



Edexcel A - AS Level Economics

Theme 2 – The UK economy – performance and policies

2.4 National income

Worked Examples

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2.4 National income

Exam Style Question 1

After the Global Financial Crisis of 2008, the US President introduced expansionary fiscal policies of \$800 billion. The International Monetary Fund estimated that the multiplier at the time was approximately 1.5.

(Source adapted from: <https://www.economist.com/the-economist-explains/2016/09/07/what-is-the-keynesian-multiplier>)

(a) Which **one** of the following is a withdrawal from the circular flow of income?

[1]

- ☐ A Exports
- ☐ B Government spending
- ☐ C Investment
- ☐ D Taxation

(b) Calculate the total final increase in US aggregate demand as a result of the President's 'expansionary fiscal policies', assuming no other changes.

[2]



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Exam Style Question 1

Answer:

(a) ☒ **Correct answer: D – Taxation**

Option A: **Incorrect** because exports is an injection into the circular flow of income.

Option B: **Incorrect** as government spending is an injection into the circular flow of income.

Option C: **Incorrect** as investment is an injection into the circular flow of income.

(b) Calculate the total final increase in US aggregate demand.

Use the multiplier formula:

Total increase in GDP = Initial Injection x Multiplier

Given:

- **Initial government spending** = \$800 billion
- **Multiplier** = 1.5

$$= 800 \times 1.5 = 1,200 \text{ billion}$$

Final answer: \$1,200 billion increase in AD. [2]

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Exam Style Question 2

The planned investment in the redevelopment of Dover Port will cost £115 million. The Chief Executive said it will lead to many 'new job opportunities for local people and a transformed waterfront experience' with new cafes, bars, and shops.

(Source adapted from: <https://www.kentonline.co.uk/dover/news/docklands-redevelopment-work-to-start-118581/>)

- (a) If the value of the multiplier is 1.8, which **one** of the following will be the total increase in GDP from the redevelopment, assuming other things are equal?

[1]

- ☐ A £64 million
- ☐ B £115 million
- ☐ C £207 million
- ☐ D £230 million

- (b) Using the example above, explain how the multiplier process leads to an increase in aggregate demand. [4]

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Exam Style Question 2

Answer:

- (a) Calculate the total increase in GDP.

Use the multiplier formula:

$$\text{Total increase in GDP} = \text{Initial Injection} \times \text{Multiplier}$$

Given:

- Initial government spending = £115 million
- Multiplier = 1.8

$$= 115 \times 1.8 = 207 \text{ million}$$

✓ Correct answer: C – £207 million [1]

- (b) Explain how the multiplier process leads to an increase in AD.

The **multiplier effect** means an initial **£115 million investment** leads to a **greater overall increase in Aggregate Demand (AD)** as money circulates through the economy. [1] Workers and businesses **spend their income**, creating **multiple rounds of spending**.

For example, construction workers **spend on local cafes and hotels**, boosting demand and creating more jobs. [1] As spending continues, the **total increase in AD reaches £207 million** (with a multiplier of **1.8**). [1] Over time, some money is **withdrawn through savings, taxes, or imports**, slowing the effect. [1] However, the **process significantly boosts economic growth**, showing the importance of government investment in stimulating AD.

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Exam Style Question 3

It is estimated that building a second runway at Gatwick airport will require an investment of £9.3 billion.

The total increase in UK GDP as result of this injection is expected to be around £44.1 billion.

(Source: adapted from www.gov.uk/government/uploads/system/uploads/attachment_data/file/452267/AC01_tagged_amend_25_11.pdf © Crown Copyright)

- (a) Define the term 'injection' in this context. [1]
- (b) Calculate the value of the multiplier based on the data given. You are advised to show your working [2]
- (c) Which **one** of the following is a likely cause of a decrease in the value of the UK's multiplier?

[1]

- ☐ A A decrease in the marginal propensity to save (MPS)
- ☐ B A decrease in the marginal propensity to tax (MPT)
- ☐ C An increase in the marginal propensity to consume (MPC)
- ☐ D An increase in the marginal propensity to import (MPM)

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Exam Style Question 3

Answer:

(a) Define the term 'injection' in this context.

An **injection** is **money added into the economy** that increases **aggregate demand (AD)** and **national income**. In this case, the **£9.3 billion investment** in Gatwick Airport's second runway is an **injection** because it **adds new spending** into the economy. [1]

(b) Calculate the value of the multiplier based on the data given.

Use the multiplier formula:

$$\text{Multiplier} = \frac{\text{Total increase in GDP}}{\text{Initial injection}}$$

Given:

- **Total GDP increase** = £44.1 billion
- **Initial investment (injection)** = £9.3 billion

$$\text{Multiplier} = \frac{44.1}{9.3} = 4.74$$

Final answer: The multiplier is 4.74 [2]

(c) Which **one** of the following is a likely cause of a decrease in the value of the UK's multiplier?

☒ **Correct Answer: D** – An increase in the marginal propensity to import

Option A: **Incorrect** as a decrease in MPS will increase the multiplier.

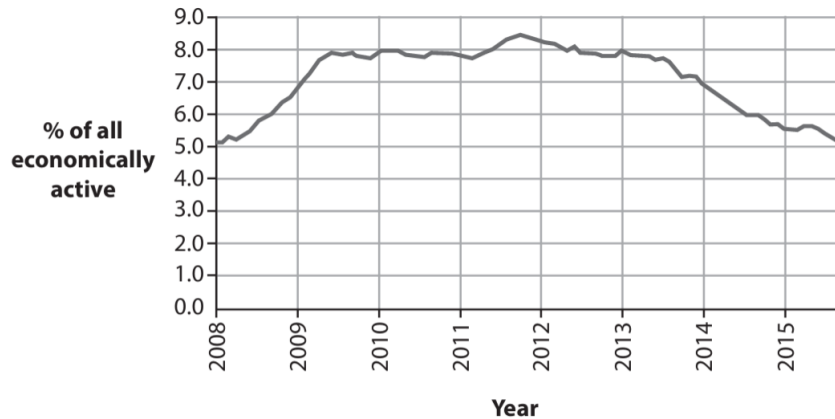
Option B: **Incorrect** as a decrease in MPT will increase the multiplier.

Option C: **Incorrect** as an increase in the MPC will increase the multiplier.

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Exam Style Question 4

The chart below shows the UK unemployment rate, seasonally adjusted, from 2008 to 2015.



(Source: <http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/december-2015/statistical-bulletin.html#tab-8--Unemployment>)

Explain the likely effects on the circular flow of income of the change in unemployment between 2013 and 2015. [4]

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Exam Style Question 4

Answer:

Explain the likely effects on the circular flow of income of the change in unemployment between 2013 and 2015.

Between **2013 and 2015**, the UK **unemployment rate fell**, meaning **more people were employed** and earning wages. This led to an **increase in the circular flow of income** as households had **higher disposable income**, leading to **greater consumer spending and investment (1)**.

With higher spending, businesses **earned more revenue**, allowing them to **expand and hire more workers**, further strengthening the **flow of money between households and firms (1)**. This represents an **injection** into the economy, boosting **aggregate demand (AD)**. At the same time, **withdrawals such as taxation (T), savings (S), and imports (M) may also increase**, slightly limiting the full effect (1).

The fall in unemployment, as seen in the **chart**, contributed to **rising consumption and investment**, which created **further rounds of income growth**. However, some of this extra income may have been spent on **imports**, meaning some money leaked out of the economy (1).



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Exam Style Question 5

The table below shows marginal propensity to save data for an economy.

Year	Marginal propensity to save (mps)
2010	0.11
2011	0.09
2012	0.07
2013	0.05
2014	0.05
2015	0.04

- (a) Explain **one** possible reason for the changes in the marginal propensity to save as shown in the table. [2]
- (b) Explain the likely effect of a fall in the marginal propensity to save on the value of the multiplier if other things remain equal. [2]

An economy has MPS of 0.1, marginal propensity to tax of 0.2 and marginal propensity to import of 0.1.

- (c) Calculate the correct size of the multiplier. [1]

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Exam Style Question 5

Answer:

- (a) Explain one possible reason for the changes in the marginal propensity to save as shown in the table.

One possible reason for the **decline in the marginal propensity to save (MPS)** is a **rise in consumer confidence** [1]. When people feel secure about their jobs and future income, they are **more likely to spend rather than save**, increasing the **marginal propensity to consume (MPC)** [1].

- (b) Explain the likely effect of a fall in the marginal propensity to save on the value of the multiplier if other things remain equal.

A **fall in MPS** means a **decrease in withdrawals from the economy** [1], leading to a **higher multiplier value** [1]. This is because **less money is being saved**, meaning **more is being spent and circulating in the economy**, causing multiple rounds of income and **greater economic growth**.

- (c) Which one of the following is the correct size of the multiplier?

The **multiplier formula** is:

$$\text{Multiplier} = \frac{1}{\text{MPS} + \text{MPT} + \text{MPM}}$$

$$\text{Multiplier} = \frac{1}{0.1 + 0.2 + 0.1} = \frac{1}{0.4} = 2.5$$

Final answer: The correct size of the multiplier is 2.5. [1]

2.4 National income

Exam Style Question 6

In 2014 the Bank of England estimated the marginal propensity to consume of UK consumers to be 0.5.

In 2014 the Chancellor of the Exchequer announced a £15 billion investment programme into UK road infrastructure.

(Sources: <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q405.pdf> and <https://www.gov.uk/government/news/autumn-statement-2014-16-things-you-should-know>)

Using the information above, calculate the total increase in national income, resulting from the £15 billion investment. **[3]**

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Exam Style Question 6

Answer:

Calculation of the Total Increase in National Income.

Step 1: Calculate the multiplier

Use the multiplier formula:

$$\text{Multiplier} = \frac{1}{1-MPC} [1]$$

Given:

- **Marginal Propensity to Consume (MPC)** = 0.5
- **Initial investment (injection)** = £15 billion

$$\text{Multiplier} = \frac{1}{1-0.5} = \frac{1}{0.5} = 2 [1]$$

Step 2: Calculate the total increase in national income

$$\begin{aligned} \text{Total increase in GDP} &= \text{Initial Injection} \times \text{Multiplier} \\ &= 15 \times 2 = 30 \text{ billion} [1] \end{aligned}$$

Final answer: The total increase in national income is £30 billion.



Please see the '2.4 National Income Revision Notes' pack for detailed notes.

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