chapter: 13

Fiscal Policy

Krugman/Wells
WHAT YOU WILL LEARN IN THIS CHAPTER

- What fiscal policy is and why it is an important tool in managing economic fluctuations
- Which policies constitute an expansionary fiscal policy and which constitute a contractionary fiscal policy
- Why fiscal policy has a multiplier effect and how this effect is influenced by automatic stabilizers
- Why governments calculate the cyclically adjusted budget balance
WHAT YOU WILL LEARN IN THIS CHAPTER

- Why a large **public debt** may be a cause for concern
- Why **implicit liabilities** of the government are also a cause for concern
Government Spending and Tax Revenue for Some High-Income Countries in 2006

- **United States**: Government spending 34%, tax revenue 37%
- **Japan**: Government spending 35%, tax revenue 36%
- **Canada**: Government spending 40%, tax revenue 39%
- **France**: Government spending 50%, tax revenue 53%
- **Sweden**: Government spending 57%, tax revenue 54%
Sources of Tax Revenue in the U.S., 2007

- Personal income taxes, 37%
- Social insurance taxes, 25%
- Other taxes, 27%
- Corporate profit taxes, 11%
Government Spending in the U.S., 2007

Social insurance programs are government programs intended to protect families against economic hardship.
Fiscal policy is the use of taxes, government transfers, or government purchases of goods and services to shift the aggregate demand curve.

\[ \text{GDP} = C + I + G + X - IM \]
Investment Tax Credits

- An investment tax credit is a tax break given to firms based on their investment spending. This increases the incentive for investment spending.
- Investment tax credits are often temporary, applying only to investment spending within a specific period.
- Like department store sales that encourage shoppers to spend a lot while the sale is on, temporary investment tax credits tend to generate a lot of investment spending when they’re in effect. Even if a firm doesn’t think it will need a new computer server or lathe for another year or so, it may make sense to buy it while the tax credit is available, rather than wait.
Expansionary Fiscal Policy Can Close a Recessionary Gap

Expansionary fiscal policy increases aggregate demand.
Contractionary Fiscal Policy Can Eliminate an Inflationary Gap

Contractionary fiscal policy reduces aggregate demand.
A Cautionary Note: Lags in Fiscal Policy

- In the case of fiscal policy, there is an important reason for caution: there are significant **lags** in its use.
  - Realize the recessionary/inflationary gap by collecting and analyzing economic data → takes time
  - Government develops a spending plan → takes time
  - Implementation of the action plan (spending the money) → takes time
Expansionary Fiscal Policy in Japan

- Japan turned to expansionary fiscal policy in the early 1990s.
- At the end of the 1980s Japan’s bubble burst—stock and land values plunged.
- During the years that followed, Japan relied on large-scale government purchases of goods and services, mainly in the form of construction spending on infrastructure, to prop up aggregate demand.
- This spending was scaled back after 2000, but at its peak it was truly impressive. In 1996 Japan spent about $300 billion on infrastructure.
Expansionary Fiscal Policy in Japan

- Was this policy a success? Yes and no.
- Many economists believe that without all that government spending, the Japanese economy would have slid into a 1930s-type depression after the bursting of the bubble economy.
- Instead, the economy suffered a slowdown but not a severe slump.
Fiscal Policy and the Multiplier

- Fiscal policy has a **multiplier effect** on the economy.
- Expansionary fiscal policy leads to an increase in real GDP larger than the initial rise in aggregate spending caused by the policy.
- Conversely, contractionary fiscal policy leads to a fall in real GDP larger than the initial reduction in aggregate spending caused by the policy.
Fiscal Policy and the Multiplier

- The size of the shift of the aggregate demand curve depends on the type of fiscal policy.
- The multiplier on changes in government purchases, $\frac{1}{1 - \text{MPC}}$, is larger than the multiplier on changes in taxes or transfers, $\frac{\text{MPC}}{1 - \text{MPC}}$, because part of any change in taxes or transfers is absorbed by savings.
- *Changes in government purchases have a more powerful effect on the economy than equal-sized changes in taxes or transfers.*
Fiscal Policy and the Multiplier

1. Assuming an MPC of 0.5, an increase in government purchases of $50 billion leads to...

2. . . . an initial rise in aggregate spending of $50 billion.

3. . . . and an induced rise in aggregate spending of $50 billion.

Rise in real GDP = $100 billion
Multiplier Effects of Changes in Taxes and Government Transfers

- Ex: The government hands out $50 billion in the form of tax cuts.

- There is no direct effect on aggregate demand by government purchases of goods and services; GDP goes up only because households spend some of that $50 billion.

- How much will they spend?
  - $\text{MPC} \times$ $50$ billion. For example, if $\text{MPC} = 0.6$, the first-round increase in consumer spending will be $30$ billion ($0.6 \times$ $50$ billion $= 30$ billion).
  - This initial rise in consumer spending will lead to a series of subsequent rounds in which real GDP, disposable income, and consumer spending rise further.
### Hypothetical Effects of a Fiscal Policy with Multiplier of 2

<table>
<thead>
<tr>
<th>Effect on real GDP</th>
<th>$50 billion rise in government purchases of goods and services</th>
<th>$50 billion rise in government transfer payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>First round</td>
<td>$50 billion</td>
<td>$25 billion</td>
</tr>
<tr>
<td>Second round</td>
<td>$25 billion</td>
<td>$12.5 billion</td>
</tr>
<tr>
<td>Third round</td>
<td>$12.5 billion</td>
<td>$6.25 billion</td>
</tr>
<tr>
<td>Eventual effect</td>
<td>$100 billion</td>
<td>$50 billion</td>
</tr>
</tbody>
</table>
Multiplier Effects of Changes in Taxes and Government Transfers

Lump-sum taxes are taxes that don’t depend on the taxpayer’s income.
How Taxes Affect the Multiplier

- Rules governing taxes and some transfers act as automatic stabilizers, reducing the size of the multiplier and automatically reducing the size of fluctuations in the business cycle.
- In contrast, discretionary fiscal policy arises from deliberate actions by policy makers rather than from the business cycle.
About That Stimulus Package . . .

- In early 2008 there was broad bipartisan agreement that the U.S. economy needed a fiscal stimulus. There was, however, sharp partisan disagreement about what form that stimulus should take.

- Republicans favored tax cuts on general political principles. Democrats, by contrast, preferred transfer payments, especially increased unemployment benefits and expanded food stamp aid.

- The eventual compromise gave most taxpayers a flat $600 rebate, $1,200 for married couples. How well designed was the stimulus plan?

- Many economists believed that only a fraction of the rebate checks would actually be spent, so that the eventual multiplier would be fairly low.
## Differences in the Effect of Expansionary Fiscal Policies

<table>
<thead>
<tr>
<th>Policy</th>
<th>Estimated effect on GDP per dollar of fiscal policy</th>
<th>Explanation of policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extend emergency federal unemployment insurance benefits</td>
<td>1.73</td>
<td>Extends the period for unemployment benefits, increasing transfers to the unemployed</td>
</tr>
<tr>
<td>10% personal income tax bracket</td>
<td>1.34</td>
<td>Reduces tax rate on some income from 15% to 10%, mainly benefiting middle-income families.</td>
</tr>
<tr>
<td>State government aid</td>
<td>1.24</td>
<td>Provides financial aid to state governments during recessions so states do not have to raise taxes or cut spending</td>
</tr>
<tr>
<td>Child tax credit rebate</td>
<td>1.04</td>
<td>Increases the income tax reduction for each child, mainly benefiting middle- and lower-income families</td>
</tr>
<tr>
<td>Marriage tax penalty</td>
<td>0.74</td>
<td>Tries to reduce the “marriage penalty,” an increase in combined taxes that can occur when two working people marry</td>
</tr>
<tr>
<td>Alternative minimum tax adjustments</td>
<td>0.59</td>
<td>Revises the alternative tax, designed to prevent wealthy people with many deductions from paying too little, to exclude those not considered sufficiently wealthy</td>
</tr>
<tr>
<td>Personal marginal tax rate reductions</td>
<td>0.24</td>
<td>Reduces tax rates for people in higher income brackets</td>
</tr>
<tr>
<td>Business investment writeoff</td>
<td>0.09</td>
<td>Temporarily allows companies to deduct some investment spending from taxable profits</td>
</tr>
<tr>
<td>Dividend–capital gain tax reduction</td>
<td>0.00</td>
<td>Reduces taxes on dividends and capital gains</td>
</tr>
<tr>
<td>Estate tax reduction</td>
<td></td>
<td>Reduces the tax paid on the value of assets left behind after taxpayers die</td>
</tr>
</tbody>
</table>
The Budget Balance

- How do surpluses and deficits fit into the analysis of fiscal policy?
- Are deficits ever a good thing and surpluses a bad thing?
Other things equal, discretionary expansionary fiscal policies—increased government purchases of goods and services, higher government transfers, or lower taxes—reduce the budget balance for that year.
The Budget Balance

- That is, *expansionary fiscal policies* make a budget surplus smaller or a budget deficit bigger.

- Conversely, *contractionary fiscal policies*—smaller government purchases of goods and services, smaller government transfers, or higher taxes—increase the budget balance for that year, making a budget surplus bigger or a budget deficit smaller.
The Budget Balance

- Some of the fluctuations in the budget balance are due to the effects of the business cycle.
- In order to separate the effects of the business cycle from the effects of discretionary fiscal policy, governments estimate the **cyclically adjusted budget balance**, an estimate of the budget balance if the economy were at potential output.
The budget deficit as a percentage of GDP tends to rise during recessions (indicated by shaded areas) and fall during expansions.
The budget deficit as a percentage of GDP moves closely in tandem with the unemployment rate.
The Budget Balance

Actual budget deficit, cyclically adjusted budget deficit (percent of GDP) 6%

Year

Actual budget deficit
Cyclically adjusted budget deficit
Most economists don’t believe the government should be forced to run a balanced budget *every year* because this would undermine the role of taxes and transfers as automatic stabilizers.

Yet policy makers concerned about excessive deficits sometimes feel that rigid rules prohibiting—or at least setting an upper limit on—deficits are necessary.
Stability Pact—or Stupidity Pact?

- In 1999 a group of European nations adopted a common currency, the euro, to replace their national currencies.
- Governments of member countries signed on to the European “stability pact.” This agreement required each government to keep its budget deficit below 3% of the country’s GDP or face fines. The stability pact, however, limited a country’s ability to use fiscal policy.
- In 2002 both France and Germany were experiencing rising unemployment and also running budget deficits in excess of 3% of GDP.
- In March 2005 the stability pact was rewritten to allow “small and temporary” breaches of the 3% limit.
Long-Run Implications of Fiscal Policy

- U.S. government budget accounting is calculated on the basis of **fiscal years**.
- A **fiscal year** runs from October 1 to September 30 and is labeled according to the calendar year in which it ends.
- Persistent budget deficits have long-run consequences because they lead to an increase in **public debt**.
Deficits Versus Debt

- A *deficit* is the difference between the amount of money a government spends and the amount it receives in taxes over a given period.
- A *debt* is the sum of money a government owes at a particular point in time.
- Deficits and debt are linked, because government debt grows when governments run deficits. But they aren’t the same thing, and they can even tell different stories.
- For example, at the end of fiscal 2008, U.S. *debt* as a percentage of GDP was fairly low by historical standards, but the *deficit* during fiscal 2008 was considered quite high.
Problems Posed by Rising Government Debt

- Public debt may **crowd out** investment spending, which reduces long-run economic growth.
- And in extreme cases, rising debt may lead to government **default**, resulting in economic and financial turmoil.
- Can’t a government that has trouble borrowing just print money to pay its bills?
- Yes, it can, but this leads to another problem: inflation.
The American Way of Debt

2008 net public debt (percent of GDP)

- Italy: 91%
- Japan: 87%
- Belgium: 72%
- United States: 48%
- Germany: 43%
- France: 36%
- United Kingdom: 33%
- Canada: 23%
- Sweden: -23%
- Norway: -153%
Deficits and Debt in Practice

- A widely used measure of fiscal health is the debt–GDP ratio.
- This number can remain stable or fall even in the face of moderate budget deficits if GDP rises over time.
U.S. Federal Deficits and Debt

(a) The U.S. Federal Budget Deficit Since 1940

Budget deficit (percent of GDP)


Year
U.S. Federal Deficits and Debt

(b) The U.S. Public Debt–GDP Ratio Since 1940

Public debt (percent of GDP)

120%
100%
80%
60%
40%
20%

Year

Japanese Deficits and Debt

(a) The Japanese Budget Deficit Since 1990

Budget deficit (percent of GDP)

Year

Japanese Deficits and Debt

(b) The Japanese Debt–GDP Ratio Since 1990

Public debt (percent of GDP)

Year

What Happened to the Debt from World War II?

- The government paid for World War II by borrowing on a huge scale. By the war’s end, the public debt was more than 100% of GDP, and many people worried about how it could ever be paid off.

- The truth is that it never was paid off. In 1946 public debt was $242 billion.

- By 1962 the public debt was back up to $248 billion. By then nobody was worried about the fiscal health of the U.S. government because the debt–GDP ratio had fallen by more than half.

- Vigorous economic growth, plus mild inflation, had led to a rapid rise in GDP. The experience was a clear lesson in the peculiar fact that modern governments can run deficits forever, as long as they aren’t too large.
Implicit Liabilities

- **Implicit liabilities** are spending promises made by governments that are effectively a debt despite the fact that they are not included in the usual debt statistics.
The Implicit Liabilities of the U.S. Government

Current spending (percent of GDP)

- Medicare and Medicaid
- Social Security

Year: 2004 - 4.1%, 4.3%
Year: 2010 - 4.8%, 4.2%
Year: 2030 - 8.4%, 5.9%
Year: 2050 - 11.5%, 6.2%
Argentina’s Creditors Take a Haircut

- During much of the 1990s, Argentina was experiencing an economic boom and the government was easily able to borrow money from abroad. However, the country slid into an economic slump.
- By 2001, the country was caught in a vicious circle: to cover its deficits and pay off old loans as they came due, it was forced to borrow at much higher interest rates.
- It took three years for Argentina to reach an agreement with its creditors.
- Argentina forced its creditors to trade their “sovereign bonds”—debts of a sovereign nation—for new bonds worth only 32% as much.
- Such a reduction in the value of debt is known as a “haircut.”
SUMMARY

1. The government plays a large role in the economy, collecting a large share of GDP in taxes and spending a large share both to purchase goods and services and to make transfer payments, largely for social insurance. Fiscal policy is the use of taxes, government transfers, or government purchases of goods and services to shift the aggregate demand curve. But many economists caution that a very active fiscal policy may in fact make the economy less stable due to time lags in policy formulation and implementation.

2. Government purchases of goods and services directly affect aggregate demand, and changes in taxes and government transfers affect aggregate demand indirectly by changing households’ disposable income. Expansionary fiscal policy shifts the aggregate demand curve rightward; contractionary fiscal policy shifts the aggregate demand curve leftward.
3. Fiscal policy has a multiplier effect on the economy, the size of which depends upon the fiscal policy. Except in the case of lump-sum taxes, taxes reduce the size of the multiplier. Expansionary fiscal policy leads to an increase in real GDP, while contractionary fiscal policy leads to a reduction in real GDP. Because part of any change in taxes or transfers is absorbed by savings in the first round of spending, changes in government purchases of goods and services have a more powerful effect on the economy than equal-size changes in taxes or transfers.

4. Rules governing taxes—with the exception of lump-sum taxes—and some transfers act as automatic stabilizers, reducing the size of the multiplier and automatically reducing the size of fluctuations in the business cycle. In contrast, discretionary fiscal policy arises from deliberate actions by policy makers rather than from the business cycle.
5. Some of the fluctuations in the budget balance are due to the effects of the business cycle. In order to separate the effects of the business cycle from the effects of discretionary fiscal policy, governments estimate the **cyclically adjusted budget balance**, an estimate of the budget balance if the economy were at potential output.

6. U.S. government budget accounting is calculated on the basis of **fiscal years**. Persistent budget deficits have long-run consequences because they lead to an increase in **public debt**. This can be a problem for two reasons. Public debt may crowd out investment spending, which reduces long-run economic growth. And in extreme cases, rising debt may lead to government default, resulting in economic and financial turmoil.
7. A widely used measure of fiscal health is the **debt–GDP ratio**. This number can remain stable or fall even in the face of moderate budget deficits if GDP rises over time. However, a stable debt–GDP ratio may give a misleading impression that all is well because modern governments often have large **implicit liabilities**. The largest implicit liabilities of the U.S. government come from Social Security, Medicare, and Medicaid, the costs of which are increasing due to the aging of the population and rising medical costs.
The End of Chapter 13

coming attraction:
Chapter 14:
Money, Banking, and the Federal Reserve System