



AQA - A Level Economics

The national and international economy

9.1 The measurement of macroeconomic
performance

Revision Notes

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9.1.1 The objectives of government economic policy

Governments **intervene in the economy** to keep things running smoothly, ensuring people have **jobs, stable prices, and a good quality of life**. They use **policies** to manage economic performance and aim to achieve key **macroeconomic objectives**.

Here are the **big goals** every government works towards:

Economic growth

What is it?

Economic growth happens when a country **produces more goods and services over time**, measured by an increase in **real GDP**.

Most **developed countries** (like the UK) aim for **2-3% annual economic growth**.

- ✓ **This is called *sustainable growth*** – meaning the economy is growing at a **healthy pace** without creating major problems.
- ✓ **Why not grow faster?** If growth is **too high**, demand for goods and services can **outpace supply**, leading to **demand-pull inflation** (where prices rise because people want more than what's available).

Governments love economic growth because it's a **sign of success**! If GDP is rising:

- ✓ **More people have jobs** → Unemployment falls 
- ✓ **Businesses make more profit** → Higher investment 
- ✓ **The government collects more taxes** → Better public services 

When the economy grows, it **affects everyone**:

- ✓ **Higher confidence** – People spend more when they feel secure.
- ✓ **More job opportunities** – Companies hire more workers.
- ✓ **Better public services** – The government can invest in **schools, healthcare, and transport**.

9.1.1 The objectives of government economic policy

Low unemployment

Governments aim to **keep unemployment low** because it means **more people have jobs, incomes are higher, and the economy is stronger**. However, **some level of unemployment is normal**.

The UK's **target unemployment rate is 4-5%**, which is close to what economists call **full employment**.

Full employment doesn't mean **zero unemployment**, some people will always be **switching jobs or entering the workforce**, which is called **frictional unemployment**.

How Does Unemployment Link to Economic Growth?

 Unemployment and economic growth move in opposite directions.

 **When the economy grows (GDP rises)** → More businesses **hire workers**, so **unemployment falls**.

 **When the economy shrinks (GDP falls)** → Businesses **lay off workers**, so **unemployment rises**.

Example:

- After the **2007-08 financial crisis**, the UK's unemployment rate **remained high for six years** as businesses struggled to recover.

9.1.1 The objectives of government economic policy

Price Stability - Low and stable rate of inflation

Inflation is when **prices of goods and services rise over time**, meaning **your money buys less than it used to**. Governments aim to **keep inflation low and stable** so the economy runs smoothly without **prices spiraling out of control**.

The UK's Inflation Target

- The **Bank of England** targets a **2% inflation rate** using the **Consumer Price Index (CPI)**, which measures **changes in the average price of goods and services**.
- A **low and steady inflation rate** is considered **healthy**, as it usually signals **economic growth** without causing major price spikes.

◆ Example:

- If inflation is **too low (below 1%)**, the economy may **slow down**, as people spend less.
- If inflation is **too high (above 4-5%)**, prices rise **too fast**, making everyday essentials **more expensive**.

What Causes Inflation?

There are **two main types** of inflation, and each needs a **different government response**:

✓ Demand-Pull Inflation → Too much demand, not enough supply

- When consumers **spend more**, businesses **struggle to keep up**, so prices **rise**.
- **Example:** If wages **increase suddenly**, people spend **more on holidays, cars, and electronics**, pushing **prices up**.
- **Solution?** The government can use **demand-side policies** like **higher interest rates** to slow spending.

9.1.1 The objectives of government economic policy

Price Stability - Low and stable rate of inflation

✓ Cost-Push Inflation → Rising costs make goods more expensive

- If **wages, raw materials, or energy prices** rise, businesses **pass these costs to consumers** by **increasing prices**.
- **Example:** When oil prices **jump**, transportation costs rise, making **food, fuel, and flights more expensive**.
- **Solution?** **Supply-side policies** like **investing in renewable energy** or **cutting business taxes** can help reduce costs.

Why Does Stable Inflation Matter?

- ✓ **Predictability for businesses** – Companies can plan **long-term investments** without worrying about price swings.
- ✓ **Stronger consumer confidence** – People feel secure spending money instead of **saving out of fear**.
- ✓ **Protects purchasing power** – Keeps wages in line with prices so people can afford their **daily needs**.

9.1.1 The objectives of government economic policy

Balance of payments equilibrium on current account

Every country **buys and sells goods and services with the rest of the world**. This financial record is called the **Balance of Payments (BoP)**, which tracks **all money flowing in and out of a country**.

A key part of this is the **Current Account**, which focuses on:

✓ **Exports** – Goods and services sold **to other countries** (money flows in 💰).

✓ **Imports** – Goods and services **bought from other countries** (money flows out 💸).

Governments aim for a **Balance of Payments equilibrium**, where **money coming in and going out is roughly equal**.

📊 **What Happens When Trade is Unequal?**

📈 **Current Account Surplus (Good for Savings, Bad for Growth?)**

✓ **Exports > Imports** → More money is coming **into the country** than leaving.

✓ This means the country is **selling more than it buys**, making it **wealthier**.

⚠️ **Potential downside?**

- If a country **only saves money and doesn't reinvest in growth**, it can **slow down domestic spending and job creation**.

9.1.1 The objectives of government economic policy

Balance of payments equilibrium on current account

📉 **Current Account Deficit (Risky, But Not Always Bad)**

✗ **Imports > Exports** → More money is **leaving the country** than coming in.

✗ This means the country **buys more than it sells**, leading to **higher debt or reliance on foreign investment**.

⚠️ **Why is this a problem?**

- A **large and long-term deficit** could mean the country is **borrowing too much**, which may lead to **debt crises or currency depreciation**.

What About the UK?

✓ **The UK has traditionally had a small current account deficit.**

✓ **As a % of GDP, this deficit hasn't been a major problem.**

✓ **The UK attracts a lot of foreign investment**, balancing out the effects of a trade deficit.



9.1.1 The objectives of government economic policy

Balance of government budget

Every year, the government creates a **budget**, deciding how much money it will **earn (revenue)** and **spend (expenditure)**. A well-balanced budget ensures the government can **fund public services, invest in infrastructure, and support the economy**, without taking on too much debt.

Where Does Government Money Come From?

Revenue (Money In)

- Taxes (income tax, VAT, corporation tax)
- Sale of government assets (e.g., selling land, state-owned companies)
- Income from government-owned services (e.g., public transport fees)

Expenditure (Money Out)

- Public sector wages (e.g., doctors, teachers, police)
- Welfare benefits (e.g., pensions, unemployment benefits)
- Public services (e.g., NHS, schools, roads, defense)

What is a Balanced Budget?

A **balanced budget** means **government spending = government revenue**. However, this isn't always the case.

Budget Deficit (Spending > Revenue)

- The government **spends more than it earns**, so it must **borrow money** to cover the gap.
- This borrowing adds to **public sector debt (national debt)**.

9.1.1 The objectives of government economic policy

Balance of government budget

Budget Surplus (Revenue > Spending)

- The government **earns more than it spends**, which can be used to **pay off debt or invest in the future**.

Why Does Government Debt Matter?

If **government debt gets too high**, lenders (investors and banks) **lose confidence** and may **charge higher interest rates** on loans. This makes borrowing **more expensive** and can lead to:

- **Higher taxes** to pay off debt
- **Cuts to public spending** (e.g., fewer benefits, reduced healthcare funding)

Example:

- After **COVID-19**, the UK's **budget deficit increased significantly** due to emergency spending (furlough schemes, business support). Now, the government must **cut future spending or raise taxes** to manage the debt.

How Can the Government Reduce a Deficit?

Reducing a deficit means making **tough choices**:

-  **Raise Taxes** – Increases government income but can **hurt businesses and consumers**.
-  **Cut Public Spending** – Reduces debt but **could lead to worse healthcare, education, and infrastructure**.
-  **Boost Economic Growth** – A growing economy **creates more jobs and tax revenue** without needing spending cuts.

Example:

- In **2010, after the financial crisis**, the UK government **cut public sector wages and reduced benefits** to control debt, leading to public protests.

9.1.1 The objectives of government economic policy

Protection of the environment

The UK Government has set **big goals** to tackle **climate change** and make the economy more **sustainable**.

🌱 What Are the UK's Broader Environmental Goals?

⚡ 1. 100% Renewable Energy by 2035

📌 Renewable energy comes from sources that don't run out, like wind, solar, and hydro power.

✅ The UK aims to **fully power homes and businesses with renewables** by 2035.

✅ This means reducing reliance on **coal, oil, and gas**.

Example:

- **Offshore wind farms** now supply a large part of the UK's electricity.
- **Solar power** is becoming **cheaper and more widely used** in homes.

♻️ 2. Focus on Sustainability

📌 Sustainability means using resources in a way that meets today's needs without harming future generations.

- ✅ Encouraging **eco-friendly farming** 🚜🌱.
- ✅ Reducing **plastic waste** and promoting recycling ♻️.
- ✅ Supporting businesses that use **green technology**.

9.1.1 The objectives of government economic policy

Protection of the environment

⚠️ 3. Reducing Negative Externalities of Production

📌 A negative externality is when businesses create costs for society, like pollution, without paying for the damage.

✅ **Factories releasing CO₂** contribute to climate change but don't pay for the environmental damage.

✅ Governments can **tax polluting industries** or give subsidies for **clean energy alternatives**.

💡 Example:

- The UK **introduced a plastic packaging tax** to reduce waste and encourage businesses to use recyclable materials.



9.1.1 The objectives of government economic policy

Greater income equality

What is Income Inequality?

Income inequality happens when **wealth is not distributed evenly across a population**, meaning some people earn **far more** than others. While some level of inequality is normal, extreme inequality can **cause social unrest, economic inefficiency, and reduced opportunities for lower-income groups**.

- Governments aim to **reduce income inequality** to create a **fairer and more stable society**.

How is Income Inequality Measured?

 **The Gini Coefficient** – A number between **0 and 1** that measures income distribution:

- **0 = Perfect equality** (everyone has the same income).
- **1 = Extreme inequality** (one person has all the income).
- Most developed economies aim for a **Gini coefficient of 0.3–0.4**.

Example:

- **Denmark (low inequality)** has a Gini coefficient of around **0.26**.
- **South Africa (high inequality)** has a Gini coefficient above **0.6**.

Why Can't We Have Perfect Income Equality?

-  **Perfect equality sounds great, but it removes the incentive to work and innovate.** If everyone earned the same, there would be **less motivation to start businesses, study, or take risks**.
-  **A balanced approach is best; reducing extreme poverty while still rewarding effort and innovation.**

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9.1.1 The objectives of government economic policy

Greater income equality

How Capitalism Creates Income Gaps

Capitalism naturally leads to **some level of inequality** because:

- ◆ **Wealthy individuals can invest in assets** like property, stocks, and businesses, making them **even richer**.
- ◆ **Ownership becomes concentrated**, with fewer people controlling the **bulk of wealth** (think billionaires owning major tech companies).

Example:

- **Jeff Bezos and Elon Musk** have amassed vast wealth through business ownership, while many workers still struggle with **low wages**.
- This is why governments often **intervene with policies to prevent excessive wealth concentration**.

What Happens if Inequality Gets Too High?

-  **Social Unrest** – If too many people feel **left behind**, there can be **protests, strikes, and even political instability**.
-  **Poverty Traps** – People in **low-income families** may struggle to **escape poverty** due to **poor education and fewer job opportunities**.
-  **Weaker Economic Growth** – When wealth is too concentrated, **fewer people can afford to spend**, slowing down economic activity.

How Can Governments Reduce Income Inequality?

-  **Progressive Taxation** – Higher earners **pay more tax**, funding welfare and public services.
-  **Minimum Wage Laws** – Ensures workers **earn a fair income**.
-  **Public Services & Education** – Investing in **healthcare, schooling, and job training** helps reduce **poverty gaps**.

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9.1.1 The objectives of government economic policy

Conflicts and trade-offs between the macroeconomic objectives

1. Economic Growth vs. Protection of the environment 🌱🏭

- Growth often leads to **more production, more pollution, and depletion of non-renewable resources.**
- **Faster growth = Higher carbon emissions and environmental damage.**

Example: China's industrial boom led to **higher GDP** but also **severe air pollution and resource depletion.**

2. Economic Growth vs. Inflation 📈🔥

- As the economy **expands**, businesses demand more **workers and resources**, pushing wages and prices **higher.**
- **If demand grows too fast, it exceeds supply**, leading to **demand-pull inflation** (rising prices due to excessive demand).

Example: The **UK's rapid recovery post-COVID-19** saw **economic growth** but also **rising inflation**, prompting the Bank of England to increase interest rates.

3. Economic Growth vs. Budget Deficit 📊📉

- Governments use **expansionary fiscal policy** (higher spending and tax cuts) to **stimulate growth**, but this **increases the budget deficit** (when government spending exceeds revenue).

Example: The **US government stimulus packages** during **COVID-19** boosted growth but **increased national debt significantly.**

9.1.1 The objectives of government economic policy

Conflicts and trade-offs between the macroeconomic objectives

4. Economic Growth vs. Balancing the Current Account 💰🌐

- Growth **raises household incomes**, leading to **more imports** (buying goods from abroad).
- **If imports grow faster than exports**, the **current account deficit worsens.**

Example: The **UK consistently runs a current account deficit** because **high consumer spending** leads to **more imports than exports.**

5. Unemployment vs. Inflation 🏢📈🔥

- As the economy nears **full employment**, businesses **struggle to find workers**, so they **offer higher wages.**
- **Higher wages = Increased production costs = Higher prices (inflation).**

Example: In **post-Brexit Britain**, **labour shortages** led to **higher wages for lorry drivers**, but this also caused **rising prices for goods.**



9.1.2 Macroeconomic indicators

Macroeconomic indicators are like a health check-up for the economy. Just like a doctor measures your blood pressure or temperature, economists use indicators to see how the economy is doing. These indicators help measure progress towards **macroeconomic objectives** (big goals for the economy, like growth, stable prices, and low unemployment).

What Are Macroeconomic Indicators?

- **Macroeconomic indicators** are numbers or data that show how well the economy is performing.
For example, if unemployment is high, it's like the economy having a fever; something needs to be fixed.
- They give a **snapshot** of the economy and help predict future trends.

Why Are They Important?

- Policymakers (like governments) and investors use these indicators to make **smart decisions**, whether it's adjusting interest rates, creating jobs, or deciding if it's the right time to invest.
- They allow us to make **historical comparisons** (e.g., "Are we better off now than 10 years ago?") and **international comparisons** (e.g., "Is our economy growing faster than Germany's?").



9.1.2 Macroeconomic indicators

Key Macroeconomic Indicators

- **Economic Growth:**
 - Measured by **GDP** (Gross Domestic Product), which is the total value of goods and services produced in a country.
 - Think of it like a scorecard for how productive a country is.
- **Inflation:**
 - This shows how much prices are rising. A little inflation is normal, but too much can be like your favourite snacks suddenly costing double overnight.
 - Measured by the **Consumer Price Index (CPI)** or **Retail Price Index (RPI)**.
- **Unemployment:**
 - This measures how many people want a job but can't find one.
 - Tracked using data like the **Claimant Count** or the **Labour Force Survey**.
- **Balance of Payments:**
 - This shows how much a country earns from exports (selling to other countries) compared to what it spends on imports (buying from other countries).
 - A "favourable balance" means the country is selling more than it's buying like earning more pocket money than you spend.

9.1.2 Macroeconomic indicators

Measures of economic growth

What is Economic Growth and GDP

Let's think of GDP as your country's scoreboard. It tells us how much *stuff* (goods and services) a country is producing over a year. The more the country produces, the higher the score. It's a keyway to measure **economic growth**, which is just a fancy way of saying how much the country's output is growing over time.

- **Definition: Economic growth** - A long-term rise in an economy's productive capacity, leading to higher production of goods and services, typically measured by growth in real GDP.

What is GDP?

GDP is the **value of all the goods and services** made in a country in one year. Imagine everything sold in shops, all the services like healthcare and teaching, and even the exports sent abroad – its all counted. It's also a way to compare how different countries are doing.

- **Total GDP:** This is the overall value of all the goods and services produced.
- **GDP per capita:** This is the value divided by the number of people in the country. Think of it as how much stuff each person gets, on average. If this grows, it means people are likely better off.



9.1.2 Macroeconomic indicators

There are **two ways** to measure GDP:

1. The Income Approach:

This adds up all the income earned from making the goods and services:

- **Wages:** From workers' salaries.
- **Rent:** From land or property.
- **Interest:** From capital like loans or savings.
- **Profits:** From businesses.

2. The Expenditure Approach:

This adds up all the money spent in the economy:

- **Consumption:** What households spend on things like groceries, clothes, Netflix subscriptions, etc.
- **Government Spending:** Money spent on things like schools, roads, and hospitals.
- **Investment:** What businesses spend on machinery, buildings, or tools.
- **Net Exports:** Exports (stuff sold abroad) minus imports (stuff bought from abroad).

Both approaches should give the same number because one person's **spending** is another person's **income**. It's all connected.

9.1.2 Macroeconomic indicators

Measures of economic growth

Real GDP vs Nominal GDP

- **Nominal GDP:** Includes inflation, so prices might look bigger just because things are more expensive, not because there's more stuff.
- **Real GDP:** Strips away inflation to show the true growth in goods and services. It's like comparing apples to apples, not apples to super-expensive golden apples.

Value vs Volume of GDP

- **Value of GDP:** The actual monetary worth of all the goods and services produced.
- **Volume of GDP:** The total number of goods and services produced, stripped of price changes like inflation. It's the real stuff, not just the inflated cost.

So, if prices go up, the value of GDP may rise, but the volume might stay the same if the same amount of goods is produced.

9.1.2 Macroeconomic indicators

Example: Cakes and Cookies Over Two Years

Year	Price per Cake (£)	Cakes sold	Prices per Cookies (£)	Cookies sold	Nominal GDP (£)	Real GDP (£)
2022	10	100	2	200	1,400	1,400
2023	12	120	2.5	220	2,010	1,780

1. **Nominal GDP:** Multiply the price of each product by the quantity sold and sum them up.
 - **For 2022:** $(£10 \times 100 \text{ cakes}) + (£2 \times 200 \text{ cookies}) = £1,400$.
 - **For 2023:** $(£12 \times 120 \text{ cakes}) + (£2.50 \times 220 \text{ cookies}) = £2,010$.
2. **Real GDP:** Use the first year's prices to calculate GDP for both years.
 - For 2023, adjust prices to 2022 levels: $(£10 \times 120 \text{ cakes}) + (£2 \times 220 \text{ cookies}) = £1,780$.



9.1.2 Macroeconomic indicators

Measures of inflation

Inflation

This is when prices **keep going up** across the economy, it's not just one or two things getting more expensive. Imagine a "basket of goods" filled with things you buy every month, like bread, milk, and shampoo. The average price of this basket is tracked using something fancy called the **Consumer Price Index (CPI)**.

For example, last year, a bread cost £1.04, and now it's £1.40. That's inflation in action. In the UK, the government tries to keep inflation steady at around **2% per year**, because a little inflation means the economy is growing.

Deflation

This is the opposite: prices **fall** across the economy. Sounds good, right? Not always. If prices drop too much, people might stop spending because they expect things to get even cheaper, which can harm businesses and jobs. Deflation happens when the **percentage change in prices goes below zero**.

Disinflation

Don't confuse this with deflation! Disinflation means prices are **still rising**, just **not as fast as before**.

For example:

- Year 1: Gym memberships go up by 10%.
- Year 2: They increase by 6%.
- Year 3: The rise slows to 3%.

Prices are still climbing, but the pace is relaxing, like a jog slowing down to a brisk walk.



9.1.2 Macroeconomic indicators

Measures of inflation

Understanding inflation is like solving a fun little puzzle using percentages, here's how it works:

Example 1:

If inflation is 20%, what will £300 worth of goods in Year 1 cost in Year 2?

Here's the process:

1. Add the 20% inflation to the original price.
2. So, 120% of £300 = **£360**.

By Year 2, those £300 goods will cost **£360**. 🛒

Example 2:

If inflation is 25%, what will £800 worth of goods in Year 2 have cost in Year 1?

Let's work backwards this time:

1. £800 is 125% of the original price (because 100% + 25% inflation = 125%).
2. To find 1%, divide £800 by 125.
3. Then multiply by 100 to find 100%:
4. Therefore, $£800 \div 125 = £6.40$. Multiply by 100 = **£640**.

So, in Year 1, those goods would have cost **£640**.

9.1.2 Macroeconomic indicators

Measures of inflation

Inflation is when the **average price** of goods and services goes up over time. Imagine buying a cinema ticket and some snacks for £10 one year, but next year it costs £11. That's inflation creeping up! The **inflation rate** tells us how much those prices have risen compared to last year.

How Do We Measure Inflation?

We use something called the **Consumer Price Index (CPI)**. It's a tool that calculates inflation by comparing the prices of a 'basket' of goods and services that most households buy.

The Consumer Price Index (CPI) – Explained Simply

- **The 'Basket of Goods':** Imagine a virtual shopping basket with 700 everyday items like bread, clothes, transport, and more. These are products an average family would buy.
- **How It's Updated:** Each year, some items are swapped out (e.g., DVD players are out, streaming services are in) based on what people actually spend their money on.
- **Weighting Items:** Items in the basket are weighted depending on their importance in household spending. For example, more money is spent on food than on cinema tickets, so food has a higher weight.

How Do Prices Get Tracked?

- Prices are collected every month from shops, online stores, and services across the UK.
- All those prices are averaged out to create a total cost for the basket.

The CPI Formula Simplified:

Here's how inflation is worked out:

$$CPI = \left(\frac{\text{Cost of basket this year}}{\text{Cost of basket in base year}} \right) \times 100$$

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9.1.2 Macroeconomic indicators

Measures of inflation

Example: Working Out the Index of Spending

Let's say the base year is **2010**, and we want to calculate the index of spending for the following data:

Year	Spending on Pizza (£)	Index
2005	500	$(500 \div 600) \times 100 = 83.33$
2010	600	100 (it's the base year)
2015	660	$(660 \div 600) \times 100 = 110$
2020	720	$(720 \div 600) \times 100 = 120$

Explanation:

1. **Base Year (2010):**
The spending in 2010 is **£600**, and this becomes our benchmark, so the index is **100**.
2. **2005 (Before the Base Year):**
Spending is **£500**. The index is 83.33.
This shows that spending was lower in 2005 compared to 2010.
3. **2015 (After the Base Year):**
Spending rises to **£660**. The index is 110
A 10% increase in spending since the base year.

Why Should You Care?

CPI helps governments set policies, workers demand fair wages, and you plan your finances. For example, if your favourite coffee shop suddenly charges £4 instead of £3, CPI will reveal if it's inflation or just overpriced lattes.  

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9.1.2 Macroeconomic indicators

Measures of inflation

The **Consumer Price Index (CPI)** is a useful tool, but it has its limitations when it comes to measuring the rate of inflation. Here's why:

- **Not Fully Representative**
CPI uses an average "basket" of goods, which doesn't reflect everyone's spending habits. For example, someone who spends more on technology versus groceries won't see their personal inflation rate reflected accurately.
- **Excludes Housing Costs**
Big expenses like house prices are left out, so CPI often underestimates inflation. If rent or property prices skyrocket, it won't show in the data.
- **Regional Differences Ignored**
CPI averages inflation nationwide, missing variations like higher living costs in cities like London compared to rural areas.
- **Doesn't Account for Quality Changes**
Product improvements aren't captured. A laptop in 2023 is far superior to one from 2000, but CPI treats them as the same if the prices match.
- **Survey Limitations**
CPI relies on small sample surveys, which can be inaccurate. People might underreport or overreport their spending, leading to unreliable results.

9.1.2 Macroeconomic indicators

Measures of inflation

Definition: The Retail Prices Index (RPI) is a measure of inflation that calculates the average change in prices of goods and services over time.

It's similar to the Consumer Prices Index (CPI) but includes extra costs related to housing and personal finance.

1) What Makes RPI Special?

RPI covers costs that CPI doesn't. For example, **train season tickets** (commuter costs), **home insurance** (keeping your house safe), or **mortgage interest payments** (if your loan payments rise, RPI will catch it).

2) Extra Costs = Higher Inflation

Because RPI includes these extra expenses, it tends to show a higher inflation rate than CPI. For instance, if housing costs skyrocket, RPI will reflect that increase more accurately than CPI.

3) Real-Life Impact

Imagine two families: one rents a flat, and the other has a mortgage. The mortgage family's costs go up if interest rates increase, which RPI takes into account. CPI, on the other hand, wouldn't reflect this.

4) Is RPI Better?

Some say RPI gives a clearer picture of household spending, especially for costs like housing and travel. For instance, it might be better for estimating the real cost of living in big cities like Manchester or Birmingham.

RPI is great for tracking costs like rail fares and homeowner inflation, but it's sensitive to interest rates and not relevant to everyone.

9.1.2 Macroeconomic indicators

Unemployment: This is the **number of people** who *want* a job, are **able to work**, but currently **don't have one**.

- **Level of unemployment:** The **total number** of unemployed people.
- **Rate of unemployment:** This shows the **percentage** of the workforce that's unemployed.

Employment: This is the **proportion of people** in work compared to the **total workforce**.

The Workforce: Everyone of **working age** who is either **working** or **ready and able to work** (so it includes both the employed and unemployed).

Measures of unemployment

In the UK, **unemployment** is measured in two main ways:

1) The Claimant Count

What is it? A count of people claiming **Jobseeker's Allowance (JSA)** or **Universal Credit** because they're unemployed.

How does it work?

- Only includes those **eligible** for benefits.
- Claimants must meet **strict requirements**, like attending meetings with a **work coach**.

9.1.2 Macroeconomic indicators

Measures of unemployment

2) The International Labour Organisation (ILO) and the UK Labour Force Survey

The **International Labour Organisation (ILO)**, used by the **Office of National Statistics (ONS)**, defines people over the age of 16 as either **employed**, **unemployed**, or **inactive**. Let's break it down:

a) Employed

- You're **working at least 1 hour a week** for pay or profit.
- Includes people on **holiday**, in **training schemes**, or doing **unpaid family work** (15+ hours).

b) Unemployed

- You're not working but are:
 - **Actively looking for work** in the past 4 weeks.
 - Available to **start work within 2 weeks**.

c) Inactive

- You're not working and **not looking for work**.
- Includes students, carers, retirees, those with health issues, or people **discouraged from applying**.

Labour Force Survey (LFS)

- A **sample survey** of households to classify people as employed, unemployed, or inactive.
- It's used in every EU country and gives an **estimate** of unemployment since it relies on a representative **sample**.



9.1.2 Macroeconomic indicators

Measures of unemployment

Unemployment refers to people who are not working but are actively looking for a job and are ready to work. **Underemployment**, on the other hand, means people have jobs but aren't working to their full potential. Let's break it down:

Underemployment:

What does it mean?

You're underemployed if:

- You **want more hours** than you're currently working (e.g., doing part-time work when you want a full-time role).
- You're **overqualified** for your job (e.g., a trained accountant working as a cashier).

Why Does Underemployment Happen?

- During **economic downturns (recession)** when jobs are scarce. People may settle for part-time jobs or roles outside their usual skill set just to make ends meet.
- When industries change or technology evolves, and workers' **skills become outdated**. Without retraining or gaining **new skills**, it's tough to find a job that matches their qualifications.

Impact on the Economy:

While underemployment isn't as bad as full unemployment, it still hurts. With less money to spend, the underemployed reduce their consumption, which leads to lower **aggregate demand** (the total demand in the economy) and slower economic growth.



9.1.2 Macroeconomic indicators

Measures of unemployment

1. Unemployment Rate

- This shows the percentage of people who are actively looking for work but aren't currently employed.

$$\text{Unemployment rate} = \frac{\text{No. actively seeking work}}{\text{Total labour force}} \times 100$$

2. Employment Rate

- This measures the percentage of working-age people who are currently employed.

$$\text{Employment rate} = \frac{\text{No. in employment}}{\text{Population of working age}} \times 100$$

3. Inactivity Rate

- This measures the percentage of working-age people who are not working and not looking for work (e.g., students, carers, retirees).

$$\text{Inactivity rate} = \frac{\text{Inactive people of working age}}{\text{Working - age population}} \times 100$$

4. Labour Force Participation Rate

- This shows how many people of working age are actively involved in the labour force, either employed or looking for work.

$$\text{Participation rate} = \frac{\text{Labour force}}{\text{Total population}} \times 100$$

9.1.2 Macroeconomic indicators

Measures of unemployment

How These Rates Work Together

The **employment rate** might rise while the **unemployment rate** also increases.

- Example: A city attracts more tech workers, increasing the working-age population, but not all of them find jobs immediately.

Unemployment rates don't show everything, like **hidden unemployment**.

- Example: A freelance artist stops looking for new clients during a slow period. They're no longer counted as unemployed but aren't working either, which lowers the unemployment rate even though the situation hasn't improved.

9.1.2 Macroeconomic indicators

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9.1.2 Macroeconomic indicators

The balance of payments

The **Balance of Payments (BOP)** is like a country's bank statement. It records all the money flowing in and out of the country over a certain period.

- **Imports:** Goods/services we buy from other countries, money flows out.
- **Exports:** Goods/services we sell to other countries, money flows in.

Main Parts of the Balance of Payments

1. Current Account:

- Tracks the buying and selling of goods, services, and income flows.
- **Trade in Goods (Visibles):** Physical items like cars, food, and clothes. For example, a German car sold in the UK is a visible import.
- **Trade in Services (Invisibles):** Non-physical transactions like tourism or financial services. A British tourist spending in Spain is an invisible import.
- **Income and Current Transfers:** Money flowing into or out of the country, such as wages, profits, or government transfers. Example: A British person earning dividends from a French company (income coming in) or sending money to family abroad (transfer going out).

2. Capital and Financial Account:

Tracks investments, loans, and asset transfers. Think of it as big money moves:

- A Chinese firm buying a factory in Manchester = money coming into the UK.
- A British investor buying property in Spain = money flowing out.



9.1.2 Macroeconomic indicators

The balance of payments

Key terms

- **Balance of Trade in Goods:** Exported goods minus imported goods (how much stuff we sell vs buy).
- **Balance of Trade in Goods and Services:** Combines physical goods (visibles) and non-physical services (invisibles) to give the full picture.

Examples:

- A British architect designs a skyscraper in Dubai = UK invisible export (money coming in).
- A London restaurant importing Italian truffles = UK visible import (money going out).

Why It Matters

- The BOP shows whether a country is borrowing or earning more from the rest of the world. A surplus means more money coming in than going out, while a deficit means the opposite.

9.1.2 Macroeconomic indicators

The balance of payments

The **current balance** is like your financial health check. It's calculated as:

Current balance = Balance of trade (goods) + Balance of invisibles (services) + Net income and current transfers.

Current Account Surplus:

This is when a country is earning more than it spends. How? **Exports > Imports**. Think of it as having more money coming in than going out. For example:

- A UK company exporting jet engines to Australia (money in).

Current Account Deficit:

This happens when a country spends more than it earns. How? **Imports > Exports**. It's like your spending outweighing your income. For example:

- A UK retailer importing luxury Italian handbags (money out).

Why It Matters:

- A **surplus** means the economy is bringing in cash, while a **deficit** shows the opposite. Neither is always good or bad, it depends on the context. A deficit could mean we're importing great stuff, while a surplus could mean we're saving rather than spending. It's all about balance, like managing your own bank account! 😊

9.1.2 Macroeconomic indicators

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9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

An **index number** is like a scoreboard for the economy. It helps economists track changes in **prices**, **quantities**, or **economic activity** over time.

- It's a way of showing how something (like the price of milk or the cost of living) has changed compared to a certain starting point (called a **base year**).
- Index numbers also help make comparisons between countries easier; kind of like using the same units when comparing height.

How to Create an Index (Step-by-Step)

Step 1: Choose What You're Measuring

Pick the item(s) or economic indicators you want to measure.

- Example: Let's say we want to track the price of coffee, bread, and petrol.

Step 2: Pick a Base Period

Choose a year (or time period) as your starting point. This will always have an index value of **100**.

- Example: You pick the year 2020 as your base year.

Step 3: Gather the Data

Collect price or quantity data over time for both the base year and future years.

- E.g. Coffee was £2 in 2020 and £2.20 in 2023.

Step 4: Apply Weights (If Needed)

Some items matter more than others, so we give them **weights**. A loaf of bread might be more important in your weekly budget than cinema tickets.

- This is common in **composite indices** like the **Consumer Price Index (CPI)**.

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9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

Step 5: Calculate the Index

For each item:

- Use the formula:
Index = (Current Value ÷ Base Year Value) × 100
- If using weights, multiply the index by the weight and then find a weighted average.

Step 6: Make Sense of the Results

Once you have the index values:

- If the index = **120**, prices have gone **up 20%** since the base year.
- If the index = **90**, prices have gone **down 10%**.

Worked example

The average price of a cinema ticket was **£10** in 2020. By 2023, the average ticket price had risen to **£12.50**. Using 2020 as the **base year**, calculate the **index number** for cinema ticket prices in 2023 and explain what this indicates about price changes over the period.

Step 1: Use the Formula

$$\text{Index} = \left(\frac{\text{Value in the current year}}{\text{Value in base year}} \right) \times 100$$
$$\therefore \text{Index for 2023} = \left(\frac{12.50}{10} \right) \times 100 = 125$$

 **Index = 125**

A value of **125** means that the price of cinema tickets **increased by 25%** between 2020 and 2023.

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9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

Inflation is when prices go up over time. Basically, your money buys you *less* stuff than before. A chocolate bar that cost £1 last year might cost £1.10 this year; that's inflation.

CPI: The Inflation Calculator

CPI stands for **Consumer Price Index**, which is just a fancy way of measuring how prices change over time for the things people typically buy like milk, clothes, train tickets, and even haircuts.

How CPI is Calculated – Step by Step

Step 1: Pick the stuff

Around 700 goods and services are chosen to represent what people buy; a typical "shopping basket." It's updated every year. E.g., if no one is buying CDs anymore, they get swapped for streaming services.

Step 2: Gather prices

Each month, price data is collected from around 150 places across the country to see what these items cost.

Step 3. Weighting

Some things are more important than others. We spend more on rent than we do on bubblegum, so rent has a higher **weight**. Each item's price is multiplied by its weight to show its real impact.

CPI Formula

To work out the CPI for a year:

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

So, if the basket cost £100 in 2020 (base year) and £110 in 2023, the CPI would be:

9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

$$\therefore CPI = \left(\frac{110}{100} \right) \times 100 = 110$$

This means price increased by **10%** since 2020.

Inflation Rate Formula

Want to know *how fast* prices are rising? Here's the formula:

$$\text{Inflation rate} = \left(\frac{\text{New CPI} - \text{Old CPI}}{\text{Old CPI}} \right) \times 100$$

For example:

- CPI in 2022: 105
- CPI in 2023: 115

$$\text{Inflation rate} = \left(\frac{115 - 105}{105} \right) \times 100 = 9.5\%$$

So, prices rose by 9.5% in a year.

Why It Matters

Policymakers (like the Bank of England) watch inflation closely. If prices rise too quickly, it might mean:

- Wages can't keep up
- Interest rates might be raised to cool things down
- Your weekly shop starts looking scarier.



9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

Worked example

Using the information below, calculate the inflation rate for 2023 if the cost of the basket in the base year (2021) was £350. Show all steps clearly.

Household Item	Price 2022	Price 2023	Basket Weight	Cost in 2022 (Price × Weight)	Cost in 2023 (Price × Weight)
Rent	800	900	40%	320.00	360.00
Groceries	250	280	25%	62.50	70.00
Public Transport	100	120	15%	15.00	18.00
Internet & Mobile Data	60	65	10%	6.00	6.50
Entertainment (Netflix)	50	55	10%	5.00	5.50
Total basket cost				£408.50	£460.00

9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

Step 1: Calculate CPI for 2022

Use the formula:

$$CPI = \left(\frac{\text{Cost of basket in current year}}{\text{Cost of basket in base year}} \right) \times 100$$
$$\therefore CPI \text{ for 2022} = \left(\frac{408.50}{350} \right) \times 100 = 116.71$$

Step 2: Calculate CPI for 2023

$$\therefore CPI \text{ for 2023} = \left(\frac{460}{350} \right) \times 100 = 131.43$$

Step 3: Work Out the Inflation Rate

$$\text{Inflation rate} = \left(\frac{\text{New CPI} - \text{Old CPI}}{\text{Old CPI}} \right) \times 100$$
$$\text{Inflation rate} = \left(\frac{131.43 - 116.71}{116.71} \right) \times 100 = 12.59\%$$

Final Answer:

Inflation rate = 12.59%

That means the general price level rose by around 12.6% between 2022 and 2023.



9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

The Retail Prices Index (RPI)

The **Retail Prices Index (RPI)** is a way to measure inflation — that is, how much the prices of everyday goods and services go up over time. It works **very similarly to the CPI (Consumer Prices Index)**, but with a few key differences.

What Makes RPI Different from CPI?

While CPI leaves some items out, **RPI includes extra costs** that many households deal with, like:

- **Mortgage interest payments** – the extra money you pay when you borrow for a house
- **Estate agents' fees** – the cost of using a real estate agent to buy or sell property
- **Council tax** – a local tax paid by households to fund public services
- **House depreciation** – the fall in value of your house over time

Basically, RPI includes more of the “big life” expenses that CPI ignores.

Why Is RPI Usually Higher Than CPI?

Because it includes extra costs (especially ones that are affected by **interest rates**) RPI tends to give a **higher estimate of inflation**.

For example:

- When interest rates go up, mortgage payments also rise. Since RPI includes mortgages, it reflects this increase, while CPI doesn't.



9.1.3 Uses of index numbers

How index numbers are calculated and interpreted

So, Which One Is More Accurate?

Many argue that **RPI gives a better idea of the real cost of living**, especially for homeowners.

It's like comparing two shopping baskets, one has your rent, Netflix, and groceries (CPI), and the other also adds your house bills, mortgage, and council tax (RPI).

9.1.4 Uses of national income data

National income measures

Let's talk about GDP (Gross Domestic Product). It's great for showing how much a country makes *within its borders*, but it doesn't tell the full story. Why? Because it ignores money made by citizens *outside* the country. Imagine your friend works abroad, sends money back home, but that cash doesn't show up in GDP.

That's where **Gross national income (GNI)** comes in. It's like GDP but cooler because it **includes income from citizens working abroad**. So, if someone from the UK is earning in Australia and sending money home, GNI counts that too.

Now, **GNP (Gross National Product)** takes things one step further. It's like saying, "Alright, let's include money sent **to** the UK by its citizens abroad and take away money sent **out** of the UK by non-residents." Clearer picture, right?

Finally, **GNP per capita** is even better because it divides GNP by the population. It's a more **realistic measure of wealth** – because it considers how much each person, on average, actually benefits from the country's income.

In summary

Think of it like pizza slices:

- **Nominal GDP** is the total pizza size.
- **Real GDP** is the same pizza without the "inflation toppings" you didn't ask for.
- **GDP per capita**? That's how many slices each person gets.
- **GNI/GNP per capita**? That's making sure you're counting the slices people earned, whether they baked the pizza at home or worked in a neighbour's pizzeria! 🍕

9.1.4 Uses of national income data

Comparing growth between countries

National income stats are like a global report card. They show us how countries are doing when it comes to **wealth, standard of living**, and whether governments are making good decisions. Here's how they help:

- You can compare countries across different eras or events. *Example:* Compare the rapid tech growth in South Korea over the last decade to the industrial boom in the UK during the 1800s.
- **Real GDP** - It's way better than nominal GDP because it removes inflation. *Example:* Imagine one country's economy is growing, but only because the price of bananas tripled. Real GDP looks past that banana inflation and tells the real story. 🍌💰
- **Real GDP per person (GDP/capita)** - It's like dividing the country's wealth among its people to see how much each individual benefits. *Example:* A small country with 1 million people and a high GDP might be better off than a larger one with 100 million people and the same GDP.
- **Real GNI per person (GNI/capita)** - It checks how much money citizens are earning, even if they're working abroad. *Example:* If a lot of workers from India earn money in the Gulf and send it home, GNI shows how much income the country's citizens actually get.
- **Real GNP per person (GNP/capita)** zooms in on money earned **within the country**. *Example:* In Switzerland, you'd see the wealth generated from chocolate factories and banks staying in the country's economy. 🇨🇭🏦

9.1.4 Uses of national income data

Problems with comparing GDP

Imagine if the economy grows by 8% in India, 4% in Nigeria, and 1% in France. At first glance, it might seem straightforward, but there's more to the story. These figures can hide significant differences because of several factors:

1. Subsistence, Barter, and the Informal Economy

In many rural areas, people may grow their own food or trade goods and services without money. This activity isn't recorded in GDP. Similarly, informal work, like unregistered street vendors, flies under the radar. For example:

- 10% of GDP in Germany may come from informal work.
- 40% in Mexico.
- Over 50% in Kenya.

This means GDP misses a big chunk of economic activity in some countries.

2. Currency Values

How do we compare the real value of money? Should we use the official exchange rate or consider how far a currency stretches in each country? For example, \$10 might buy a simple meal in Canada but a week's worth of food in Cambodia. Using measures like purchasing power parity (PPP) can provide a fairer comparison.

3. Income Distribution

GDP per capita might look good, but is the wealth shared evenly? For instance, a tech billionaire in the USA skews the average, even if millions struggle to afford healthcare. A high GDP doesn't always reflect the reality for most citizens.



9.1.4 Uses of national income data

Problems with comparing GDP

4. Size of the Public Sector

Some economies rely heavily on government spending, like Norway's public-funded healthcare and education. Meanwhile, in places like the Philippines, the public sector is much smaller, and most spending comes from individuals. Whether this spending improves welfare is not always clear.

5. Consumer vs. Capital Spending

If a country pours money into building high-speed rail networks (capital spending), it might boost future growth but won't immediately improve people's day-to-day lives. On the other hand, if the focus is on consumer spending (like buying cars or gadgets) GDP might grow, but long-term benefits could be limited.

6. Quality Issues

Spending on infrastructure like roads might be high, but are the roads actually usable? For instance, a country may build ten new hospitals, but if they lack staff or equipment, the quality of healthcare doesn't improve. Numbers alone don't tell the whole story.

9.1.4 Uses of national income data

Purchasing Power Parities (PPP)

Imagine PPP as your travel guide for money, it helps you compare what your currency can buy in different countries. It's like finding out how much of your currency is needed to buy the same good in different places, whether it's **GDP**, **GNI**, or **GNP** we're talking about.

- **Definition: PPP** – *The exchange rate between two currencies that reflects the cost of living in different countries by comparing the price of a standard basket of goods.*

How Does PPP Work?

PPP shows how much money you'd need in one country to buy the same things as in another.

Example:

- A pair of trainers' costs **£50 in the UK**, but the same pair might cost **\$150 in Australia**.
- PPP here would be **1:3**, meaning it costs 3 times as much in Australia in currency terms.

9.1.4 Uses of national income data

Purchasing Power Parities (PPP)

Why is PPP Useful?

It's the best tool to compare the **standard of living** between countries where prices for goods and services can be wildly different.

- A basket of groceries that costs **£110 in Thailand** might cost **£330 in the UK**. Here, PPP = 1:3.
 - This tells us the UK is more expensive.
 - BUT, if British workers earn more than 3 times what people in Thailand earn, their standard of living might still be better.
 - On the flip side, if incomes in Thailand stretch further, it could mean they're living it up on less.

Breaking It Down:

- **High PPP** (like 1:3): Goods cost much more in one country compared to another.
- **Low PPP** (like 1:1): Things cost about the same, no matter where you are.



Please see the '9.2 The measurement of macroeconomic performance Worked Examples' pack for exam style questions.

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