AQA A Level Economics

Your notes

9. Measuring Macroeconomic Performance

Contents

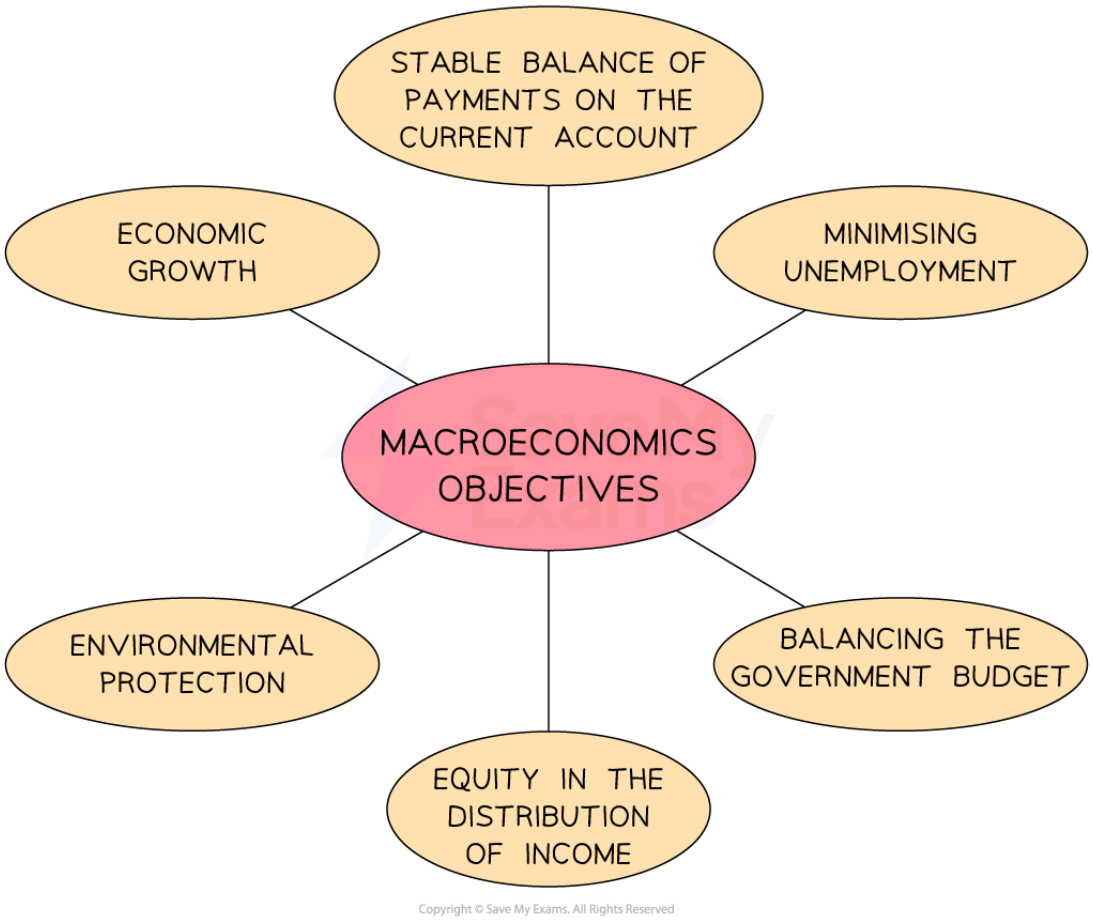
Government Macroeconomic Objectives

Your notes

An Introduction to Macroeconomic Objectives

- Macroeconomic Objectives are goals set by the government aimed at improving the overall **economic performance** of a country as well as the **quality of life** of its citizens

Diagram: The Macroeconomic Objectives



Governments want their economies to grow and prosper

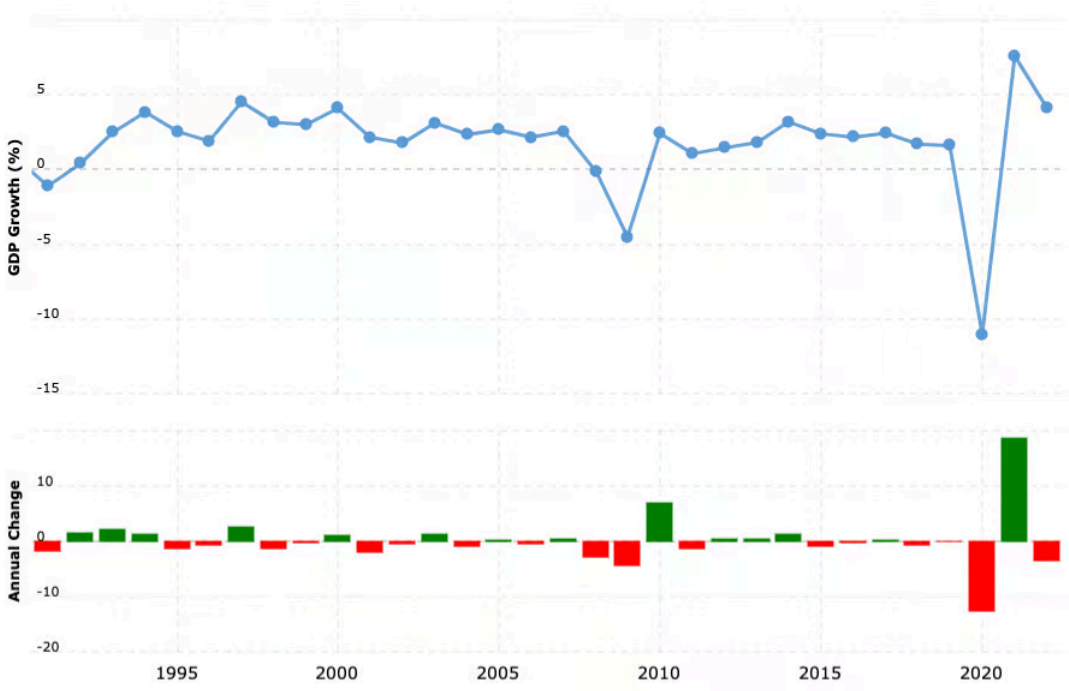
- The government aims to achieve these objectives through the use of **macroeconomic policies**
- It can be difficult to achieve some **outcomes simultaneously**
  - E.g. High economic growth and stable price levels can be in conflict with one another

Economic Growth

Your notes

- **Economic growth** is a central macroeconomic aim of most governments
- Many developed nations (UK included) have an annual target rate of 2–3%
  - This is considered to be **sustainable growth**
  - Growth at this rate is **less likely** to cause excessive **demand pull inflation**
- **Politicians** often use it as a metric of the effectiveness of their **policies** and leadership
- Economic growth has **positive impacts** on confidence, consumption, investment, employment, incomes, living standards and government budgets
- **Strong** economic growth means higher incomes, lower unemployment rates and better government budgets
- **Sustainable** economic growth will have less demand-pull inflationary pressures or excessive **environmental** pressure

Graph: UK Economic Growth Rates up to 2023



Following the dismal covid figures of 2020, the UK economy rebounded strongly in 2021

(Source: ***Macrotrends)***

Your notes

Growth trends

- An increase in real GDP is a sign that the economy is expanding and employment is increasing
- A fall in real GDP (-11% in 2020) caused by Covid restrictions is a sign economy is contracting
- In 2021 and 2022, real GDP growth rate shows signs of recovery post-Covid restrictions
  - High inflation rates also occurred during this period

UK Economic Growth Trends 2019–2022

Year	GDP Growth (%)	Economic Trends
2019	1.6%	Stable economic growth rate
2020	-11%	Fall in GDP growth rate (**(Recession)**
2021	7.6%	Rapid economic growth post-covid recovery
2022	4.1%	Continued economic growth, but at a decreasing rate

Price Stability

- The UK has a **target inflation** rate of 2% using the **Consumer Price Index (CPI)**
- A low rate of inflation is desirable, as it is a **symptom of economic growth**
- The different causes of inflation (**cost push** or **demand pull**) require different policy responses from the Government
  - **Demand-side policies** ease demand pull inflation
  - **Supply-side policies** ease cost push inflation

Graph:UK Inflation Rates up to 2022

The inflation rate in the UK from 1991 to 2024 measured using the CPI

(Source: Macrotrends)

Inflation trends for 2015–2023

- In the period following the pandemic, inflation rates have exceeded the target rate of 2%
- The CPI peaked at around 8% in 2023
- This is due to supply chain disruptions causing **cost-push inflation**
- Increased spending following the pandemic caused **demand-pull inflation**
- The **Bank of England (BoE)** uses **monetary policy** to observe and regulate inflation rate

Minimising Unemployment Levels

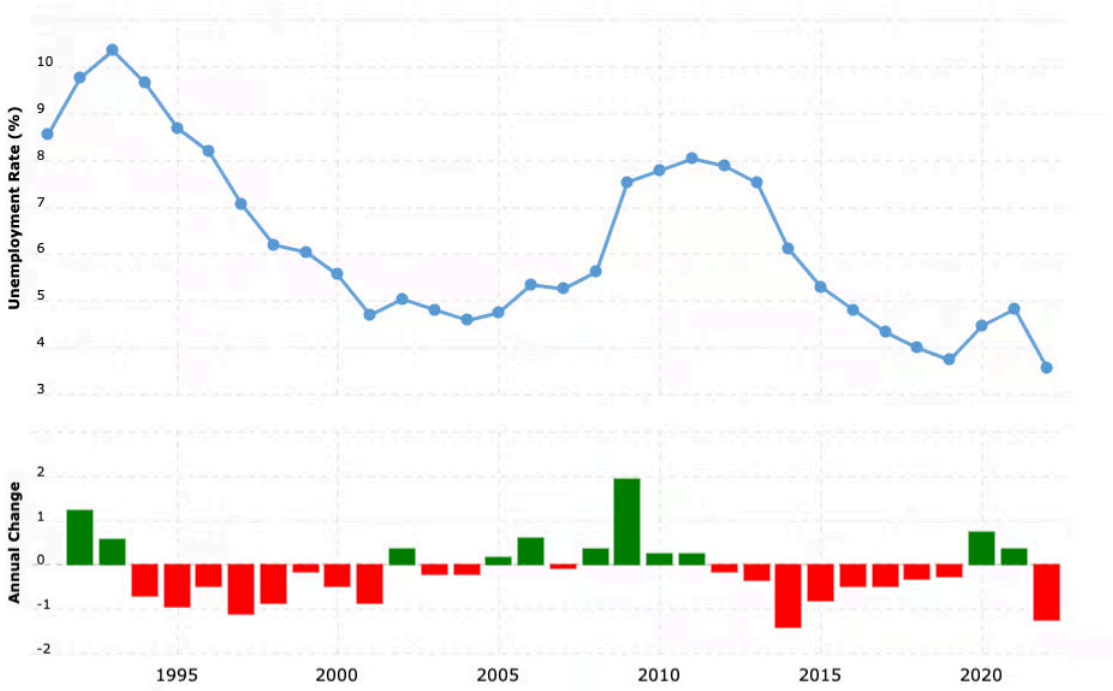
- The target unemployment rate for the UK is 4–5%
- This is close to the **full employment level** of labour (Y_{FE})
  - There will always be a level of **frictional unemployment**
  - This makes it impossible to achieve 100% employment

Your notes

- Within the broader **unemployment rate**, there is an **increased emphasis** on the unemployment rate within different **sections of the population**
  - E.g. **youth unemployment**, ethnic/racial unemployment by group
    - In 2021, black unemployment in the UK was 11% and white unemployment was 4.1%
- Low levels of unemployment are a sign of a strongly performing economy and are inversely linked to **real GDP growth**
  - When real GDP increases, unemployment falls
  - When real GDP decreases, unemployment rises

Your notes

Graph: UK Unemployment Rates up to 2024



A diagram showing the actual and projected unemployment rate in the UK from 1991 - 2024

Source: Macrotrends

Unemployment trends

- In the six years following the 2007 financial crisis, unemployment in the UK remained relatively high
- It declined during economic recovery in 2012, reaching lowest levels just before Covid pandemic
- However, with restrictions, unemployment rose again

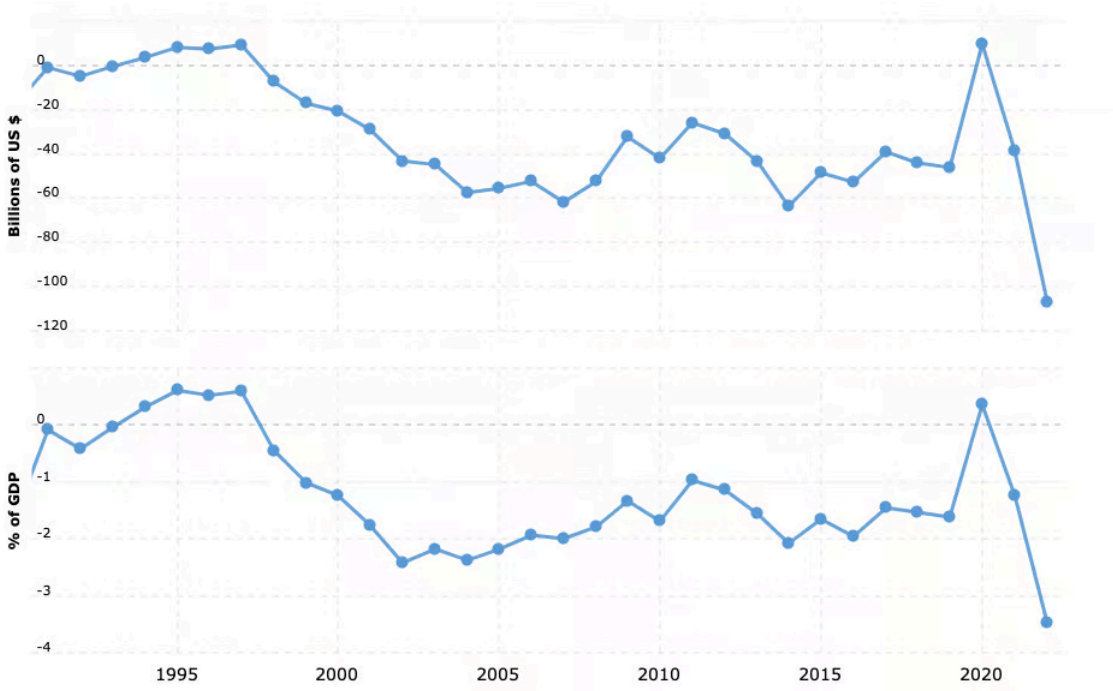
- Unemployment increased from 2021 to 2022, but decreased by just over 1% in 2023

Stable Balance of Payments on Current Account

Your notes

- The **Balance of Payments (BoP)** for a country is a record of all the **financial transactions** that occur between it and the rest of the world
  - The current account focuses mainly on the financial transactions related to exports and imports of goods and services
- Governments aim for Balance of Payments equilibrium on the **Current Account**
  - If exports > imports, it will create a current account **surplus**
  - If imports > exports, it will create a current account **deficit**
    - Each one of these conditions has advantages and disadvantages associated with it
    - However, a current account deficit is more problematic in the long-run
- The **UK** has traditionally run a small **deficit**
  - As a percentage of GDP, the UK current account deficit is insignificant so has not been problematic

Graph: The UK Trade Deficit up to 2022



The bottom graph illustrates the trade deficit as a percentage of GDP and the top one illustrates the absolute value expressed in US$

Your notes

(Source: Macrotrends)

Graph analysis

- The U.K. trade balance for 2019 was $-46.14B, a 4.78% increase from 2018
- The U.K. trade balance for 2020 was $9.69B, a 121% decline from 2019
- The U.K. trade balance for 2021 was $-38.56B, a 498.05% decline from 2020.
- The U.K. trade balance for 2022 was $-106.79B, a 176.91% increase from 2021
- The UK offsets its negative trade in goods with a very positive trade in services

Balancing the Government Budget

- The Government Budget is presented annually and includes the forecasted revenue and expenditure

Examples of Government Revenue and Expenditure

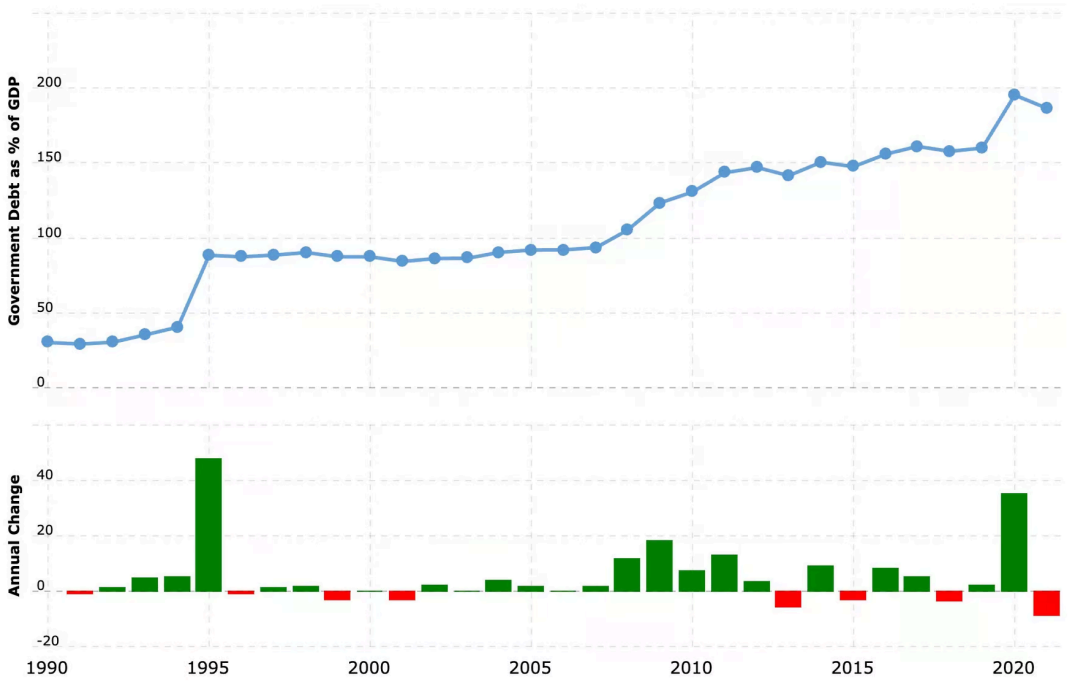
Revenue	Expenditure
▪ Sale of state assets; water, electricity ▪ Taxes: VAT, corporation tax, carbon tax ▪ Sales revenue from goods or services, e.g. train tickets	▪ Government spending, such as public sector salaries ▪ Unemployment benefits ▪ Spending on public and merit goods

- The UK Government aims to run a balanced budget
  - If expenditure > revenue, there is a **budget deficit**
  - Any deficit has to be financed through public-sector borrowing
  - Any borrowing is added to the **public sector debt**(Government debt)
- If the **UK government's debt** becomes too high (expressed as a % of GDP), then lenders begin to **lose confidence** in the Government's ability to repay the debt
  - The Government then has to **raise the interest rate** it offers to lenders, which makes borrowing more **expensive**

Your notes

- The UK Government has worked extremely hard recently to **reduce the budget deficit** and run a balanced budget
  - COVID-19 expenditure has eroded the progress they made

Graph Showing the UK Government Debt to GDP Ratio



UK government debt to GDP ratio - 1990 to 2021

Source: Macrotrends

Debt to GDP insights

- The **Debt-to-GDP ratio** reflects a notable surge in **government debt relative to GDP**, rising from 30% in the 1990s to 186% in 2020.
  - This signals a substantial increase in **government borrowing**
- **Reducing the deficit** can mean tough choices for the economy
  - E.g. Cutting public sector pay; raising taxes; reducing unemployment benefits; reducing spending on merit goods
- The significant **deficit increase** in the 2020/21 budget due to COVID-19 will need to be repaid
  - The short-term help offered through the crisis may generate **long-term pain** as the Government seeks to cut future spending so as to repay the debt

Environmental Protection


Your notes

- The UK government aims to ensure **sustainable economic development** and reduce adverse impacts on the environment
- In April 2021, the UK Government stated that their environmental aim was to reduce emissions by **78% by 2035**
  - This reduction is based on the **emission levels of 1990**
  - It is one of the most ambitious climate change targets globally
  - It includes the UK's share of international aviation and shipping emissions
- Broader environmental aims include
  - A focus on **sustainability**
  - The reduction of **negative externalities** of production
  - 100% energy from **renewable** sources by 2035

Equity in the Distribution of Income

- Equitable distribution ensures **fairness** and allows the same opportunities for everyone
- The aim is not equality of distribution as it removes the incentive to work and study
- High levels of income inequality can create **social unrest**
- Income inequality is measured using the **Gini Coefficient**

Income Inequality for 2020 using Gini Coefficient

Country	Gini Index
Belgium	0.248
Uk	0.357
Mexico	0.420

- The higher the Gini coefficient, the more unequal the distribution of income
  - 0 = complete equality; 1 = complete inequality

- Most developed economies have a Gini target of 0.3–0.4

- There is a need for the UK government to **intervene** to maintain acceptable levels of income inequality. Governments can redistribute income
  - Through a **progressive tax** system
  - Providing essential [popover id="KzHY6wVtuflFJQub" label="merit goods"] such as healthcare and education


Your notes

Macroeconomic Objectives: Conflicts & Changes

Your notes

Conflicts in Achieving the Macroeconomic Objectives

- As the UK government tries to implement one objective, in the short run it can affect its ability to achieve another objective

The Common Trade-offs that Exist Between the Macroeconomic Objectives

Conflict	Explanation
Economic growth and inflation	▪ Increasing economic growth causes the economy to move closer to **full employment** ▪ **Prices** for remaining resources are **bid up,** leading to inflation, which may outpace the target inflation rate of **2%**
Economic growth and environmental sustainability	▪ Economic growth often increases pollution, **negative externalities,** and the depletion of non-renewable resources ▪ The higher the growth, the **faster the depletion**
Economic growth & inequality	▪ During periods of high economic growth, the **profits** the owners of the factors of production receive are disproportionate to any increase in **workers' wages** leading to **greater inequality**
Economic growth and a balanced budget	▪ Economic growth driven by expansionary fiscal policy often requires a **budget deficit**
Economic growth and balancing the current account	▪ Economic growth usually leads to higher incomes which leads to an **increase in imports** by households thereby worsening the **current account balance**
Low unemployment and low inflation	▪ The closer an economy moves to full employment the **less workers** will be available for hire and **wage inflation** will help increase overall inflation

Examiner Tips and Tricks

The material on this page is frequently examined in the Paper 2 structured questions. You will be asked to discuss **to what extent** rapid economic growth might conflict with at least two other macroeconomic objectives.

1. Identify two other macroeconomic objectives that are in conflict with economic growth, such as **low levels of inflation** and **environmental sustainability**
2. Explain that if UK government tries to achieve one's objective, it affects the ability to achieve another macroeconomic objective
3. Consider that low and stable rates of inflation may have been sacrificed in order to achieve economic growth. Additionally, economic growth contributes to environmental degradation and sustainable development.

Your notes

Changes to the Macro Objectives over time

- The **priority of macroeconomic goals** is determined by the current government
  - When the government changes, the priority may change
  - E.g. The current government may prioritise economic growth over inequality in income, whereas a future government may focus more on reducing unemployment
- The priority of the macroeconomic goals may also change over time due to societal changes
  - E.g. In the 1950s and 1960's, many post-war governments focused on improving and delivering public services. However, the current focus is more on cutting public services so as to reduce tax rates in the country

Changing Macroeconomic Objectives over time

Time Period	Explanation of the Macroeconomic Focus
1940's to 1970's	▪ **Keynesian economics** dominated this time period ▪ Importance was placed on achieving **economic growth** and **full employment**
1980's	▪ The focus shifted to more **free market economics** (less government intervention) ▪ During this time period, the UK suffered from **high levels of inflation**

1990s	▪ Controlling **inflation** continued to be an important objective in the UK
2008–2012	▪ This was a period of economic **recession** ▪ **Economic growth** and **employment** required policies to stimulate demand


Your notes

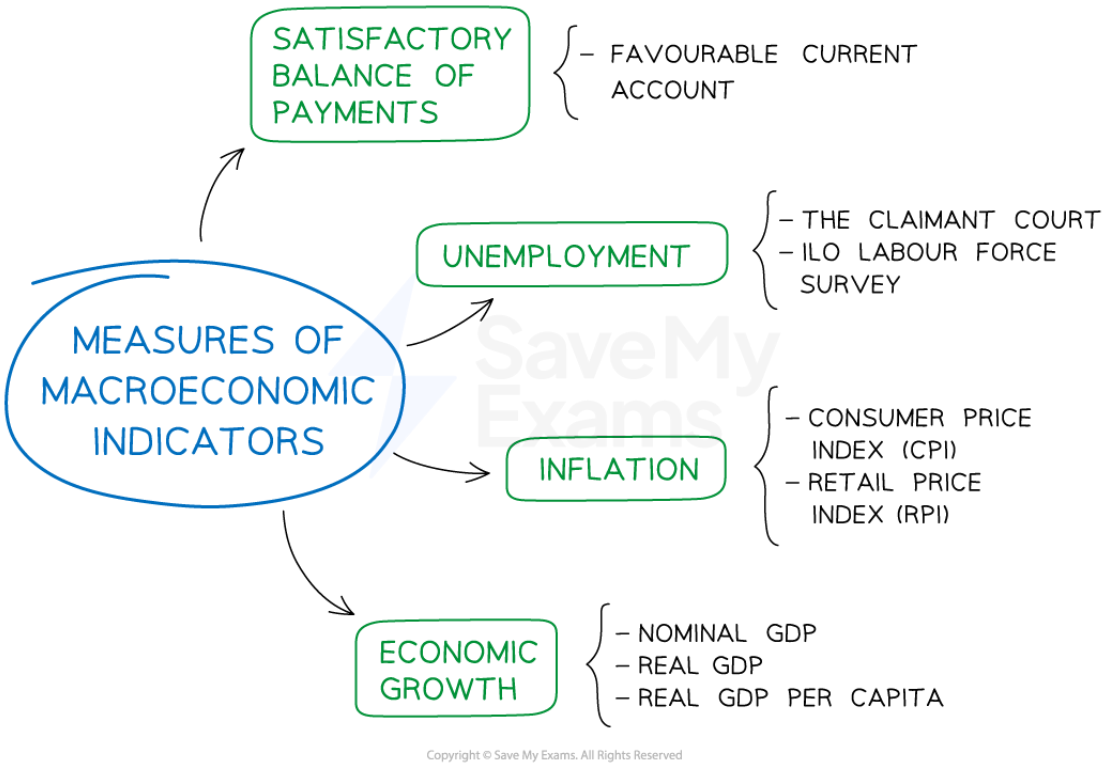
Macroeconomic Indicators

Your notes

An Introduction to Macroeconomic Indicators

- Each of the **macroeconomic objectives** has at least one metric that is used to measure progress towards that objective
  - These metrics are called macroeconomic indicators
  - **Macroeconomic indicators** provide a snapshot of the economic performance
- The data from the macroeconomic indicators helps **policymakers, economists**, **investors** and businesses make informed **decisions**

Diagram: Macroeconomic Indicators



Indicators used to measure and track macroeconomic objectives include the Claimant Count and the Consumer Price index

- **Policymakers** use the data from **economic growth**, **inflation**, **unemployment**, and the **balance of payments** to assist in formulating and evaluating **progress towards their objectives**

- The indicators provide a means of making **historical** and **international** comparisons

Measures of Economic Growth

Your notes

- **Economic growth** is one of the main macroeconomic goals that the government aims to achieve
  - A steady increase in national output can help achieve other goals, such as **lower levels of unemployment**
- Three common indicators used to measure economic growth are
  - **Nominal GDP**
    The value of all **goods and services** produced in an economy in a one-year period
- **Real GDP**
  This is nominal GDP that is adjusted for **inflation**. E.g. If nominal GDP is £100bn and **inflation** is 10%, then real GDP is £90bn
- **Real GDP per Capita**
  The real GDP is divided by the total population of a country so as to give an average $ amount of real GDP/person. E.g. Switzerland ($93,657) has a much higher GDP/capita than Burundi ($238)

Worked Example

Using the information from the table below, calculate the GDP per capita for Costa Rica to nearest dollar bracket

[2 Marks]

GDP Data for Costa Rica, UK & USA 2015/2016

	Costa Rica	UK	USA
GDP (PPP $bn)	69.6	2 518.1	16 890.2
Population millions	4.9	64.7	321.8

Step 1: Insert values into the formula and solve

Your notes

$$\text{Real GDP per capita} = \frac{\text{Real GDP}}{\text{Population}}$$

$$= \frac{\$\ 69.6\ \text{biilion}}{4.9\ \text{million}}$$ [2]

$$= \$\ 14,204.08$$

Examiner Tips and Tricks

When giving the answer, always include the currency (dollar sign $), round to the nearest dollar and give full numerical value (billion/bn).

Worked Example

The table contains data for the rates of growth of nominal and real GDP and the rate of inflation for an economy in a given year. Which one of the following combinations, A, B, C or D, shows the correct relationship between the three variables?

Answer	Nominal GDP Growth	Real GDP Growth	Inflation
A	-3%	0%	+3%
B	+5%	+3%	-2%
C	-4%	-2%	-2%
D	+4%	+4%	+1%

Step 1: Substitute the values for each answer into the following formula

$\text{Inflation} = \text{Nominal GDP} - \text{real GDP}$

$\text{Inflation A should be} -3\% \text{ so the answer is incorrect } (-3\% - 0)$

$\text{Inflation B should be} +2\% \text{ so the answer is incorrect } (5\% - 3\%)$

$\text{Inflation C should be} -2\% \text{ so the answer is correct } (-4\% - (-2\%))$

Step 2: Identify the correct answer on the answer sheet

C. **[1]**

Your notes

Measures of Inflation

- **Inflation is a sustained increase in the general price level of an economy**
- The UK uses two **inflation** indices to measure inflation and each one is calculated differently
  - The **consumer price index (CPI)**
  - The **retail price index (RPI)**

A Comparison of the CPI & RPI

Consumer Price index	Retail Price Index

▪ The CPI is an **index** that measures the change in the price of a fixed basket of **consumer goods** bought by a **typical** household
  ▪ A **'household basket'** of 700 goods and services that an **average family** would purchase is compiled on an annual basis
  ▪ A **household expenditure survey** is conducted to determine what goes **into the basket**
  ▪ Each year, some goods and services **exit the basket** and **new ones are added**
  ▪ The explanation of how a consumer price index is composed can be found on the page 'Using Index Numbers'
▪ The formula used to calculate the CPI is
	▪ The **Retail Price Index (RPI)** is calculated in **exactly the same way** as the **CPI**
	▪ However, certain **goods and services** that are **excluded from the CPI** are **included with the RPI**
	  ▪ These include **council tax**, mortgage interest payments, house depreciation, and **other house purchasing costs** such as estate agents fees
	▪ Due to the **extra inclusions**, inflation measured using the **RPI is usually higher than the CPI**
	  ▪ This is mainly due to its **sensitivity to interest rate**

$$CPI = \frac{\text{Cost of basket in year X}}{\text{Cost of basket in base year}} \times 100$$ • The **percentage difference in CPI** between the two years is the **inflation rate** for the period	**changes,** which affect mortgage interest • It is argued that the **RPI** is a **more accurate indication** of household inflation

Your notes

Measures of Unemployment

- **A worker is considered unemployed if they are out of a job and actively looking for one**
  - Unemployed people who are not actively looking for a job would not be considered to be unemployed
- Unemployment is measured in many countries using two different approaches
  - The International Labour Organisation (ILO) Survey
  - The Claimant Count

The Differences Between the ILO Labour Force Survey & the Claimant Count

The ILO Labour Force Survey	The Claimant Count

• An extensive **survey** is sent to a random sample of households every quarter (**60,000** households in the UK)
• Respondents self-determine if they are unemployed based on the following ILO criteria
  ▪ **Ready to work** within the next two weeks
  ▪ Have **actively looked for work** in the past month
• The same survey is used globally so it's useful for making **international comparisons**
	• Counts the number of people claiming **job seekers allowance** or unemployment benefits
	• There is a more stringent requirement to be considered unemployed than with the ILO survey
	• It often requires claimants to meet regularly with a '**work coach**'

Three indicators used to Analyse the Labour Market in an Economy

Unemployment Rate	Employment Rate	Labour Force

		Rat
$= \frac{\text{no. actively seeking}}{\text{total labour force}} \times 100$	$= \frac{\text{no. in employment}}{\text{population of working age}} \times 100$	$= \frac{\text{labour fo}}{\text{total popul}}$

Your notes

- The **employment rate** could be increasing even as the **unemployment rate** is increasing
  - This may be caused by **increased immigration,** which causes the **working age** population to increase
  - This may be caused as people move from being **economically inactive to employed**
- Unemployment rates do not capture the **hidden unemployment** that occurs in the long term
  - Workers look for a job but may eventually **give up** and become **economically inactive**
  - This actually improves the unemployment rate, as **fewer people are actively seeking work**

A Satisfactory Balance of Payments

- **The Balance of Payment (BOP) measures the flow of money in and out of a country in a specified time period (usually a month, quarter, or year)**

- The most important component of the BOP is the **current account**
  - It represents the flow of trade (exports - imports) in **goods and services**
  - It also includes net income payments (the difference between income flowing in and out of a country)

Components of the UK Current Account For 2017

Component	2017
Net trade in goods (exports - imports)	£-32.9bn
Net trade in services (exports - imports)	£27.9bn
Sub-total trade in goods and services	£-5bn

Net income (interest, profits & dividends)	£-2.1bn
Current transfers	£-3.6bn
Total Current Account Balance	£-10.7bn
Current Account as a % of GDP	3.7%


Your notes

Explaining the account

- **Goods** are also referred to as **visible** exports or imports
- **Services** are also referred to as **invisible** exports or imports
- **Net income** consists of income transfers by citizens and corporations
  - Credits are **received from UK citizens** who are abroad and send **remittances** home
  - Debits are **sent by foreigners** working in the UK **back to their countries**
- **Current transfers** are typically payments at **government level** between countries, e.g. contributions to the World Bank
- The **Current Account balance** is often expressed as a **% of GDP**
  - This allows for easy **international comparisons**

The Current Account balance

- **A trade deficit** is when a country's imports exceed its exports during a given time period.
- **A trade surplus** is when a country's exports exceed its imports during a given time period. Balance of trade = exports - imports.
- The UK government has a macroeconomic aim to get their Current Account balance as close to **equilibrium** as possible
  - The UK usually has a **current account deficit** in its balance of payments
- **Export-led** economic growth would help it become positive
- However, with **increasing income and wealth** in an economy, the **value of imports** rises
  - Consumers enjoy the variety of goods and services abroad
  - **Rising imports** push the balance towards a **deficit**

Examiner Tips and Tricks

Students sometimes confuse a UK Government Budget deficit with a Current Account deficit. Ensure that your understanding of the distinction between these two concepts is clear.

The Budget deficit occurs when: UK Government spending > UK Government revenue (tax receipts).

The Current Account deficit refers to the BOP.

Your notes

Using Index Numbers


Your notes

An Introduction to Index Numbers

- An index number is a tool economists use to track changes in **prices, quantities, or economic activity over time**
  - Index numbers are a way of standardising economic data so as to make easier **comparisons between countries**

How to create an index

Step 1: Select the items

- Determine what items or variables you want to measure such as prices or other economic indicators

Step 2: Select the base period

- Choose a base period against which all future observations will be compared
- This period typically serves as the reference point with an index value of 100

Step 3: Data collection

- Gather data for the selected items or variables over time, including during the base period

Step 4: Weighting (if applicable)

- Assign weights to each item based on their relative importance
- This step is common when constructing composite indices like the **Consumer Price Index (CPI)**

Step 5: Index calculation

- Multiply each item's value by its weight (if applicable) and sum them up to obtain the index value for the current period

Step 6: Interpretation

- Analyse the index values to understand trends or changes in the measured variables over time

Worked Example

An economy's GDP increased from $500 billion in 2017 to $540 billion in 2019. Using 2016 as the base year, establish the value of the index for GDP in 2018 and comment on its significance

Step 1: Calculate the Index for 2019 using the formula

$$\text{Index for 2019} = \frac{\text{Real GDP 2019}}{\text{Real GDP base year}} \times 100$$

$$\text{Index for 2019} = \frac{\$\ 540\ \text{billion}}{\$\ 500\ \text{billion}} \times 100$$ **[1 Mark]**

$$\text{Index for 2019} = 108$$

Step 2: Comment on the value

The value of the GDP has increased by 8 percent in this period

Your notes

Calculating Inflation

- **Inflation is the sustained increase in the general price level in an economy**
- The UK uses two inflation indices and each is calculated slightly differently
  - The **consumer price index** (CPI)
  - The **retail price index** (RPI)

Consumer Price Index (CPI)

- The Consumer Price Index (CPI) measures changes in **the average** level of prices paid by households for **goods and services during a specific time period**

The Construction of the CPI

Steps	Explanation
Step 1: Selection of goods and services	▪ A selection of 700 goods and services are selected as a typical **'household basket'** each month. ▪ This is determined through **household expenditure survey** ▪ Each year, some goods and services **exit** the basket and **new** ones are added

Step 2: Collection of price data	▪ Usually, on a **monthly basis**, prices for each item in the basket are collected from a **150 locations** across the country ▪ The number of goods in the **basket varies** from country to country, e.g. the UK has 700 'goods' in their basket and Singapore has 4,800
Step 3: Weighting	▪ Goods and services in the basket are weighted based on the proportion of household spending ▪ E.g. More money is spent on food than shoes, so shoes have a lower weight in the basket ▪ The **price x weighting** determines the final value of the good or service in the basket

Your notes

Using the CPI to calculate inflation

- The formula used to calculate the CPI is

$$\text{CPI} = \frac{\text{Cost of basket in current year}}{\text{Cost of basket in base year}} \times 100$$

- Once the index number has been calculated, the percentage difference between two index numbers **represents the rate of inflation**

$$\text{Inflation rate} = \frac{\text{New CPI} - \text{Previous CPI}}{\text{Previous CPI}} \text{ x } 100$$

Worked Example

- Using the information in the table, calculate the inflation rate for 2021, if the price of the basket in the base year (2019) was $400 [3]

Household Item	Price 2020	Price 2021	Basket Weight	Cost of Basket in 2020 (Price xWeight)	Cost of Basket in 2021 (Price xWeight)
Housing, water, electricity, gas	950	1200	34%	323.00	408.00
Transport	250	325	11%	27.50	35.75

Food	500	620	9%	45.00	55.80
Recreation & culture	300	340	10%	30.00	34.00
Clothing & footwear	190	210	5%	9.50	10.50
				$435.00	**$544.05**

Your notes

Step 1: Calculate the CPI for 2020

$$\text{CPI} = \frac{\text{Cost of basket 2020}}{\text{Cost of basket in base year}} \times 100$$

$$\text{CPI} = \frac{435}{400} \times 100$$

$$\text{CPI} = 108.75$$

Step 2: Calculate the CPI for 2021

$$\text{CPI} = \frac{\text{Cost of basket 2021}}{\text{Cost of basket in base year}} \times 100$$

$$\text{CPI} = \frac{544.05}{400} \times 100$$

$$\text{CPI} = 136.01$$

Step 3: Calculate the CPI for 2020

$$\text{Inflation rate} = \frac{\text{New CPI} - \text{Old CPI}}{\text{Old CPI}} \times 100$$

$$\text{Inflation rate} = \frac{136.01 - 108.75}{108.75} \times 100$$

$$\text{Inflation rate} = 25.07\%$$

3 marks for the correct answer or 1 mark for any correct working. The final answer should be rounded to 2 decimal places


Your notes

The Retail Prices Index (RPI)

- The retail price index (RPI) is calculated in exactly the same way as the CPI
  - Certain goods and services that are **excluded** from the CPI are **included** with the RPI
    - These include **council tax, mortgage interest payments**, **house depreciation**, and other house purchasing costs such as **estate agents fees**
- Due to the extra inclusions, inflation measured using the RPI is usually **higher** than the CPI
  - This is mainly due to its **sensitivity to interest rate** changes, which affect mortgage interest
  - It is argued that the **RPI is a more accurate** indication of a households inflation

Using National Income Data


Your notes

An Introduction to National Income

- **National income** is the total value of the **new output** of an economy over a period of time
  - The output is produced by the **physical (machinery) and human capital** in the economy
- National income gives an indication of the **economic performance** of a country
- **Nominal** and **real GDP** are often used to measure national income
  - A **fall** in national income may indicate the economy is going into a **recession**
  - A **rise** in national income indicates the economy is experiencing **economic growth**

Gross national income

- Gross national income (GNI) is another measure of national income
  - It represents the total income earned by a country's residents, both domestically and abroad
- GNI includes the following components
  - GDP and Net income from abroad
  - **Net income from abroad** accounts for income earned by residents of a country from their investments or employment in foreign countries, minus income earned by foreign residents within the country
- It can be calculated in one of two ways
  - Using GDP data **plus** net income from abroad

$$\text{GNI} = \text{GDP} + (\text{net income from abroad})$$

- Using income data from the factors of production **plus** net income from abroad

$$\text{GNI} = (\text{Wages} + \text{interest} + \text{rent} + \text{profit}) + (\text{net income from abroad})$$

Using GDP to make Comparisons Between Countries

- While national income data can **provide valuable information for policy makers**, it is also limited in how useful it is when making international comparisons

The Usefulness of National Income Data to Assess Changes in Living Standards

Purpose	Explanation
Compares changes in living standards across time	▪ National income statistics serve as a valuable tool for comparing standards of living **over time,** e.g between 1998 and 2016 ▪ **GNI per capita** in the UK is a crucial indicator used to evaluate changes in living standards across different periods ▪ Typically, a **rising** GNI per capita indicates an **improvement** in average income, leading to an overall improvement in the standard of living for the population
Evaluates effectiveness of economic policy	▪ Monitoring **GNI per capita** is beneficial in assessing how **effective a policy** has been in enhancing economic well-being ▪ It also assists the government in **formulating** economic policy to improve standard of living in the future
Compares data across countries	▪ National income statistics are useful for making comparisons **between countries** ▪ They allow judgments to be made about the **relative wealth** and standard of living within each country ▪ They allow **comparisons** to be made over the same or different time periods ▪ E.g. The growth of the Asian Economies in the last 15 years can be compared to the growth of the European Economies in the 1990s

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The Limitations of Using GDP for Comparisons

The Limitations of Using GDP Data to Compare Living Standards Between Countries over time

Limitation	Explanation

Lack of information provided on inequality	▪ The **distribution of income** in an economy is provided as an **average** (GDP/capita) ▪ The differences in the standard of living within the same country can be significant
Quality of goods and services	▪ GDP provides no information on the increase or decrease in the **quality of goods or services** over time ▪ If **quality worsens** but prices are lower, then the standard of living is judged to have increased ▪ The poor quality may actually have decreased the standard of living
Does not include unpaid or voluntary work	▪ If it included voluntary or unpaid work, then **GDP/capita would be higher** ▪ E.g. Some economies have a high amount of **family child care** provision. This increases standards of living but is **not recorded** in any way
Differences in hours worked	▪ GDP data does not capture the **amount of time** taken to **produce the GDP/capita** ▪ In one country, where it takes less time to generate income than in a similar country, the standard of living would actually be higher
Environmental factors	▪ GDP does not capture the **environmental and health impacts** of generating income within a country (externalities) ▪ In one country, where there are fewer externalities in generating income, the standard of living would be higher

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Purchasing Power Parity (PPP) for Making International Comparisons

- Using **GDP per capita** to **compare living standards** may not be accurate because currency values are different
- [popover id="4ukZPd6hY55mt67Q" label="Purchasing power parity (PPP)"] **adjusts exchange rates** based on the price levels of a standard set of goods and services in different countries, aiming to account for differences in the **cost of living**

- PPP is conversion factor that can be applied to **GDP, GNI** and **GNP**
- It calculates the relative purchasing power of **different currencies**
  - It shows the number of units of a country's currency that are required to buy a product in the local economy, as $1 would buy of the same product in the USA
- If a **basket of goods** cost $150 in Vietnam (once the currency has been converted) and the same basket of goods cost $450 in the USA, the purchasing power parity would be 1:3
  - It seems like the **cost of living** is much higher in the USA
  - However, if the USA **GNP/capita** is more than three times higher than the GNP/capita of Vietnam, it could be argued the USA has better **standards of living**
  - Conversely, if the GNP/capita in the USA was less than three times that of Vietnam, it could be argued that Vietnamese citizens enjoy a higher standard of living as they spend **less income** to acquire the same goods/services


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