

Exercise walk-through

The circular flow of income ■ 9.1

eXercise

You must be able to

- calculate the multiplier from the MPC
- explain the accelerator
- analyse the determinants of consumption, saving and investment

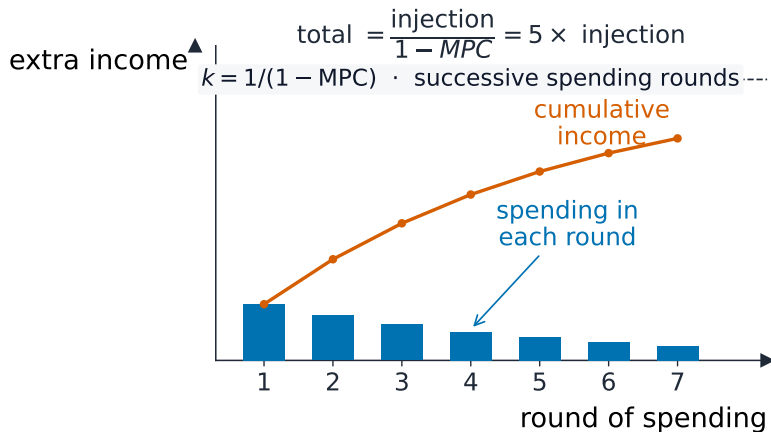
Method — The multiplier

$$\text{multiplier} = \frac{1}{1 - MPC}$$

- **Worked:** if $MPC = 0.8$, $\text{multiplier} = \frac{1}{1-0.8} = 5 \rightarrow$ a \$10m injection raises income by \$50m.
- A **bigger MPC** (smaller leakages) gives a bigger multiplier.
- **Accelerator 加速数:** investment depends on the **rate of change** of output.

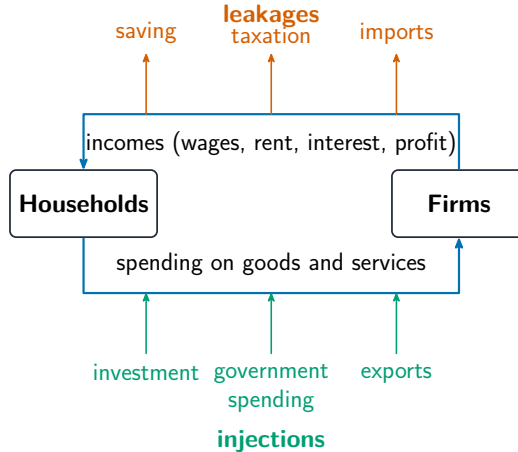
Answer shapes: AO1 + AO2 + AO3 (analysis) + AO4 (a supported judgement *in context*).

Method — The multiplier



An injection is spent round after round, raising income by a multiple

Method — The multiplier



Practice 2.1 ■ 2 marks

Define the term *multiplier*.

Solution 2.1

Worked steps

the ratio of the final change in national income to the initial change in injections that caused it (2 for a clear definition; 1 for a partial idea).

Practice 2.2 ■ 2 marks

The marginal propensity to consume is 0.75. Calculate the multiplier.

Solution 2.2

Worked steps

$$\frac{1}{1-0.75} = \frac{1}{0.25} = 4 \text{ (2; award 1 for a correct method with the wrong figure).}$$

Practice 2.3 ■ 2 marks

State two factors that influence the level of investment.

Solution 2.3

Method: The multiplier

Worked steps

any two of: interest rates; expected profit; technology; business confidence ($1 + 1$).

Exam-style 3.1 ■ 1 mark

The value of the multiplier rises when:

- A** the marginal propensity to consume rises
- B** the marginal propensity to save rises
- C** the marginal propensity to import rises
- D** the tax rate rises

Solution 3.1

A the marginal propensity to consume rises



B the marginal propensity to save rises

C the marginal propensity to import rises

D the tax rate rises

Worked steps

A. A higher MPC means smaller leakages, so the multiplier rises.

Exam-style 3.2 ■ 2 marks

The MPC is 0.6 and the government raises spending by \$20m.

- (a) Calculate the multiplier.
- (b) Calculate the total rise in national income.

Solution 3.2

Method: The multiplier

Worked steps

(a) multiplier = $\frac{1}{1-0.6} = 2.5$ (2). (b) total rise = $2.5 \times \$20\text{m} = \50m (2; allow follow-through from (a)).

Exam-style 3.3 ■ 8 marks

Discuss the usefulness of the multiplier concept for a government planning to increase its spending.

Solution 3.3

Method: The multiplier

Worked steps

[8] AO1/AO2/AO3 up to 5 + AO4 up to 3. **Useful:** the multiplier shows that an injection raises income by more than itself, helping the government estimate the full effect of its spending on output and jobs. **Limits:** the real MPC is hard to measure and varies, leakages (saving, tax, imports) shrink the effect, and crowding out or full capacity can offset it. Judgement: the multiplier is a useful planning guide but only an estimate — its reliability depends on the size of leakages and spare capacity.