Economic Growth & GDP

AQA A-Level Economics

GDP · National Income · Real vs Nominal · Measuring Growth · Benefits & Costs · Living Standards

What is Economic Growth?

Definition:
Economic growth is an increase in the real output of an economy over time — measured as a sustained rise in real GDP. It represents the economy producing more goods and services than before.

Two types of economic growth:

Short-Run Economic Growth

An increase in real GDP by using existing spare capacity — moving from inside to the production possibility frontier. Achieved by boosting aggregate demand (C, I, G, X−M). Does not increase the economy's potential output.

e.g. UK 2021 recovery: GDP grew 7.5% as furloughed workers returned and lockdown restrictions lifted — spare capacity was used up.

Long-Run Economic Growth

An increase in the economy's productive potential — shifting the production possibility frontier outward. Requires improvements in the quantity or quality of factors of production. Achieved through supply-side improvements.

e.g. UK Industrial Revolution (1760–1840): new machinery, steam power, and capital investment permanently raised potential output — a genuine long-run supply-side expansion.

Measuring GDP & National Income

Gross Domestic Product (GDP):

The total monetary value of all final goods and services produced within a country's borders in a given period. The primary measure of economic activity and growth.

Three equivalent approaches:

Expenditure: GDP = C + I + G + (X−M). Consumption + Investment + Government spending + Net exports. Most commonly used approach.

Output: sum of value added at each stage of production. Avoids double-counting — only the final value added is counted.

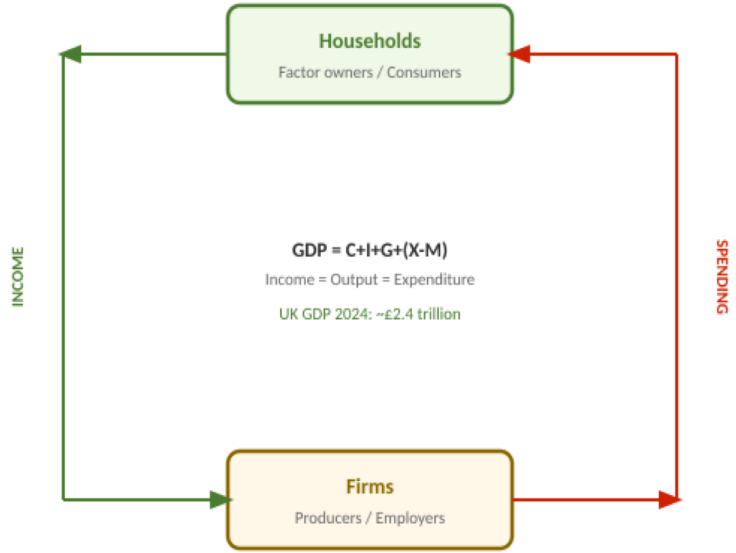
Income: sum of all factor incomes — wages, profit, rent, and interest. All three approaches should give the same result.

Related measures:

GNP (Gross National Product): GDP plus net income from abroad. Measures output by a country's residents, not just within its borders.

Net National Income (NNI): GNP minus capital depreciation. A more accurate measure of long-run sustainable income.

The circular flow identity: Income ≡ Output ≡ Expenditure. All three measure the same flow of economic activity from different angles.



Real-World Example

UK GDP 2023: ~£2.3 trillion nominal. The ONS uses all three approaches and reconciles them. GDP per capita ~£34,000 — but this average masks huge regional variation: London GDP per head is roughly double that of the North East of England.

Real vs Nominal GDP

Why the distinction matters:
If prices rise, nominal GDP rises even if the economy is actually producing no more goods and services. To measure genuine output growth we must strip out the effect of inflation.

Nominal GDP

Measured at current prices — the actual market value of output in the year it was produced. Rises automatically when prices rise, even if output is unchanged.

Formula: Nominal GDP = Price Level × Real GDP

Problem: if nominal GDP rises 5% but inflation is 4%, real output only grew 1%. Using nominal GDP alone exaggerates growth in high-inflation periods.

e.g. UK 2022: nominal GDP grew ~9% but CPI inflation was ~9% — real GDP growth was close to zero.

Real GDP

Nominal GDP adjusted for inflation using a base year price index. Measures changes in the actual volume of output produced — the true indicator of growth.

Formula: Real GDP = (Nominal GDP ÷ Price Index) × 100

Real GDP growth is the standard measure used in economic analysis, government targets, and international comparisons. Only real growth translates into genuine improvements in living standards.

e.g. UK 2021: real GDP grew 7.5% as lockdowns ended and the economy used spare capacity — a genuine increase in output, not just price rises.

Causes of Economic Growth

Growth can originate from the demand side (using spare capacity) or the supply side (expanding capacity):

Rise in Consumption (C)

Higher household disposable income, rising consumer confidence, lower interest rates, or rising wealth (e.g. house prices) all boost C — the largest component of AD (~60% of GDP).

Rise in Net Exports (X–M)

Growing world trade, a depreciation of the exchange rate, or improvements in international competitiveness raise exports. Export-led growth boosted East Asian economies (South Korea, Taiwan).

Rise in Investment (I)

Business investment in capital — machinery, buildings, technology. Raises both AD in the short run and productive capacity (LRAS) in the long run. Sensitive to interest rates and confidence.

Improved Technology

Technological progress raises total factor productivity — more output from the same inputs. A key driver of long-run LRAS growth. R&D investment, innovation, and digitalisation all contribute.

Rise in Government Spending (G)

Fiscal stimulus — direct injection into the circular flow. Multiplied through the economy. Also builds infrastructure which raises long-run supply-side capacity (schools, roads, broadband).

Growth in Labour Supply/Quality

More workers (population growth, immigration) or better-skilled workers (education, training) raise potential output. Human capital is a critical determinant of long-run growth rates.

Economic Growth: AD/AS & PPF Analysis

Short-run growth — AD shifts right:

If the economy has spare capacity (actual output below potential), an increase in AD raises real GDP without much inflation. Output moves toward the LRAS.

Long-run growth — LRAS shifts right:

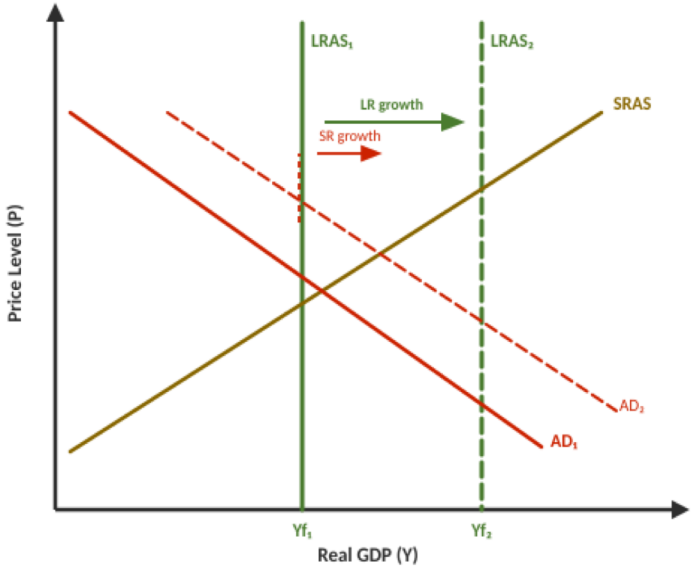
Supply-side improvements shift the vertical LRAS rightward — the economy's productive potential rises. This is non-inflationary growth: price level may even fall as more is produced at the same cost.

PPF analysis:

Short-run growth: movement from inside the PPF toward the frontier (using spare capacity). Long-run growth: outward shift of the PPF itself (more resources or better technology).

Output gap:

When actual GDP < potential GDP, there is a negative output gap — spare capacity and unemployment. Growth closes this gap. When actual GDP > potential, a positive output gap creates inflationary pressure.



Real-World Example

UK 2021: short-run growth as COVID restrictions lifted — AD surged using spare capacity. In contrast, post-2008: UK LRAS grew slowly (~1% pa) due to the 'productivity puzzle' — weak investment meant potential output expanded far slower than pre-crisis.

Benefits of Economic Growth

Economic growth brings significant benefits — but these are not automatic and depend on the nature and distribution of growth:

Higher Living Standards

Rising real GDP per capita means households can afford more goods and services. Material living standards improve — better nutrition, housing, healthcare, and leisure.

e.g. UK real GDP per capita roughly doubled between 1980 and 2019 — significant improvement in average material living standards

Reduced Poverty

Growth creates jobs and raises wages — can lift households out of poverty. Governments can fund more generous welfare systems from higher tax receipts.

e.g. China: rapid GDP growth averaging ~9% pa (1980–2010) lifted ~800 million people out of absolute poverty — the largest poverty reduction in

Lower Unemployment

Growing output requires more labour — firms hire more workers. Cyclical unemployment falls as the economy expands. GDP growth above trend rate reduces unemployment.

e.g. UK employment reached record highs of ~76% in 2022 following strong post-COVID GDP growth — near the top of what economists

Improved Public Services

Higher tax revenues allow governments to invest more in health, education, and infrastructure — improving public sector output and human capital for future growth.

e.g. Post-war UK: rapid GDP growth in the 1950s–60s allowed the expansion of the NHS, comprehensive schooling, and the welfare state —

Higher Tax Revenues

Rising incomes and profits increase income tax, corporation tax, and VAT receipts automatically. Government can fund better public services or reduce borrowing without raising tax rates.

e.g. UK tax revenues rose to a 70-year high share of GDP (~37%) in 2023–24 as wage growth and corporate profits swelled HMRC receipts — fiscal drag at work.

Business Confidence and Investment

Growing markets attract domestic and foreign investment. The accelerator effect means rising GDP growth stimulates further investment — creating a virtuous cycle of growth.

e.g. Ireland: sustained GDP growth in the 1990s–2000s ('Celtic Tiger') attracted FDI from US tech giants. Growth bred more growth through increased business confidence.

Costs & Risks of Economic Growth

Growth is generally desirable but carries significant risks — especially if it is rapid, uneven, or unsustainable:

Inflation

If demand grows faster than supply — especially near full employment — excess demand creates inflationary pressure. A positive output gap causes cost-push and demand-pull inflation simultaneously.

Current Account Deficit

Rapid domestic growth raises consumer incomes → increased spending on imports → current account deficit worsens. Fast-growing economies often run persistent trade deficits.

Environmental Damage

GDP growth typically increases resource consumption, carbon emissions, deforestation, and pollution. Conventional growth models fail to account for environmental externalities — GDP rises even as natural capital is depleted.

Structural Unemployment

Growth driven by new technology or changing industry structure causes displacement. Workers in declining sectors face structural unemployment — skills are no longer demanded by growing industries.

Rising Inequality

Growth does not automatically benefit everyone equally. In the UK, much post-1980 growth accrued to higher earners. Without redistribution, growth can widen income and wealth gaps.

Unsustainable Debt

Growth financed by excessive credit or government borrowing may be unsustainable. The 2008 crisis showed that debt-fuelled growth can collapse suddenly, causing deep and prolonged recessions.

Limitations of GDP as a Welfare Measure

GDP is the standard measure of economic activity but a poor proxy for welfare and living standards. AQA requires evaluation of its limitations:

Ignores Distribution

High GDP may coexist with extreme inequality. The average masks the experience of the majority. Two countries with identical GDP per capita can have very different living standards for most people.

Composition of Output Matters

High military spending or disaster reconstruction raises GDP without improving wellbeing. The type of output matters as much as the quantity — not all GDP growth improves welfare.

Excludes Non-Market Activity

Unpaid work — childcare, cooking, volunteering, caring — is excluded from GDP. In countries with large informal economies, GDP significantly understates economic activity.

International Comparisons: PPP

Nominal GDP comparisons ignore price level differences. $1 buys far more in India than Norway. Purchasing Power Parity (PPP) adjustments are needed for meaningful cross-country comparisons.

Ignores Environmental Damage

Pollution and resource depletion are not subtracted from GDP. Destroying a rainforest for timber raises GDP. GDP can rise while genuine sustainable welfare falls.

Happiness & Subjective Wellbeing

Research shows GDP correlates weakly with happiness above a moderate income level. Nordic countries consistently rank highest in wellbeing despite not having the highest GDPs.

★ Bonus: Alternative Measures of Living Standards

Beyond GDP — why alternatives matter:
GDP per capita is a starting point but misses health, education, environment, inequality, and subjective happiness. A range of alternatives offer broader pictures of wellbeing.

Human Development Index (HDI)

UNDP composite: GDP per capita (PPP) + life expectancy + mean/expected years of schooling. 0–1 scale. Norway consistently tops. Better than GDP alone but excludes inequality and environment.

Limitation: Does not capture within-country inequality, political freedom, or environmental sustainability.

Happy Planet Index / Wellbeing

World Happiness Report surveys life satisfaction. Finland tops despite lower GDP than USA. ONS measures UK national wellbeing quarterly. Happiness rises with income to a point then flattens.

Limitation: Subjective — difficult to compare across cultures. Aspiration adaptation means people adjust expectations.

Inequality-Adjusted HDI (IHDI)

HDI discounted for inequality in each dimension. Countries with high inequality (e.g. USA) rank significantly lower on IHDI than standard HDI — reveals how inequality reduces average outcomes.

Limitation: Data-intensive; not available for all countries; still excludes environmental factors.

Genuine Progress Indicator (GPI)

Adjusts GDP: adds non-market benefits (volunteering, household work) and subtracts negatives (crime costs, pollution, inequality, loss of leisure, resource depletion). GPI stagnant in many rich countries despite rising GDP.

Limitation: Very hard to measure consistently; no agreed methodology; not standardised internationally.

Summary: Key Terms & Relationships

Key Term	Meaning
Economic growth	An increase in real GDP over time — either by using spare capacity (SR) or raising productive potential (LR).
GDP	Total value of all final goods/services produced in a country in a year. Measured by expenditure, output, or income.
Nominal GDP	GDP at current prices. Rises with inflation even if output is unchanged — not a true measure of growth.
Real GDP	GDP adjusted for inflation using a base-year price index. The true measure of output growth.
GDP per capita	GDP divided by population. A crude measure of average living standards.
Short-run growth	Using existing spare capacity — AD↑ moves actual output toward potential (LRAS). Often demand-driven.
Long-run growth	LRAS shifts right due to improvements in technology, capital, labour quality, or productive efficiency.
Output gap	Actual GDP minus potential GDP. Negative gap → spare capacity, unemployment. Positive gap → inflation risk.
PPP	Purchasing Power Parity — adjusts GDP comparisons for differences in price levels across countries.
HDI	Human Development Index: combines GDP per capita, life expectancy, and education into a 0–1 score.
GPI	Genuine Progress Indicator — adjusts GDP for income distribution, environmental costs, and non-market activity.
Accelerator	Rising GDP growth stimulates investment — links output growth to further capital spending and AD growth.