In this chapter, look for the answers to these questions:

- How does the interest-rate effect help explain the slope of the aggregate-demand curve?
- How can the central bank use monetary policy to shift the AD curve?
- In what two ways does fiscal policy affect aggregate demand?
- What are the arguments for and against using policy to try to stabilize the economy?

Introduction

- Earlier chapters covered:
  - the long-run effects of fiscal policy on interest rates, investment, economic growth
  - the long-run effects of monetary policy on the price level and inflation rate
- This chapter focuses on
Aggregate Demand

- Recall, the AD curve slopes downward for three reasons:
  - The wealth effect
  - The interest-rate effect
  - The exchange-rate effect

- Next:
  - A supply-demand model that helps explain the interest-rate effect and how monetary policy affects aggregate demand.

The Theory of Liquidity Preference

- A simple theory of the interest rate (denoted \( r \))
- \( r \) adjusts to balance

- Money supply:

The Theory of Liquidity Preference

- Money demand

- For simplicity, suppose household wealth includes only two assets:
  - Money – liquid but pays no interest
  - Bonds – pay interest but not as liquid

- A household’s “money demand” reflects its preference for liquidity.
- The variables that influence money demand:
Money Demand

Suppose real income ($Y$) rises. Other things equal, what happens to money demand?

If $Y$ rises:

\[ \text{i.e., an increase in } Y \text{ causes an increase in money demand, other things equal.} \]

ACTIVE LEARNING 1

The determinants of money demand

A. Suppose $r$ rises, but $Y$ and $P$ are unchanged. What happens to money demand?

B. Suppose $P$ rises, but $Y$ and $r$ are unchanged. What happens to money demand?

ACTIVE LEARNING 1

Answers
**How the Interest-Rate Effect Works**

- **Monetary Policy and Aggregate Demand**
  - To achieve macroeconomic goals, the Fed can use monetary policy to
  - The Fed’s policy instrument is
  - The news often reports that the Fed targets the interest rate.
    - More precisely,
  - To change the interest rate
The Effects of Reducing the Money Supply

\[ MS_1 \]

Interest rate

\[ r_1 \]

\[ M \]

\[ MD \]

\[ P_1 \]

\[ Y_1 \]

\[ AD_1 \]

\[ Y \]

For each of the events below,
- determine the short-run effects on output
- determine how the Fed should adjust the money supply and interest rates to stabilize output

A. Congress tries to balance the budget by cutting govt spending.
B. A stock market boom increases household wealth.
C. War breaks out in the Middle East, causing oil prices to soar.
**Fiscal Policy and Aggregate Demand**

- **Fiscal policy:**
  - Expansionary fiscal policy
  - Contractionary fiscal policy

- Fiscal policy has two effects on $AD$...

**1. The Multiplier Effect**

- If the govt buys $20b of planes from Boeing, Boeing’s revenue increases by $20b.
- This is distributed to Boeing’s workers (as wages) and owners (as profits or stock dividends).
- These people are also consumers

**Multiplier effect:**

A $20b increase in $G$ initially shifts $AD$ to the right by $20b$. The increase in $Y$ causes

![Graph showing the AD curve and multiplier effect](image)
Marginal Propensity to Consume

How big is the multiplier effect?
It depends on

Marginal propensity to consume (MPC):

E.g., if \( MPC = 0.8 \) and income rises $100, \( C \) rises $\ldots$.

A Formula for the Multiplier

Notation: \( \Delta G \) is the change in \( G \), \( \Delta Y \) and \( \Delta C \) are the ultimate changes in \( Y \) and \( C \)
\[
Y = C + I + G + NX
\]
identity

\( I \) and \( NX \) do not change because \( \Delta C = MPC \Delta Y \)
solved for \( \Delta Y \)

\[ \Delta Y = \frac{1}{1 - MPC} \Delta G \]

The multiplier

A bigger \( MPC \) means
Other Applications of the Multiplier Effect

- The multiplier effect:
  Each $1 increase in $G$ can generate more than a $1$ increase in aggdemand.
- Also true for the other components of GDP.
  Example:

2. The Crowding-Out Effect

- Fiscal policy has another effect on $AD$ that works in the opposite direction.
- A fiscal expansion raises $r$.

- So, the size of the $AD$ shift may be __________ than the initial fiscal expansion.
- This is called the crowding-out effect.

How the Crowding-Out Effect Works

A $20b$ increase in $G$
Changes in Taxes

- A tax cut increases households’ take-home pay.
- Households
- The size of the shift is affected by the multiplier and crowding-out effects.
- Another factor: whether households perceive the tax cut to be

Active Learning 3

Exercise

The economy is in recession. Shifting the AD curve rightward by $200b would end the recession.

A. If MPC = .8 and there is no crowding out, how much should Congress increase G to end the recession?

B. If there is crowding out, will Congress need to increase G more or less than this amount?

Active Learning 3

Answers
Most economists believe the short-run effects of fiscal policy mainly work through aggregate demand.

But recall one of the Ten Principles from Chap 1: People respond to incentives.

People who believe this effect is large are called

Govt purchases might affect aggregate supply. Example:

This effect is probably more relevant in the long run: it takes time to build the new roads and put them into use.

Since the Employment Act of 1946, economic stabilization has been a goal of U.S. policy. Economists debate how active a role the govt should take to stabilize the economy.
The Case for Active Stabilization Policy

Keynes:
among households and firms, leading to shifts in aggregate demand and fluctuations in output and employment.

Also, other factors cause fluctuations, e.g.,

If policymakers do nothing, these fluctuations are destabilizing to businesses, workers, consumers.

The Case for Active Stabilization Policy

Proponents of active stabilization policy believe the govt should use policy to reduce these fluctuations:

When GDP falls below its natural rate,

When GDP rises above its natural rate,

Keynesians in the White House

1961:
John F Kennedy pushed for a tax cut to stimulate aggdemand. Several of his economic advisors were followers of Keynes.

2001:
George W Bush pushed for a tax cut that helped the economy recover from a recession that had just begun.
The Case Against Active Stabilization Policy

**Monetary policy**
- Firms make investment plans in advance, so
- Most economists believe it takes at least ______ for monetary policy to affect output and employment.

**Fiscal policy**
- Changes in $G$ and $T$ require Acts of Congress.
- The legislative process can take months or years.

---

The Case Against Active Stabilization Policy

- Due to these long lags, critics of active policy argue that
- These critics contend that policymakers should focus on long-run goals like economic growth and low inflation.

---

Automatic Stabilizers

- Automatic stabilizers:
Automatic Stabilizers: Examples

- The tax system
- Govt spending
  - Govt spending on these programs automatically rises, which stimulates agg demand.

CONCLUSION

- Policymakers need to consider all the effects of their actions. For example,
  - When Congress cuts taxes, it should consider
  - When the Fed reduces the rate of money growth, it must take into account not only