Aggregate Demand

AQA A-Level Economics

AD = C + I + G + (X – M) · Consumption · Investment · Circular Flow · Multiplier · Accelerator

What is Aggregate Demand?

Definition:

Aggregate demand (AD) is the total planned spending on an economy's goods and services at a given price level over a period of time.

AD = C + I + G + (X – M)

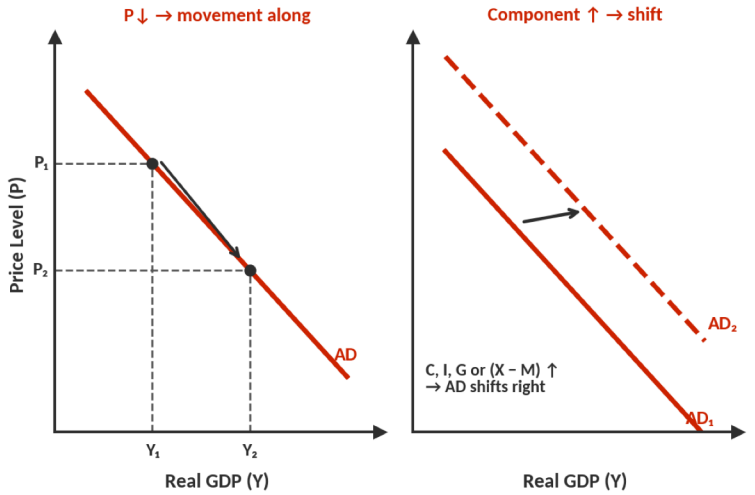
Why does the AD curve slope downwards?

Wealth effect: a lower price level raises the real value of wealth, so C rises. Interest rate effect: lower prices reduce demand for money, so interest rates fall, boosting C and I. Trade effect: UK goods become more competitive, so X rises and M falls.

Movement vs shift:

A change in the price level causes a movement along AD. A change in any component (C, I, G or X – M) for any other reason shifts the whole AD curve.

Movement along vs shift of the AD curve



Real-World Example

UK GDP by expenditure: consumption is around 60%, government spending ~20% and investment ~17%. Net exports are usually slightly negative.

Consumption (C): Determinants

Consumption is spending by households on goods and services — the largest component of UK AD:

Disposable Income

The main determinant — higher real disposable income (after tax and benefits) raises consumption.

e.g. Falling real wages in 2022–23 squeezed UK consumer spending.

Interest Rates

Higher rates raise the cost of borrowing and the reward for saving, and increase mortgage payments — so C falls.

e.g. BoE rate rises to 5.25% (2023) raised millions of mortgage payments.

Consumer Confidence

Households spend more when they feel secure about jobs and incomes; they save more when worried.

e.g. GfK consumer confidence hit a record low in 2022.

Wealth Effects

Rising house and share prices make households feel wealthier, so they spend more and save less.

e.g. Homeowners may borrow against rising property values (equity withdrawal).

Availability of Credit

Easier access to loans, credit cards and mortgages allows households to spend beyond current income.

e.g. Tighter lending after 2008 reduced consumer spending.

Taxes & Expectations

Lower income tax raises disposable income. Expected price rises may bring spending forward.

e.g. Spending often rises ahead of an announced VAT increase.

Consumption, Saving & the MPC

Key measures:

Average propensity to consume (APC) = C ÷ Y. Marginal propensity to consume (MPC) = ΔC ÷ ΔY — the proportion of extra income that is spent.

MPC + MPS = 1 APC + APS = 1

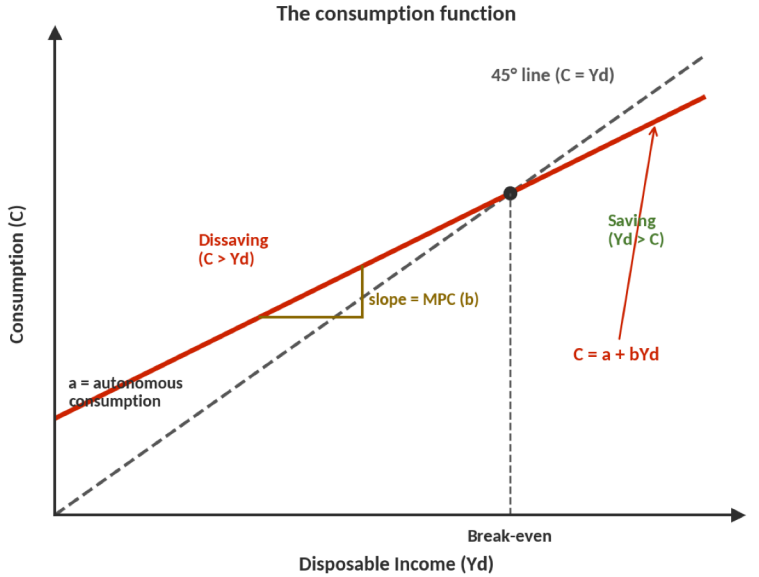
The consumption function:

C = a + bYd, where a is autonomous consumption (spending even at zero income, financed by savings or borrowing) and b is the MPC.

Who has a high MPC?

Low-income households spend most of any extra income, so their MPC is high. High earners save more, so their MPC is lower — relevant to the effect of tax cuts on AD.

The household saving ratio = the % of disposable income that is saved.



Real-World Example

The UK household saving ratio jumped to over 25% in mid-2020 as lockdowns closed shops and hospitality, then settled around 10% by 2024.

Investment (I): Determinants

Investment is firms' spending on capital goods — machinery, buildings, technology — adding to capacity:

Interest Rates

Higher rates raise the cost of borrowing and the opportunity cost of using retained profits — investment falls.

e.g. Projects are only worthwhile if the expected return exceeds the interest rate.

Business Confidence

Investment depends on expected future profits. Keynes's 'animal spirits' — optimism or pessimism — drive it.

e.g. Uncertainty after the 2016 Brexit vote held back UK business investment.

Expected Demand (Accelerator)

Rising demand for output encourages firms to expand capacity — see the accelerator slide.

e.g. Online shopping growth drove investment in warehouses.

Taxation & Incentives

Lower corporation tax and capital allowances raise the post-tax return on investment.

e.g. 'Full expensing' (permanent from 2023) lets firms deduct investment from taxable profit.

Technology

New technology creates opportunities to cut costs or make new products, encouraging investment.

e.g. Firms investing in AI, automation and data centres.

Access to Finance

Retained profits, bank lending and share issues fund investment. Tight credit limits it.

e.g. Small firms struggled to get bank loans after 2008.

Government Spending (G) & Net Exports (X – M)

The remaining components of AD depend on government policy and the UK's trade with the rest of the world:

Government Spending (G)

Spending on public services (NHS, education, defence) and investment (roads, rail, housing).

Transfer payments (pensions, benefits) are NOT included in G, as no output is produced in return.

Determined by government policy — fiscal policy choices, the economic cycle and political priorities.

Can be used to boost AD in recessions (expansionary fiscal policy).

e.g. UK government spending rose sharply in 2020 — the furlough scheme and COVID support cost hundreds of billions.

Net Exports (X – M)

Exchange rate: a weaker £ makes exports cheaper and imports dearer, so X − M rises.

Growth abroad: faster growth in trading partners (e.g. the EU, USA) raises demand for UK exports.

Domestic growth: rising UK incomes raise spending on imports.

Relative inflation and productivity affect price and non-price competitiveness; tariffs and trade deals matter too.

e.g. The £ fell ~15% after the 2016 referendum, making UK exports cheaper — but raising import prices and inflation.

The Circular Flow of Income

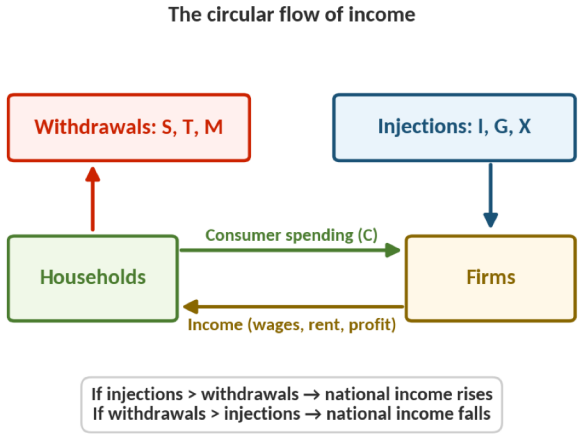
The basic model:
Households supply factors of production to firms and receive income. They spend this income on firms' output — so income flows round the economy.

Withdrawals (leakages):
Income not passed on in the circular flow: savings (S), taxation (T) and imports (M).

Injections:
Spending that enters the flow from outside households' consumption: investment (I), government spending (G) and exports (X).

Equilibrium:
National income is in equilibrium when injections = withdrawals (I + G + X = S + T + M). If injections exceed withdrawals, national income rises.

National output = national income = national expenditure — three ways of measuring GDP.



Real-World Example

COVID-19 (2020): saving surged and exports fell, but huge government spending was injected — without it, national income would have fallen far further.

The Multiplier

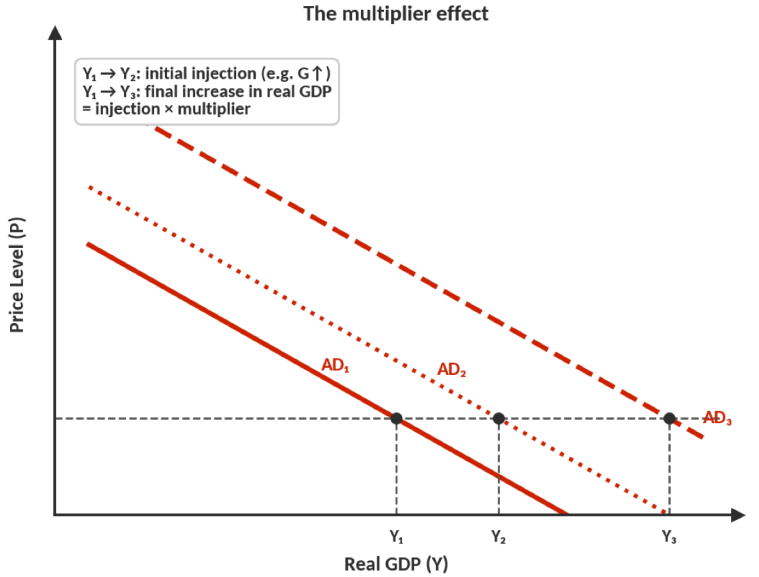
Definition:
The multiplier is the process by which an initial injection into the circular flow leads to a larger final increase in national income.

Multiplier = 1 ÷ (1 − MPC) = 1 ÷ MPW

How it works:
Extra government spending becomes income for workers and firms, who spend part of it — becoming income for others, and so on. Each round is smaller as some income leaks out (S, T, M).

Worked example:
If MPS = 0.1, MPT = 0.2 and MPM = 0.2, then MPW = 0.5, so the multiplier = 1 ÷ 0.5 = 2. A £10bn rise in G raises GDP by £20bn.

Eval: time lags, crowding out, spare capacity and the size of leakages all limit the multiplier in practice.



Real-World Example

The OBR estimates the UK multiplier for government capital spending at around 1 — relatively small, as the UK has high leakages through taxes and imports.

The Accelerator

Definition:
The accelerator theory states that the level of investment depends on the rate of change of national income (or demand) — not its level.

How it works:
If demand grows, firms need more capital to meet it — so investment rises by more than the rise in demand. If growth slows, investment can fall even though demand is still rising.

Why it matters:
Investment is the most volatile component of AD. The accelerator helps explain why business investment rises sharply in booms and collapses in recessions.

Eval: firms may have spare capacity, and expectations and interest rates also matter — so the accelerator is not mechanical.

Multiplier–Accelerator Interaction

An injection raises income (multiplier), which raises investment (accelerator), which raises income further — amplifying the economic cycle.

Capital–Output Ratio

The amount of capital needed to produce a unit of output. The higher the ratio, the stronger the accelerator.

Real-World Example

UK business investment fell by around 20% during the 2008–09 recession — far more than the ~6% fall in GDP, as the accelerator predicts.

★ Bonus: The Paradox of Thrift

The idea (Keynes):
Saving is sensible for an individual household. But if everyone tries to save more at the same time, consumption falls, AD falls and national income falls.

The paradox:
Lower national income means people have less to save — so total saving may not rise at all. The attempt to save more makes everyone worse off.

Fallacy of composition:
What is true for one individual is not necessarily true for the economy as a whole.

Evaluation:
Explains why recessions can deepen as households cut spending.
✗ In the long run, higher saving can fund investment and raise growth (classical view).

Keynesian View

In a recession, higher saving reduces AD and output. Government should boost spending to fill the gap.

Classical View

Saving is channelled into investment through lower interest rates — so it raises long-run growth.

Real-World Example

Japan: high household and corporate saving and weak domestic demand contributed to decades of low growth and deflation after its 1990 asset bubble burst.

Summary: Key Terms & Relationships

Key Term	Meaning
Aggregate demand (AD)	Total planned spending on an economy's output at a given price level. AD = C + I + G + (X − M).
Consumption (C)	Household spending on goods and services — around 60% of UK AD.
Investment (I)	Firms' spending on capital goods that add to productive capacity.
Government spending (G)	Spending on public services and investment. Excludes transfer payments.
Net exports (X − M)	Exports minus imports. Affected by exchange rates, world growth and competitiveness.
MPC / MPS	Share of extra income spent / saved. MPC + MPS = 1.
Wealth effect	Rising asset values make households feel richer, so consumption rises.
Injections	Spending entering the circular flow: I, G, X.
Withdrawals	Income leaving the circular flow: S, T, M.
Multiplier	1 ÷ (1 − MPC) = 1 ÷ MPW. An injection leads to a larger final rise in income.
Accelerator	Investment depends on the rate of change of national income.
Animal spirits	Keynes's term for the confidence and emotions that drive investment decisions.
Paradox of thrift	If everyone saves more, national income may fall and total saving may not rise.