

Aggregate Expenditure & the Multiplier — Worksheet

Part A — AE components, MPC/MPS and the multiplier

This worksheet drills the core quantitative skills of the AE model: MPC and MPS, the multiplier, the multiplier process round by round, and applying $\Delta Y = \Delta AE \times k$.

Worked example. MPC = 0.8, injection = \$100m.

$$MPS = 0.2; k = 1 \div 0.2 = 5; \Delta Y = 100 \times 5 = \$500m$$

Round by round: 100, 80, 64, 51.2, 41.0 ... summing towards \$500m.

Always show **$k = 1/(1-MPC)$** and then **$\Delta Y = \Delta AE \times k$** as two clear steps — markers award method marks even if the final figure slips.

Components and the consumption function

1. Write the aggregate expenditure equation and name each component. _____
2. Define the marginal propensity to consume and the marginal propensity to save, and state the relationship between them. _____
3. A household receives an extra \$500 and spends \$400 of it. Calculate its MPC and MPS. _____

Multiplier calculations

4. Calculate the multiplier for each MPC: (a) 0.5; (b) 0.8; (c) 0.9. _____
5. Government spending rises by \$300m and the MPC is 0.8. Calculate the multiplier and the total change in equilibrium income. Show your working. _____

6. Complete the first four rounds of the multiplier process for a \$1,000m injection with $MPC = 0.7$, then state the eventual total change in income.

Round	Spending added (\$m)
1 (injection)	1000
2	
3	
4	
Eventual total	

Equilibrium and application

7. Explain how a build-up of unplanned inventories signals that planned aggregate expenditure is below output, and describe how the economy returns to equilibrium.

8. A mining downturn cuts business investment by \$2 billion. With an MPC of 0.75, estimate the eventual effect on equilibrium income, and explain why the fall in income is larger than the fall in investment.
