Short-run fluctuations: Senimar questions and answers

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Q1

Explain the terms **exogenous** and **endogenous**.

Exogenous means outside the system; endogenous means part of the system. Thinking about the circular flow and the factors that affect the *injections* and *withdrawls*, business investment, government spending and exports are considered to be exogenous; savings, tax and imports would be considered endogenous because they will be affected by the level of income. Endogenous variables are important to the multiplier effect as they cause feedback.

Q2

If the marginal propensity to consume is 0.8, national income is £10.0bn and Household spending is £8.0bn, what level of household spending would be expected if national income increased to £11.0bn?

If there is an increase in national income from £10.0bn to £11.0bn, the first round effect is that there will be £800 mn additional spending as the initial adjustment as £200mn will be saved. For the second round effect there will be £640mn spending; followed by £512mn. This will continue onwards as an infinite progression. The final outcome is that $\frac{1}{(1-MPC)}$ or $\frac{1}{MPS}$ will be the total expansion. This is equal to $\frac{1}{0.2} = 5$. Thertefore, the total expansion is £5.0bn. This is the multiplier.

If M is the multiplier,

$$M = 1 + 0.8 + 0.8^2 + 0.6^3 + 0.8^4 \dots \tag{1}$$

Multiply each side by 0.8

$$0.8M = 0.8 + 0.8^2 + 0.8^3 + 0.8^4 + 0.8^5 \dots \tag{2}$$

Take Equation 2 from Equation 1

$$\begin{aligned}
M - 0.8M &= 1 \\
M(1 - 0.8) &= 1 \\
M &= \frac{1}{1 - 0.8} \\
M &= \frac{1}{0.2} \\
M &= 5
\end{aligned}$$

Therefore, a £1.0bn increase in spending leads to a £5.0bn increase in GDP.

Q3

Identify one factor that affects savings. How has this factor influenced savings during the recent financial crisis in the UK?

Amongst the factors that affect savings are

1. Wealth
2. Economic uncertainty
3. Income
4. Age
5. Taste and fashion

Q4