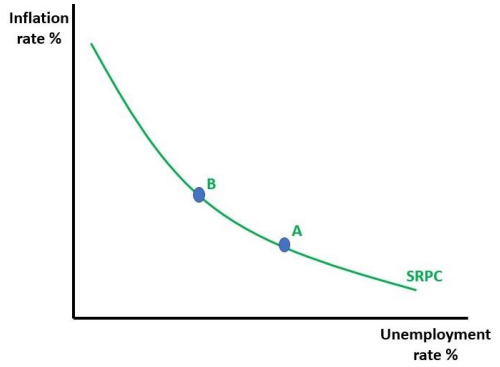


At AD1, price level is PL1 and real GDP is Y1; there is a negative output gap of Y1Yfe, implying some unemployment.
AD increases to AD2. The negative output gap closes; unemployment falls, but there is some demand-pull inflation.
Rising AD reduces unemployment when there is a negative output gap.

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%

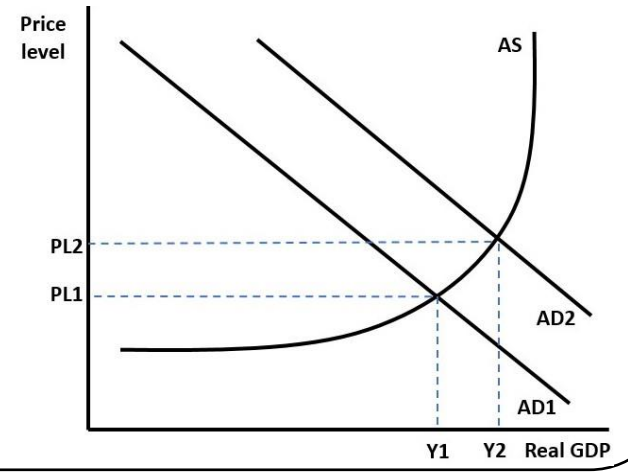
Monetary policy transmission mechanism

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

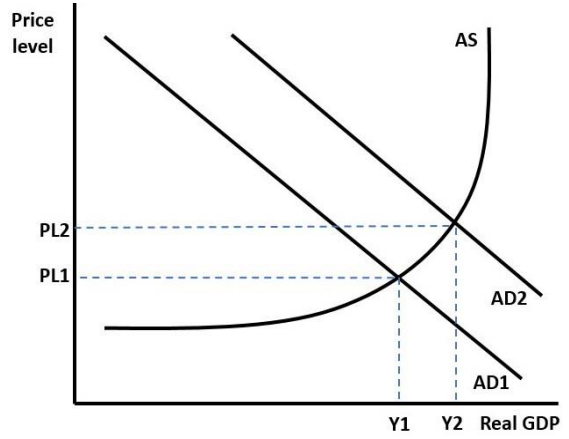
- Commercial banks receive cash from BoE asset purchases, and this increases their **liquidity** and might encourage them to lend out to customers which will help to stimulate an increase loan-financed consumption C & investment I
- Increased demand for government bonds increases the market price of 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

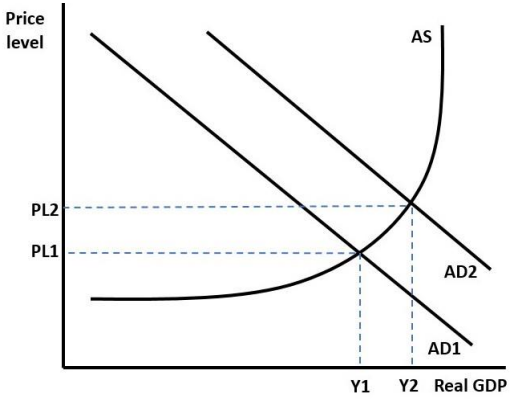
This can lead to an increase in X and a fall in M, increasing net X demand (X-M_ and increasing AD, ceteris paribus

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*

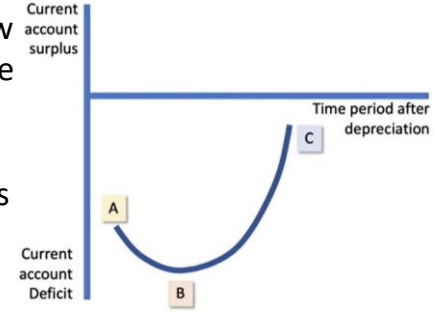


Short run v long run effects of currency movement

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

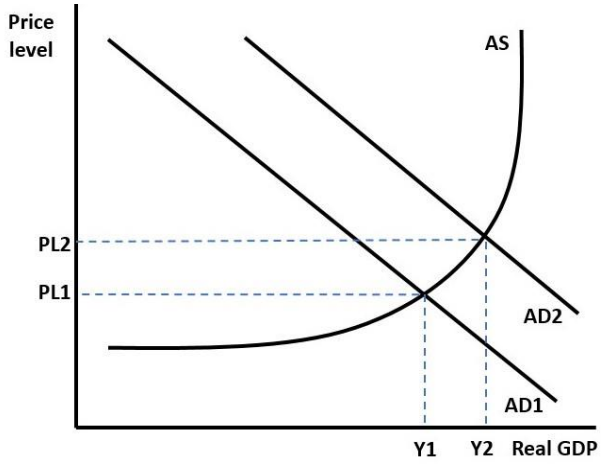
Fiscal policy: use of taxation, government spending and government borrowing to influence the economy.
Demand-side fiscal policy: fiscal policies that aim to manipulate aggregate demand (AD) to achieve the macroeconomic objectives
Supply-side fiscal policy: fiscal policies that aim to improve the supply-side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

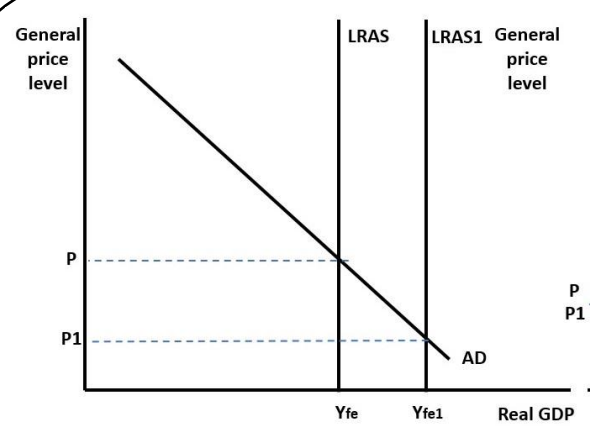
Reduced social safety nets: Critics argue these policies can lead to reduced public services, including healthcare, education, and welfare programmes and may increase poverty

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

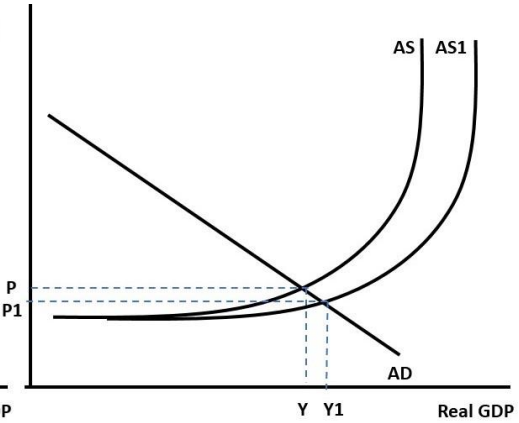
Market failures: Free markets are not perfect and can lead to market failures, such as externalities (costs or benefits imposed on third parties) and public goods problems (goods with non-excludable and non-rivalrous consumption).

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