MACROECONOMICS
MADE SIMPLE

The Keynesian Multiplier

How one person’s spending becomes another person’s income — and why national income can rise by more than the initial spending.

THE CENTRAL IDEA

An increase in spending can trigger successive rounds of income and consumption. In a simple Keynesian model, the total change in national income can be larger than the initial change in spending.

A beginner-friendly chapter with examples, equations, a real-world application, and a knowledge check.

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Clear explanations for curious minds.

1. The idea behind the multiplier

Imagine that the government spends ■1,000 on repairing a road. The money becomes income for workers, contractors, and suppliers. Those people may then spend some of their income at shops, restaurants, and other businesses. That spending becomes income for someone else.

The key insight is simple: **one person’s expenditure is another person’s income.** When some of the new income is spent again, the initial spending can generate several rounds of economic activity.

Follow the money

Round	Who receives income?	Amount spent onward
Initial spending	Road workers and suppliers	■1,000 enters the economy
Round 1	Local shopkeepers	■800
Round 2	Other businesses and suppliers	■640
Round 3	Further recipients	■512

In this illustration, each recipient spends 80% of the additional income and saves 20%. The amounts spent onward become smaller in each round. The process can continue, but it gets progressively smaller.

Why does spending not continue at the same amount?

- People save part of their additional income.
- Some income is paid in taxes.
- Some spending goes toward imported goods and services, creating income abroad rather than domestically.
- In the real economy, production limits, prices, interest rates, and business decisions also affect the final result.

2. The formula, explained

In the simplest Keynesian model, the government-spending multiplier is:

$$k = 1 / (1 - MPC)$$

k is the multiplier. **MPC** is the marginal propensity to consume: the share of an additional rupee of disposable income that is spent on consumption.

Example: MPC = 0.80

If people spend 80 paise out of every additional rupee they receive, then MPC = 0.80.

$$k = 1 / (1 - 0.80) = 1 / 0.20 = 5$$

If government spending increases by ■1,000, the model predicts:

$$\text{Change in national income} = \text{Multiplier} \times \text{Change in spending}$$

$$\Delta Y = 5 \times ■1{,}000 = ■5{,}000$$

Interpretation: under the model's assumptions, an initial ■1,000 increase in government spending produces a total ■5,000 increase in equilibrium income.

Why is the answer ■5,000 rather than ■1,000?

Because the ■1,000 is the first injection of spending, not the only spending that follows. In the example, the rounds are ■1,000 + ■800 + ■640 + ■512 + … . This infinite geometric series sums to ■5,000 when the MPC is 0.80.

A crucial distinction

The multiplier is not saying that the government receives ■5,000 back, nor that every person becomes ■5,000 richer. It refers to the modelled change in aggregate income or output across the economy. The distribution of that gain can differ across people.

3. What makes the multiplier larger or smaller?

The simple formula highlights one important relationship: a higher MPC generally creates a larger multiplier because more of each additional rupee is spent again.

MPC	Multiplier: 1/(1−MPC)	Intuition
0.50	2	Half of each additional rupee is spent.
0.75	4	Three-quarters is spent.
0.80	5	Four-fifths is spent.
0.90	10	Most additional income is spent.

How to interpret this table

If households spend a large share of extra income, the initial injection passes through more rounds of consumption. If households save a larger share, fewer rounds of additional spending occur, so the simple multiplier is smaller.

Does the multiplier always equal 5?

No. The value of 5 comes from a deliberately simplified model with MPC = 0.80 and no other leakages. In a more realistic model, taxes and imports reduce the amount that returns to domestic consumption. Monetary policy, inflation, spare productive capacity, and the type of spending can also change the observed effect.

A real-world policy question

Suppose the government launches a rural road programme. It may directly employ workers and buy materials. Better roads may also reduce transport costs and help businesses reach markets. The first channel is the short-run spending effect; the second is a possible longer-run productivity effect. These are related but distinct mechanisms, and they should not be confused.

Important caveat

If the economy is already close to full capacity, extra demand may raise prices more than real output. If interest rates rise or private investment is displaced, the final increase in output may also be smaller than the simplest model predicts.

4. Check your understanding

Try answering these questions before looking at the answer key.

Question 1. If MPC = 0.75, what is the simple Keynesian multiplier?

A. 2 B. 3 C. 4 D. 5

Question 2. If the multiplier is 4 and government spending increases by ■2,000, what is the modelled change in equilibrium income?

A. ■2,000 B. ■4,000 C. ■6,000 D. ■8,000

Question 3. Why does the spending process become smaller in each round?

A. Every recipient spends all of their income. B. Some income is saved or leaks out of the domestic spending flow. C. The government collects all the money immediately.

Answer key

1. C — 4	k = 1 / (1 – 0.75) = 4.
2. D — ■8,000	Change in income = 4 × ■2,000 = ■8,000.
3. B	Saving, taxes, and imports are examples of leakages from the domestic consumption flow.

The concept in one sentence

The Keynesian Multiplier explains how an initial increase in autonomous spending can generate a larger total change in national income through successive rounds of consumption.

Further reading

For a fuller treatment, consult an introductory macroeconomics textbook's chapter on the Keynesian cross, planned expenditure, equilibrium output, and the government-spending multiplier. Remember that the numerical multiplier in this chapter is an illustrative result from a simplified model, not a universal estimate for every country or policy.

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