The goal of this chapter is to understand Keynesian economics and the use of fiscal policy to stabilize the economy. Specifically:

– Why did Keynes think the market was inherently unstable?
– How can fiscal policy help stabilize the economy?
– How will the use of fiscal policy affect the government’s budget deficit?
Learning Objectives

After completing this chapter, you should know:
1. What fiscal policy is.
2. Why fiscal policy might be needed.
3. What the multiplier is and how it works.
After completing this chapter, you should know:

4. How fiscal stimulus or restraint is achieved.
5. How fiscal policy affects the federal budget.
Fiscal Policy

- **Fiscal policy** is the use of government taxes and spending to alter macroeconomic outcomes.
- The premise of fiscal policy is that the aggregate demand (AD) for goods and services will not always be compatible with economic stability.
Fiscal Policy

• Recessions occur when AD declines.
• Recessions persist when AD remains below the economy’s capacity to produce.
• John Maynard Keynes explained how a deficiency in demand could arise in a market economy.
• Keynes showed how and why the government should intervene to achieve macroeconomic goals.
• Keynes also advocated aggressive use of fiscal policy to alter market outcomes.
Components of Aggregate Demand

- *Aggregate demand* (AD) is the total quantity of output demanded at alternative price levels in a given time period, *ceteris paribus*.
Components of Aggregate Demand

- The four major components of AD are:
  - Consumption (C)
  - Investment (I)
  - Government spending (G)
  - Net exports (exports minus imports) \((X - IM)\)

\[
AD = C + I + G + (X - IM)
\]
Figure 12.1

Total spending: $15.7 trillion

Government spending: 20%

Investment spending: 13%

Consumption spending: 71%

Net exports: -4%
• **Consumption** refers to expenditures by consumers on final goods and services.
  – Consumption spending accounts for more than two-thirds of total spending in the U.S. economy.
  – Consumers often *vary* their spending behavior, going on sprees then cutting back.
• *Investment* refers to expenditures on (production of) new plants and equipment in a given time period, plus changes in business inventories.

• Investment spending is dependent on the outlook of businesses.
  - Optimistic? Expand.
  - Pessimistic? Cut back or stand pat.
• Government spending includes expenditures on all goods and services provided by the public sector.
  – Income transfers are not included.
  – Accounts for one-fifth of AD.
  – Keynes advocated the use of government spending to intervene in the economy.
Net Exports \((X - IM)\)

- **Net exports** is the difference between export spending and import spending.
  - Americans buy more goods from abroad than foreigners buy from us.
  - This means that U.S. net exports are *negative*. 
Equilibrium

- **Macro equilibrium** is the combination of price level and real output that is compatible with both AD and AS.
  - There is no guarantee that AD will always produce an equilibrium at full employment and price stability.
  - Sometimes there will be too little demand and sometimes there will be too much.
Figure 12.2

The diagram illustrates the relationship between the price level (average price) and real output (quantity per year). It shows the aggregate supply (AS) curve and two aggregate demand (AD) curves, AD$_1$ and AD$_2$. The equilibrium point is at point a, where the aggregate supply and demand curves intersect. At this point, the price level is $P_1$ and the real output is $Q_1$.

- Too much AD: inflation occurs when the aggregate demand curve shifts to AD$_2$, leading to a higher price level ($P_2$) and real output ($Q_F$).
- Too little AD: unemployment occurs when the aggregate demand curve shifts to AD$_1$, leading to a lower price level ($P_1$) and real output ($Q_1$).
The Nature of Fiscal Policy

• $C + I + G + (X - IM)$ seldom adds up to exactly the right amount of AD.

• The use of government spending and taxes to adjust AD is the essence of fiscal policy.
• If AD falls short, there is a gap between what the economy can produce and what people want to buy.
  – The **GDP gap** is the difference between full-employment output and the amount of output demanded at current price levels.

• The goal is to eliminate the GDP gap by shifting AD to the right.
To help with the 2008 – 2009 recession, President Obama created huge increases in government spending.

Increased government spending is a form of fiscal stimulus:

– *Fiscal stimulus* – tax cuts or spending hikes intended to increase (shift) AD.
Multiplier Effects

• Any increase in spending results in increased incomes to someone else, who also increases spending.

• All income is either spent or saved.
  – The saved portion is drained away and not recycled as added income to someone else.
Multiplier Effects

• Part of each dollar spent is re-spent several times, creating new income and new spending.

• As a result, every dollar has a multiplied impact on aggregate income.
The marginal propensity to consume (MPC) is the fraction of each additional (marginal) dollar of disposable income spent on consumption:

\[
MPC = \frac{\text{change in consumption}}{\text{change in disposable income}}
\]
The *marginal propensity to save* (MPS) is the fraction of each additional (marginal) dollar of disposable income *not* spent on consumption:

$$MPS = \frac{\text{change in saving}}{\text{change in disposable income}}$$
Multipler Effects

- Because all new income must be either spent or saved, spending and saving decisions are connected:

\[ MPS = 1 - MPC \]

or

\[ MPC + MPS = 1 \]
Multiplier Effects and the Circular Flow

• The fiscal stimulus to AD includes:
  – The initial increase in government spending.
  – All subsequent increases in consumer spending triggered by the government outlays.

• Income gets spent and re-spent in the circular flow.
Figure 12.6

A circular diagram showing the economic cycle:

1. Government spends $100 billion.
2. Sales increase by $75 billion.
3. Increased jobs and wages.
5. Consumer spending increases by $75 billion.

The cycle connects Households, Government, Business firms, and Product markets.
The *multiplier* formula tells us how much total spending will change in response to an initial spending stimulus. It is governed by how much drains away into saving (MPS = 1 – MPC).

\[
\text{Multiplier} = \frac{1}{1 - \text{MPC}}
\]
• Every dollar of fiscal stimulus has a multiplied impact on AD:

\[ \text{Total change in spending} = \text{Multiplier} \times \text{Initial change in government spending} \]
• Government can cut taxes to increase consumption or investment spending.
• A tax cut directly increases disposable income and stimulates consumer spending ($C$).

\[ \text{Initial increase in consumption} = MPC \times \text{tax cut} \]
Taxes and Consumption

• The cumulative increase in AD equals a multiple of the tax-induced change in consumption.

\[
\text{Cumulative change in spending} = \text{Multiplier} \times \text{Initial change in consumption}
\]
Inflation Worries

• The AS curve is upward-sloping, so an increase in AD increases prices as well as output.

• Any shift of AD right raises worries about rising inflation.
Fiscal Restraint

• Fiscal restraint may be the proper policy when inflation threatens:
  – *Fiscal restraint* — tax hikes or spending cuts intended to reduce aggregate demand (shift AD left).
Figure 12.8

Budget cuts and tax hikes reduce AD.
• Cutbacks in government spending directly reduce AD.

• The impact of spending cuts is *magnified* by the multiplier.
Multiplier Cycles

• Government cutbacks have a multiplied effect on AD:

\[ \text{Cumulative reduction in spending} = \text{Multiplier} \times \text{Initial budget cut} \]
Fiscal Guidelines

• **Problem:** unemployment.
• **Solution:** increase AD.
• **Tools:**
  – Increase government spending.
  – Cut taxes.

• **Problem:** inflation.
• **Solution:** decrease AD.
• **Tools:**
  – Decrease government spending.
  – Raise taxes.
• Tax increases reduce disposable income and thus reduce consumption, shifting the AD curve to the left.
• Tax increases have been used to “cool down” the economy; that is, they act as a fiscal restraint.
Fiscal Guidelines

- The policy goal is to match AD with the full-employment potential of the economy.
- The fiscal strategy for attaining that goal is to shift the AD curve.
• The use of the budget to manage aggregate demand implies that the budget will often be unbalanced, usually in deficit: 
  – Government spending > Tax revenues.
• Recent deficits have been much larger than earlier deficits.
Figure 12.9
• **Budget deficit:** the amount by which government expenditures *exceed* government revenues in a given time period.
  – The government must borrow to pay for deficit spending.
  – A fiscal stimulus increases the budget deficit.
  – A fiscal restraint decreases the budget deficit.
Countercyclical Policy

• In Keynes’ view, an unbalanced budget is appropriate if macro conditions call for a deficit or a surplus.

• A balanced budget is appropriate only if the resulting aggregate demand is consistent with full-employment equilibrium.
What We Learned

1. Fiscal policy is the use of government spending and tax to alter macro outcomes.

2. Keynes stated that fiscal policy is needed when macro instability causes a deficiency in demand.
3. Any new spending becomes new income to others who increase their spending, too. This cycle recurs and has a multiplied impact on AD. An initial stimulus is multiplied into a final total impact on AD.
4. A fiscal stimulus (increase in government spending or a cut in taxes) generates a rightward movement in AD, which responds to the multiplier effect. A fiscal restraint (decrease in government spending or a tax hike) generates a leftward movement in AD, which responds to the multiplier effect.
5. A fiscal stimulus increases the budget deficit. A fiscal restraint decreases the budget deficit.