

Economics

ELEVENTH EDITION

Michael Parkin





30

FISCAL
POLICY

After studying this chapter, you will be able to:

- ◆ Describe the federal budget process and the recent history of outlays, tax revenues, deficits, and debt
- ◆ Explain the supply-side effects of fiscal policy
- ◆ Explain how fiscal policy choices redistribute benefits and costs across generations
- ◆ Explain how fiscal stimulus is used to fight a recession

Does it matter if the government runs a large budget deficit and accumulates more debt?

Does accumulating debt slow economic growth?

Does debt impose a burden on future generations—on you and your children?

How do taxes and government spending influence the economy?

Does a dollar spent by the government have the same effect as a dollar spent by someone else?

Does a dollar spent by the government create jobs, or does it destroy them?

The Federal Budget

The **federal budget** is the annual statement of the federal government's outlays and tax revenues.

The federal budget has two purposes:

1. To finance the activities of the federal government
2. To achieve macroeconomic objectives

Fiscal policy is the use of the federal budget to achieve macroeconomic objectives, such as full employment, sustained economic growth, and price level stability.

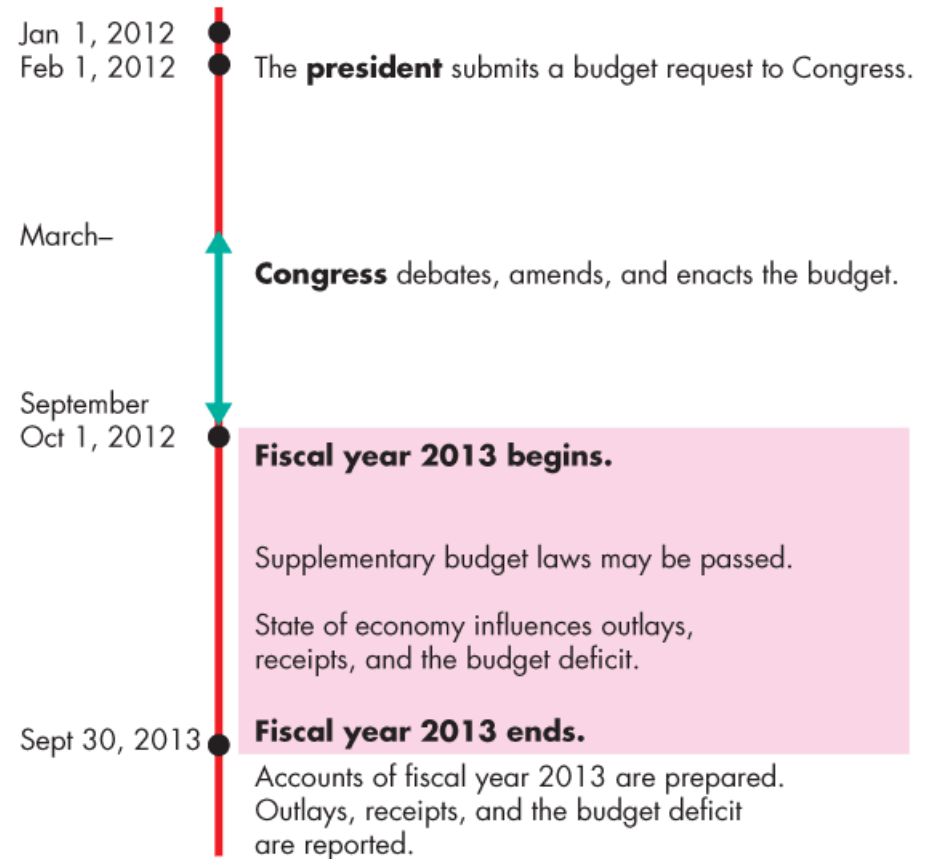
The Federal Budget



The Institutions and Laws

The President and Congress make fiscal policy.

Figure 30.1 shows the timeline for the 2013 budget.



The Federal Budget

Employment Act of 1946

Fiscal policy operates within the framework of the **Employment Act of 1946** in which Congress declared that

. . . it is the continuing policy and responsibility of the Federal Government to use all practicable means . . . to coordinate and utilize all its plans, functions, and resources . . . to promote maximum employment, production, and purchasing power.

The Federal Budget

The Council of Economic Advisers

The **Council of Economic Advisers** monitors the economy and keeps the President and the public well informed about the current state of the economy and the best available forecasts of where it is heading.

This economic intelligence activity is one source of data that informs the budget-making process.

The Federal Budget

Highlights of the 2013 Budget

The projected fiscal 2013 Federal Budget has receipts of \$3,136 billion, outlays of \$4,133 billion, and a projected deficit of \$997 billion.

Receipts come from personal income taxes, Social Security taxes, corporate income taxes, and indirect taxes.

Personal income taxes are the largest revenue source.

Outlays are transfer payments, expenditure on goods and services, and debt interest.

Transfer payments are the largest item of outlays.



The Federal Budget

Surplus or Deficit

The federal government's budget balance equals receipts minus outlays.

If receipts exceed outlays, the government has a **budget surplus**.

If outlays exceed receipts, the government has a **budget deficit**.

If receipts equal outlays, the government has a **balanced budget**.

The projected budget deficit in fiscal 2013 is \$997 billion.

The Federal Budget

TABLE 30.1 Federal Budget in Fiscal 2013

| Item | Projections (billions of dollars) |
|-----------------------------------|--------------------------------------|
| Receipts | 3,136 |
| Personal income taxes | 1,348 |
| Social Security taxes | 1,058 |
| Corporate income taxes | 441 |
| Indirect taxes and other receipts | 289 |
| Outlays | 4,133 |
| Transfer payments | 2,644 |
| Expenditure on goods and services | 1,132 |
| Debt interest | 357 |
| Deficit | 997 |

The Federal Budget

The Budget in Historical Perspective

Figure 30.2 shows the government's receipts, outlays, and budget balance as a percentage of GDP.

The budget deficit peaked at almost 12 percent of GDP in 2010. The previous peak was 6 percent in 1983.

The deficit declined through 1989 but climbed again during the 1990–1991 recession and then began to shrink.

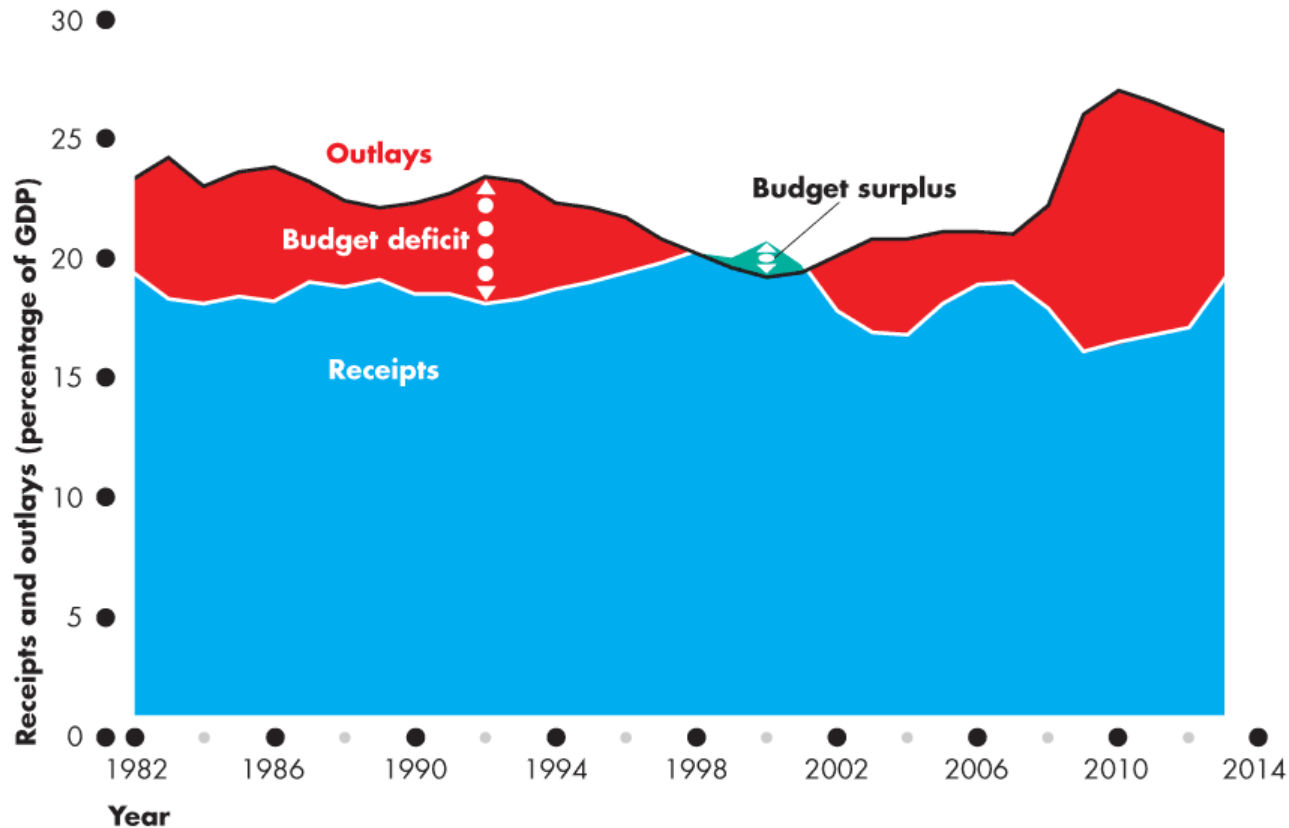
In 1998, a surplus emerged, but by 2002, the budget was again in deficit.

The deficit after 2008 reached a new all-time high because outlays increased.

The Federal Budget



Figure 30.2 shows receipts, outlays, and the budget deficit when outlays exceed receipts and budget surplus when receipts exceed outlays.

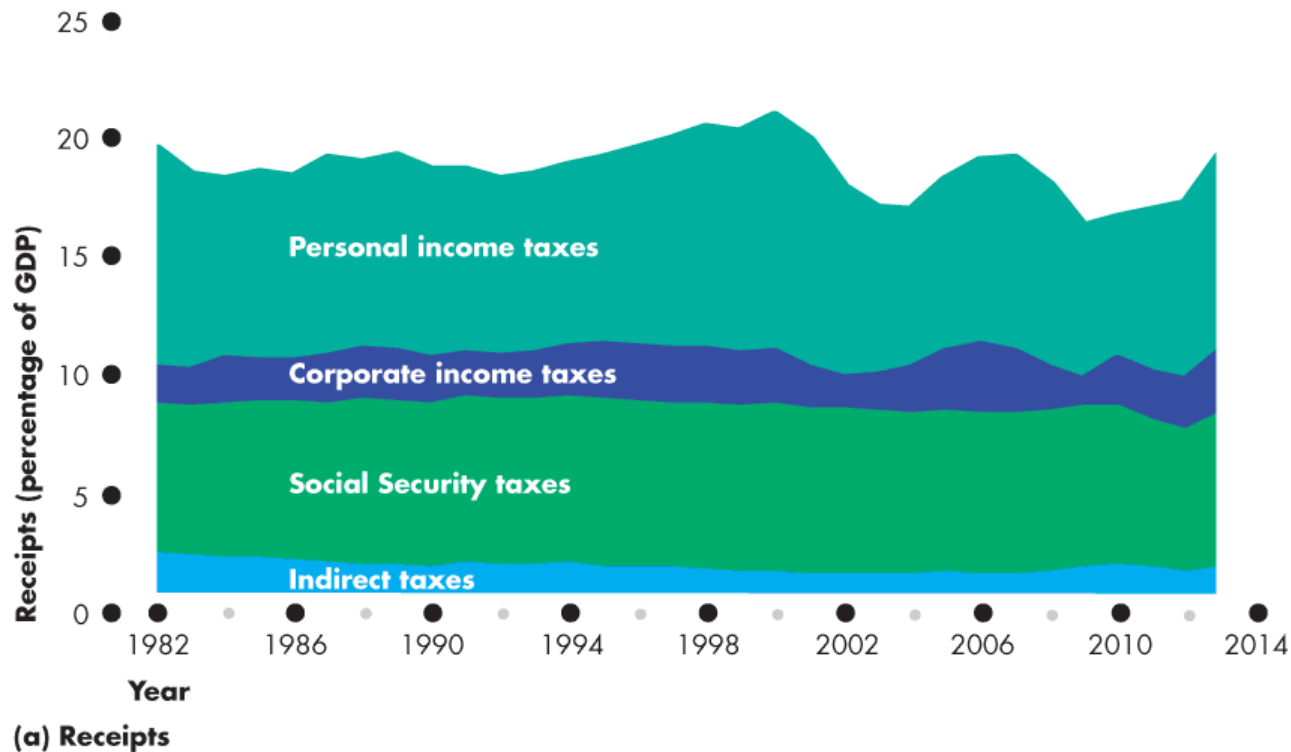


The Federal Budget

Receipts



Figure 30.3(a) shows receipts as a percentage of GDP.

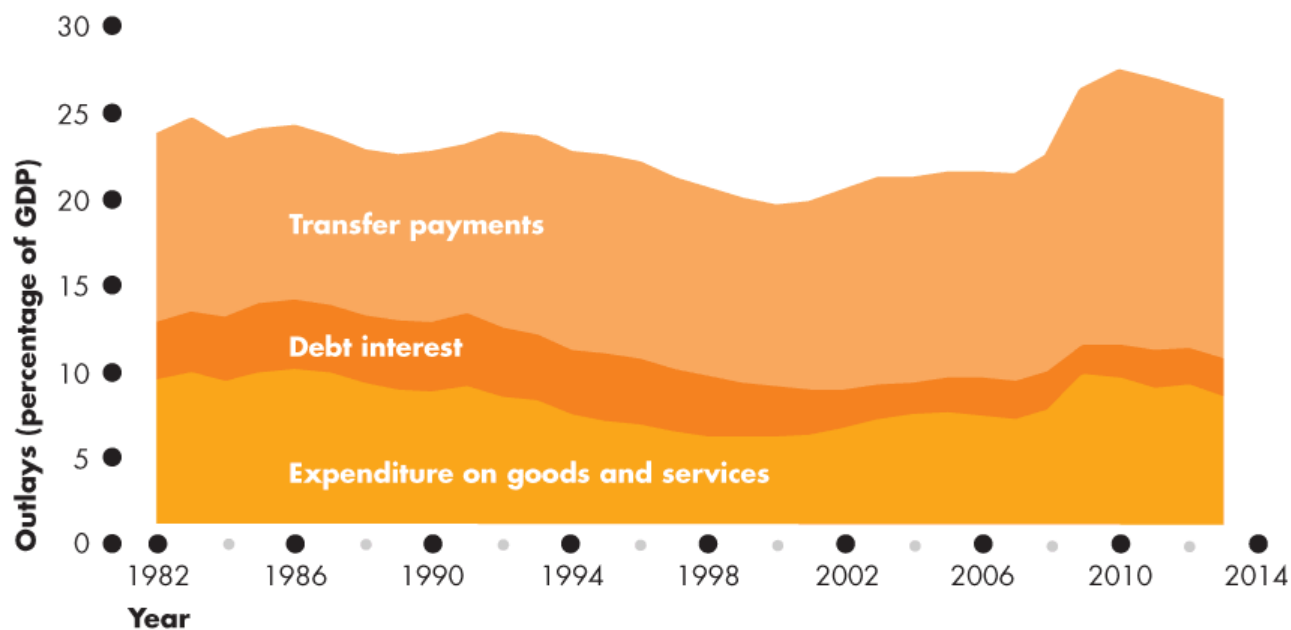


The Federal Budget

Outlays



Figure 30.3(b) shows outlays as a percentage of GDP.



(b) Outlays

The Federal Budget



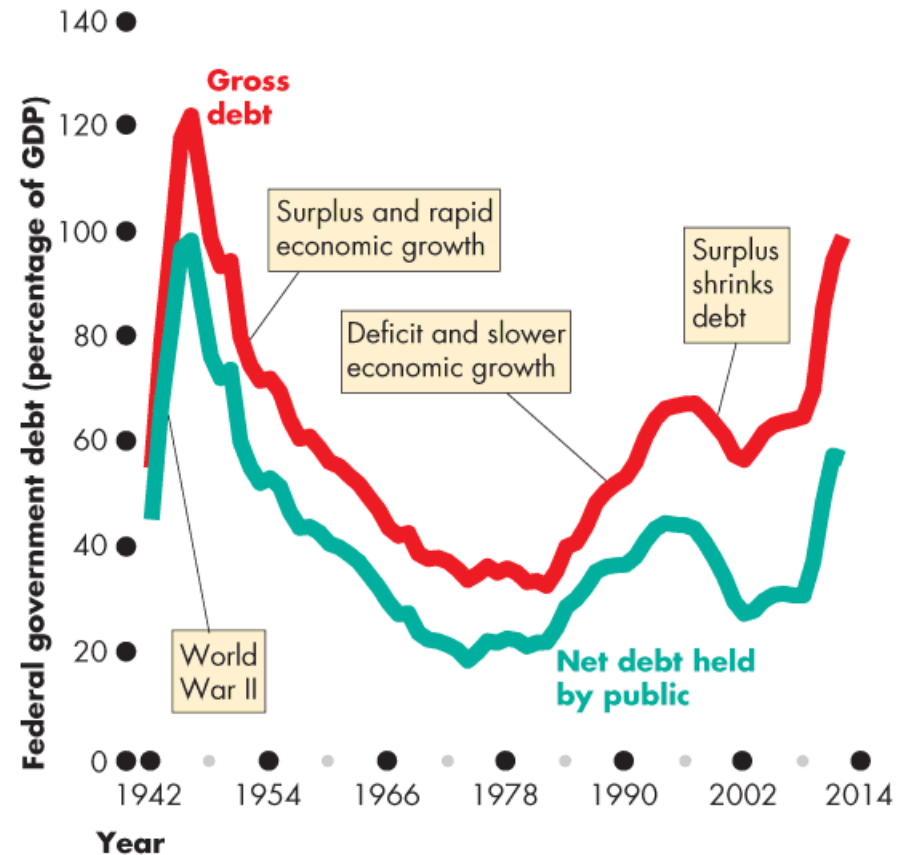
Budget Balance and Debt

Government debt is the total amount that the government has borrowed.

It is the sum of past deficits minus past surpluses.

Figure 30.4 shows the federal government's gross debt ...

and net debt.



The Federal Budget

State and Local Budgets

The *total government sector* includes state and local governments as well as the federal government.

In 2013, when federal government outlays were about \$4,133 billion, state and local outlays were a further \$2,000 billion.

Most of state expenditures were on public schools, colleges, and universities (\$550 billion); local police and fire services; and roads.



Supply-Side Effects of Fiscal Policy

Fiscal policy has important effects on employment, potential GDP, and aggregate supply—called **supply-side effects**.

An income tax changes full employment and potential GDP.

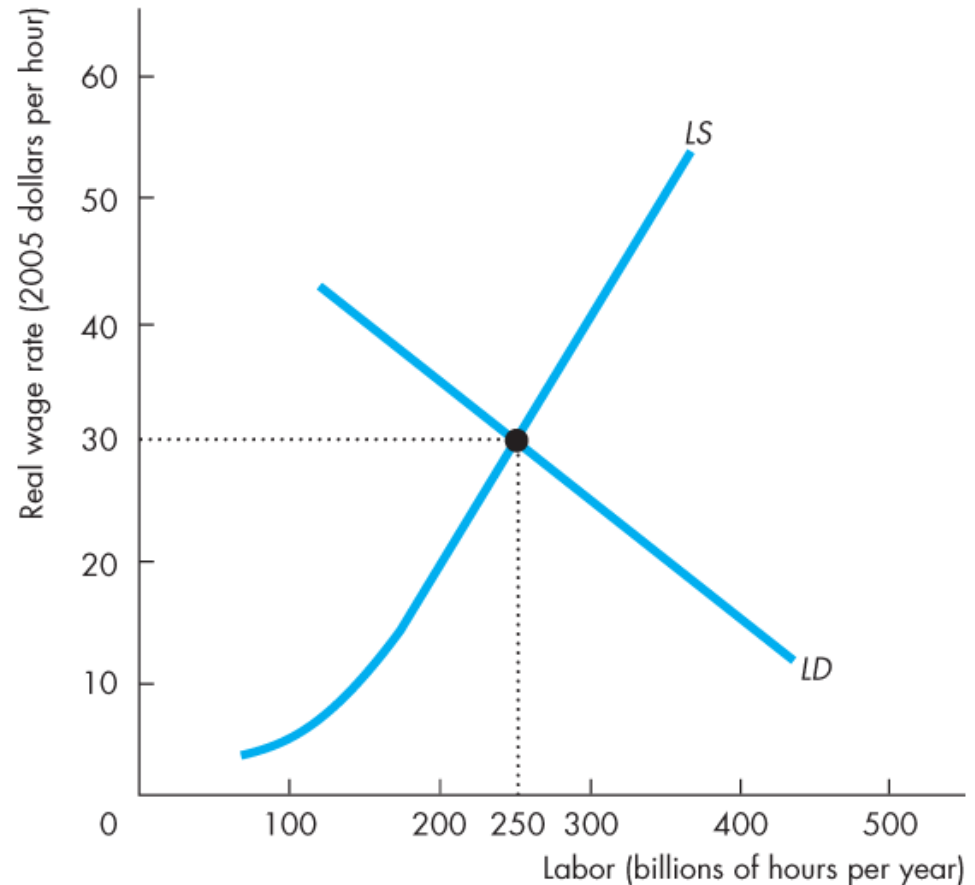
Supply-Side Effects of Fiscal Policy

Full Employment and Potential GDP

Figure 30.5 illustrates full employment and potential GDP.

Equilibrium employment is full employment and ...

the real GDP produced by the full-employment quantity of labor is potential GDP.



(a) Income tax and the labor market

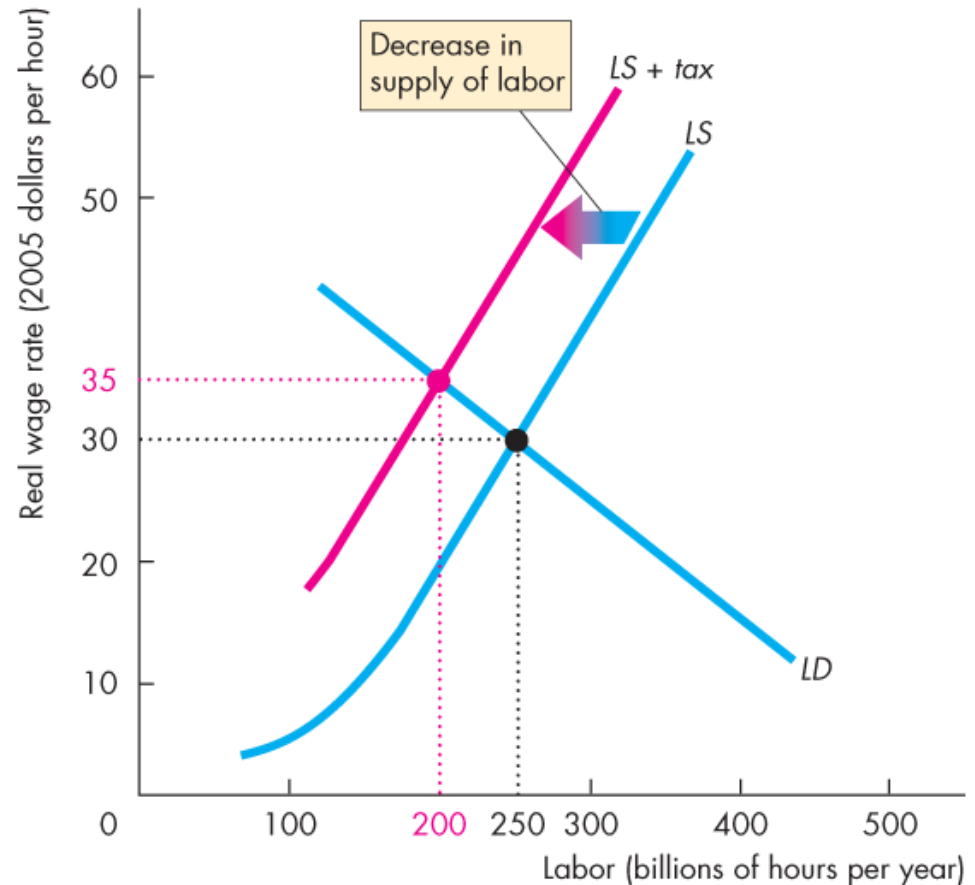
Supply-Side Effects of Fiscal Policy



The Effects of the Income Tax

Figure 30.5(a) illustrates the effects of an income tax in the labor market.

The supply of labor decreases because the tax decreases the after-tax wage rate.



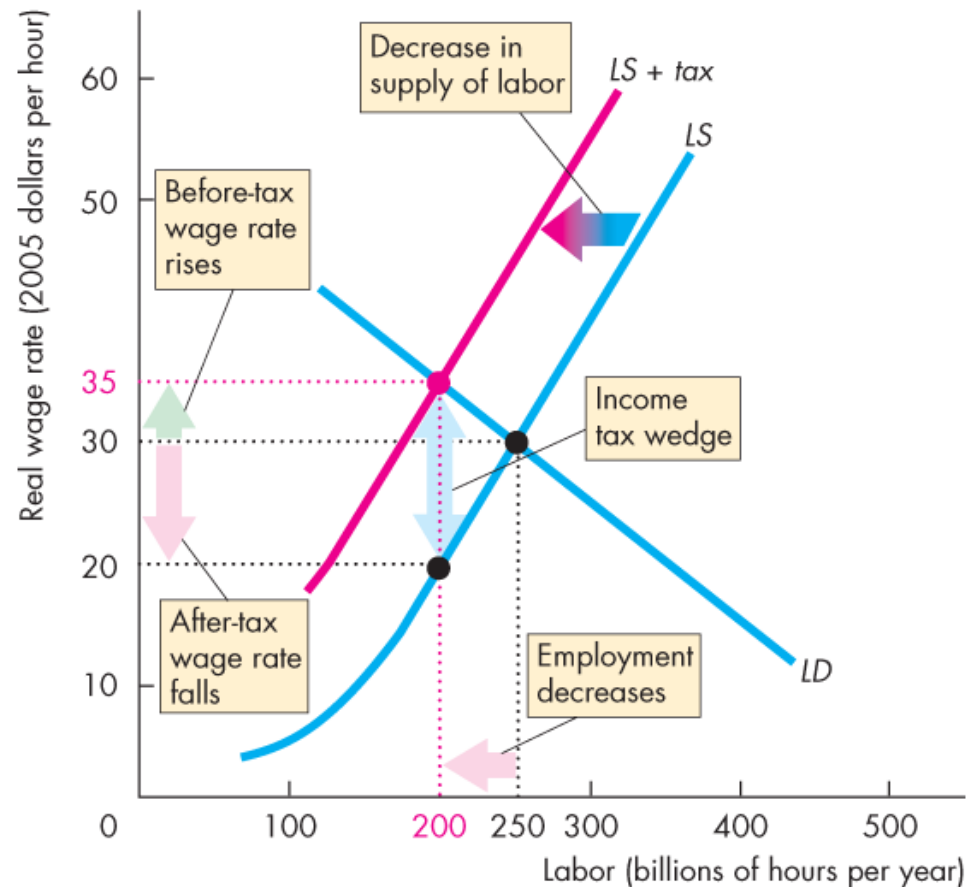
(a) Income tax and the labor market

Supply-Side Effects of Fiscal Policy

The before-tax real wage rate rises but the after-tax real wage rate falls.

The quantity of labor employed decreases.

The gap created between the before-tax and after-tax wage rates is called the **tax wedge**.



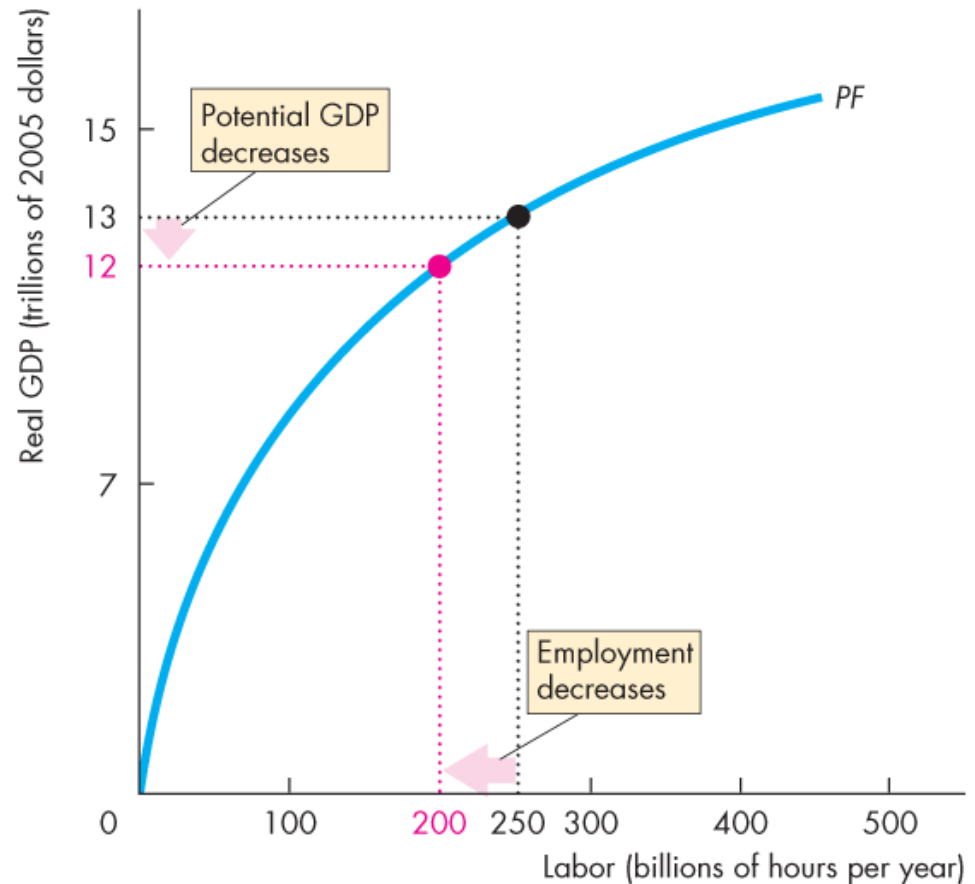
(a) Income tax and the labor market

Supply-Side Effects of Fiscal Policy



When the quantity of labor employed decreases, ... potential GDP decreases.

The supply-side effect of a rise in the income tax decreases potential GDP and decreases aggregate supply.



(b) Income tax and potential GDP



Supply-Side Effects of Fiscal Policy

Taxes on Expenditure and the Tax Wedge

Taxes on consumption expenditure add to the tax wedge.

The reason is that a tax on consumption raises the prices paid for consumption goods and services and is equivalent to a cut in the real wage rate.

If the income tax rate is 25 percent and the tax rate on consumption expenditure is 10 percent, a dollar earned buys only 65 cents worth of goods and services.

The tax wedge is 35 percent.



Supply-Side Effects of Fiscal Policy

Taxes and the Incentive to Save and Invest

A tax on capital income lowers the quantity of saving and investment and *slows the growth rate of real GDP*.

The interest rate that influences saving and investment is the *real after-tax* interest rate.

The real after-tax interest rate subtracts the income tax paid on interest income from the real interest.

Taxes depend on the nominal interest rate. So the true tax on interest income depends on the inflation rate.

Supply-Side Effects of Fiscal Policy

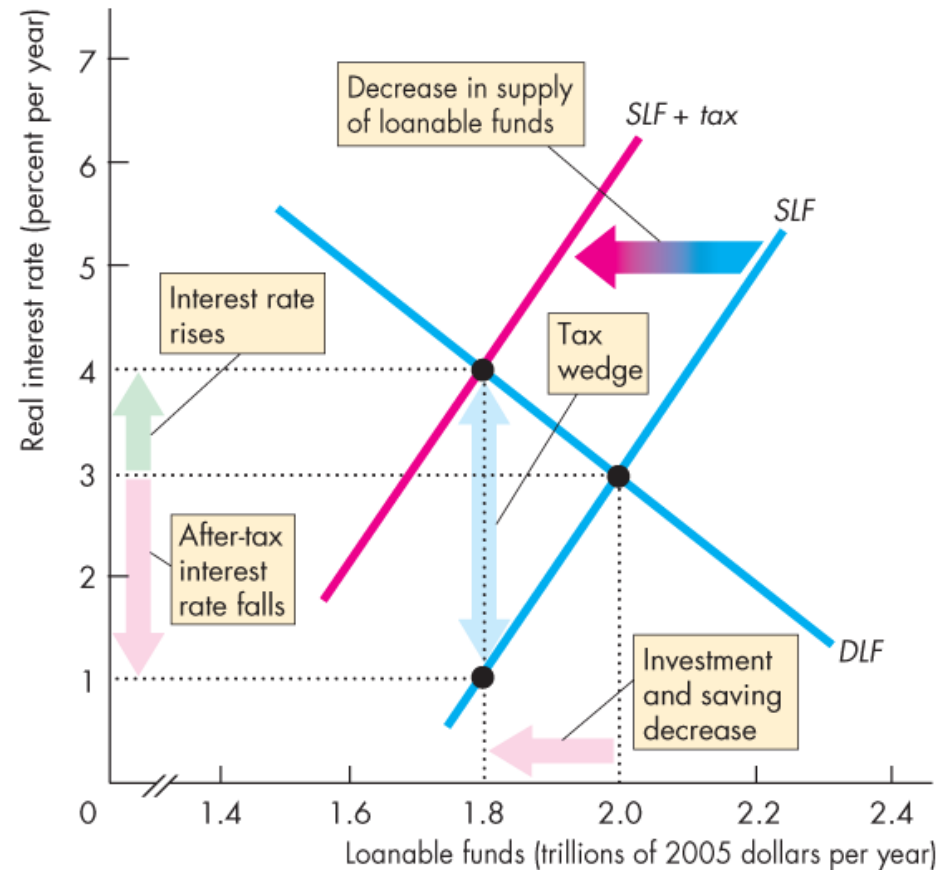


Figure 30.6 illustrates the effects of a tax on capital income.

A tax decreases the supply of loanable funds.

Investment and saving decrease.

A tax wedge is driven between the real interest rate and the real after-tax interest rate.

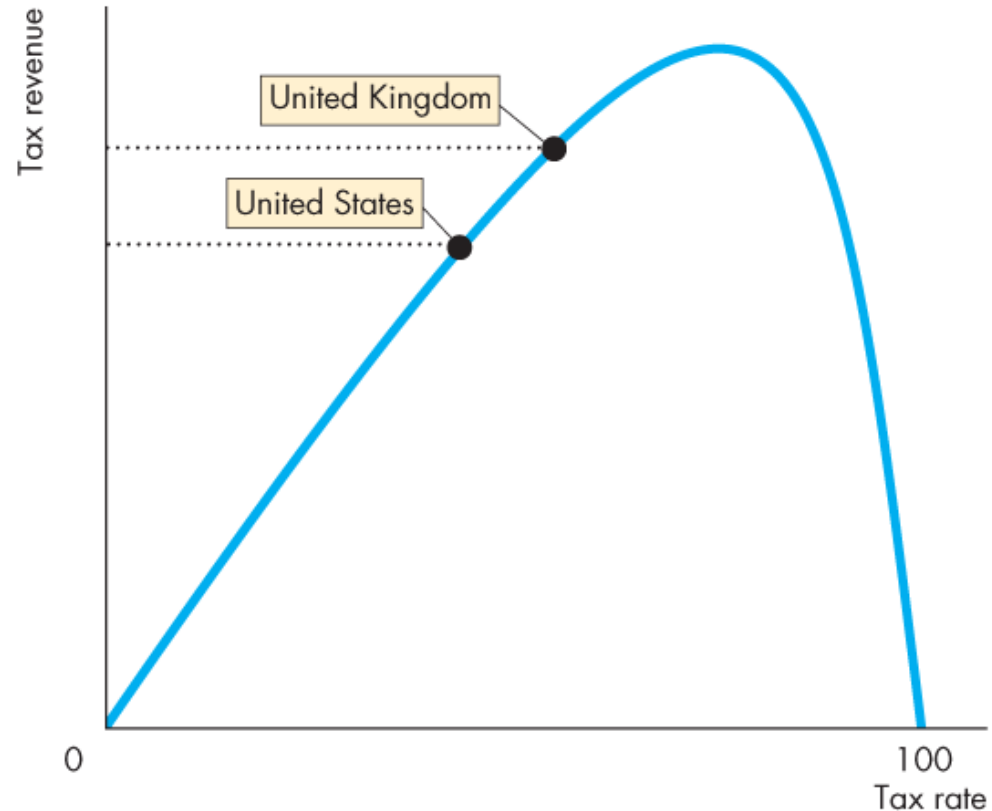


Supply-Side Effects of Fiscal Policy



Tax Revenues and the Laffer Curve

The relationship between the tax rate and the amount of tax revenue collected is called the **Laffer curve**.

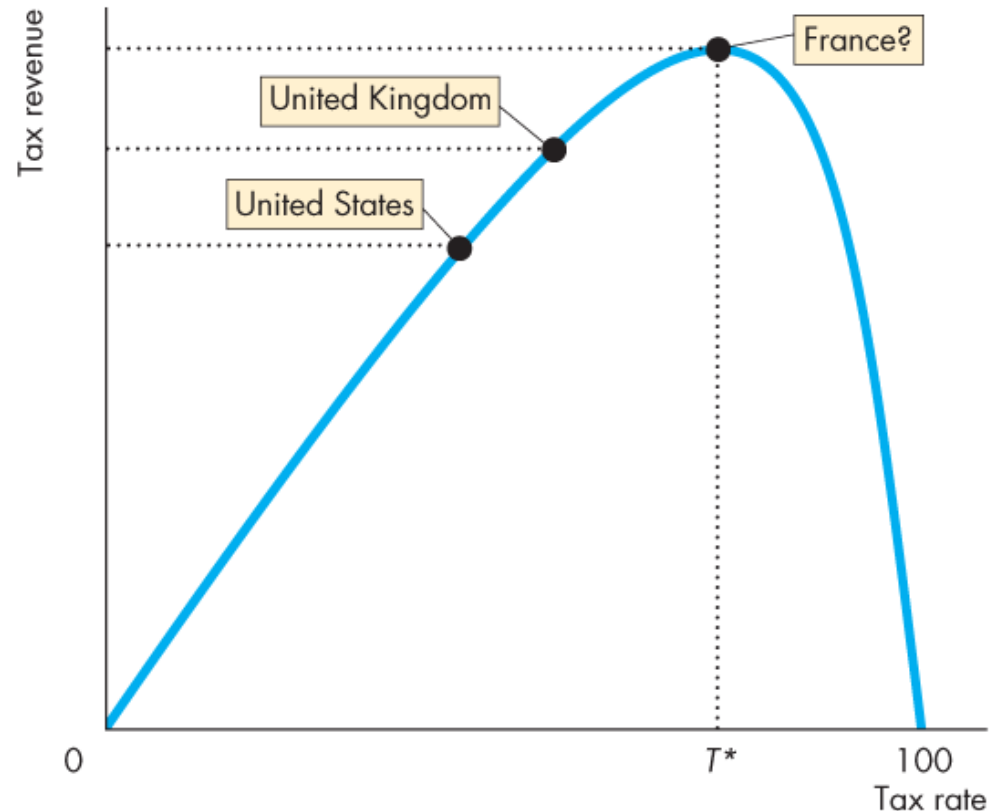


Supply-Side Effects of Fiscal Policy

At the tax rate T^* ,
tax revenue is maximized.

For a tax rate below T^* ,
a rise in the tax rate
increases tax revenue.

For a tax rate above T^* ,
a rise in the tax rate
decreases tax revenue.



Generational Effects of Fiscal Policy

Is the budget deficit a burden on future generations?

Is the budget deficit the only burden on future generations?

What about the deficit in the Social Security fund?

Does it matter who owns the bonds that the government sells to finance its deficit?

To answer questions like these, we use a tool called generational accounting.

Generational accounting is an accounting system that measures the lifetime tax burden and benefits of each generation.

Generational Effects of Fiscal Policy

Generational Accounting and Present Value

Taxes are paid by people with jobs. Social security benefits are paid to people after they retire.

So to compare the value of an amount of money at one date (working years) with that at a later date (retirement years), we use the concept of present value.

A **present value** is an amount of money that, if invested today, will grow to equal a given future amount when the interest that it earns is taken into account.

Generational Effects of Fiscal Policy

For example:

If the interest rate is 5 percent a year, \$1,000 invested today will grow, with interest, to \$11,467 after 50 years.

The present value (2013) of \$11,467 in 2063 is \$1,000.

Generational Effects of Fiscal Policy

The Social Security Time Bomb

Using generational accounting and present values, economists have found that the federal government is facing a Social Security time bomb!

In 2008, the first of the baby boomers started collecting Social Security pensions and in 2011, they became eligible for Medicare benefits.

By 2030, all the baby boomers will have reached retirement age and the population supported by Social Security will have doubled.

Generational Effects of Fiscal Policy

Under the existing Social Security laws, the federal government has an obligation to pay pensions and Medicare benefits on an already declared scale.

To assess the full extent of the government's obligations, economists use the concept of fiscal imbalance.

Fiscal imbalance is the present value of the government's commitments to pay benefits minus the present value of its tax revenues.

Gokhale and Smetters estimated that the fiscal imbalance was \$79 trillion in 2010—5.8 times the value of total production in 2010 (\$13.6 trillion).

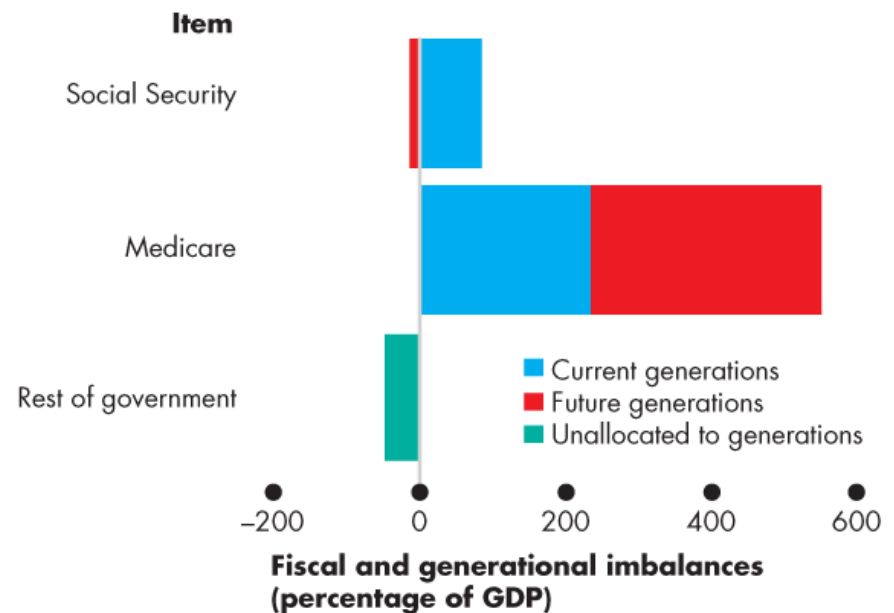
Generational Effects of Fiscal Policy



Generational Imbalance

Generational imbalance is the division of the fiscal imbalance between the current and future generations, assuming that the current generation will enjoy the existing levels of taxes and benefits.

The bars show the scale of the fiscal imbalance.



Generational Effects of Fiscal Policy

International Debt

How much investment have we paid for by borrowing from the rest of the world? And how much U.S. government debt is held abroad?

In June 2012, the United States had a net debt to the rest of the world of \$7.4 trillion.

Of that debt, \$4.8 trillion was U.S. government debt.

U.S. corporations used \$6.5 trillion of foreign funds.

Foreigners hold 40 percent of U.S. government debt.

Generational Effects of Fiscal Policy

TABLE 30.2 What the United States Owed the Rest of the World in June 2012

| | \$ trillions |
|---------------------------------------|--------------|
| (a) U.S. liabilities | |
| Deposits in U.S. banks | 1.2 |
| U.S. government securities | 4.8 |
| U.S. corporate bonds and equities | 6.5 |
| Other items (net) | -5.1 |
| Total | 7.4 |
| (b) U.S. government securities | |
| Held by rest of world | 4.8 |
| Held in the United States | 6.8 |
| Total | 11.6 |

Fiscal Stimulus

A **fiscal stimulus** is the use of fiscal policy to increase production and employment.

Fiscal stimulus can be either

- Automatic
- Discretionary

Automatic fiscal policy is a fiscal policy action triggered by the state of the economy with no government action.

Discretionary fiscal policy is a policy action that is initiated by an act of Congress.

Fiscal Stimulus

Automatic Fiscal Policy and Cyclical and Structural Budget Balances

Two items in the government budget change automatically in response to the state of the economy.

- Tax revenues
- Needs-tested spending

Fiscal Stimulus

Automatic Changes in Tax Revenues

Congress sets the tax *rates* that people must pay.

The tax dollars people pay depend on tax rates and incomes.

But incomes vary with real GDP, so tax revenues depend on real GDP.

When real GDP increases in an expansion, tax revenues increase.

When real GDP decreases in a recession, tax revenues decrease.

Fiscal Stimulus

Needs-Tested Spending

The government creates programs that pay benefits to qualified people and businesses.

These transfer payments depend on the economic state of the economy.

When the economy is in an expansion, unemployment falls, so needs-tested spending decreases.

When the economy is in a recession, unemployment rises, so needs-tested spending increases.

Fiscal Stimulus

Automatic Stimulus

In a recession, receipts decrease and outlays increase.

So the budget provides an automatic stimulus that helps shrink the recessionary gap.

In a boom, receipts increase and outlays decrease.

So the budget provides automatic restraint that helps shrink the inflationary gap.

Fiscal Stimulus

Cyclical and Structural Balances

The **structural surplus or deficit** is the budget balance that would occur if the economy were at full employment and real GDP were equal to potential GDP.

The **cyclical surplus or deficit** is the actual surplus or deficit minus the structural surplus or deficit.

That is, a cyclical surplus or deficit is the surplus or deficit that occurs purely because real GDP does *not* equal potential GDP.

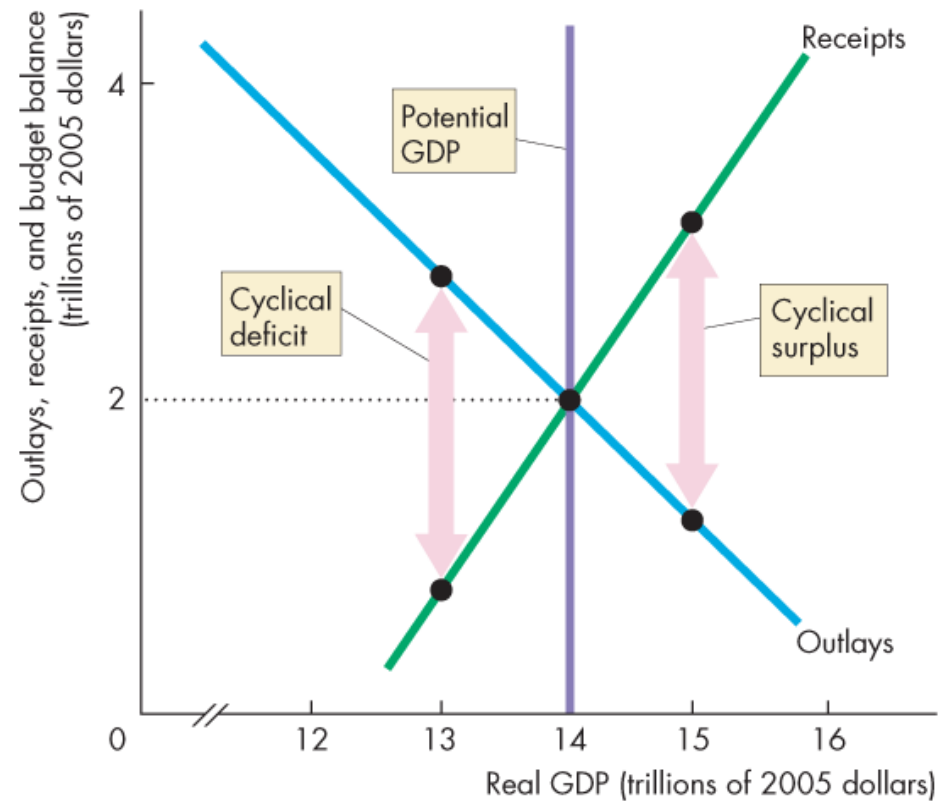
Fiscal Stimulus

Figure 30.9 illustrates a cyclical deficit and a cyclical surplus.

In part (a), potential GDP is \$14 trillion.

If real GDP is \$13 trillion, the budget is in deficit and it is a cyclical deficit.

If real GDP is \$15 trillion, the budget is in surplus and it is a cyclical surplus.



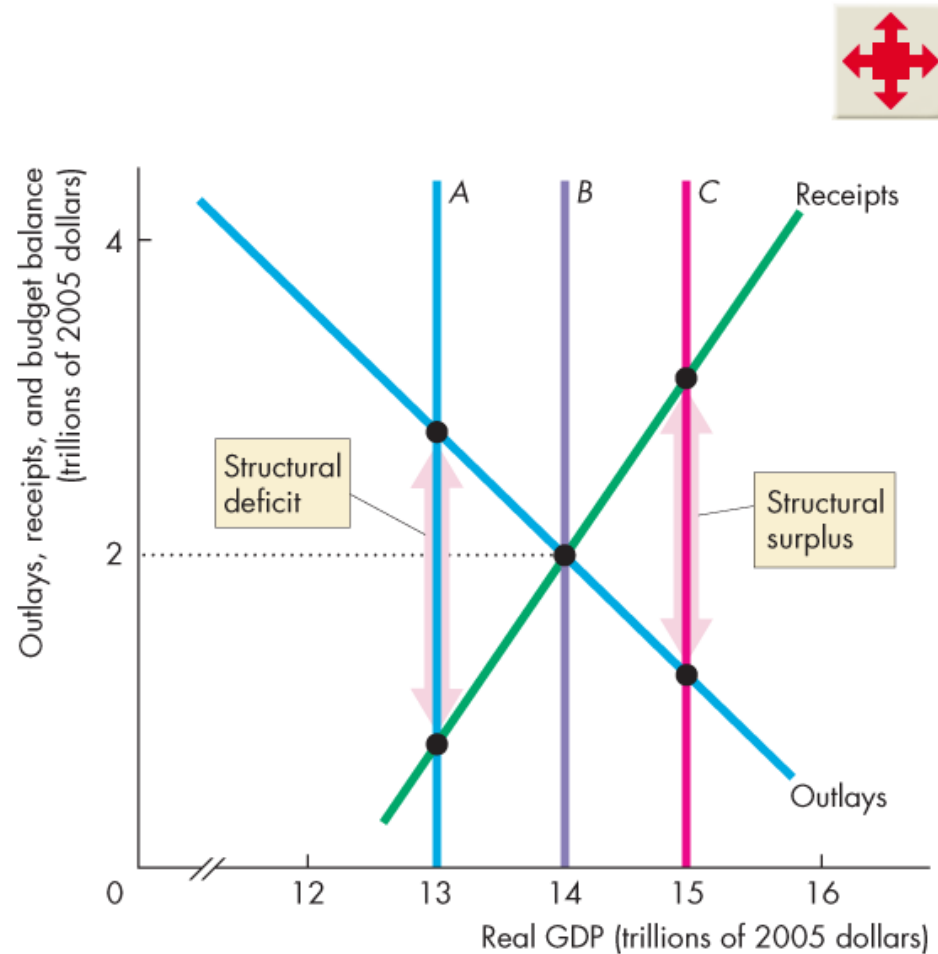
(a) Cyclical deficit and cyclical surplus

Fiscal Stimulus

In part (b), if real GDP and potential GDP are \$13 trillion, the budget is a deficit and the deficit is a structural deficit.

If real GDP and potential GDP are \$14 trillion, the budget is balanced.

If real GDP and potential GDP are \$15 trillion, the budget is a surplus and the surplus is a structural surplus.



(b) Structural deficit and structural surplus

Fiscal Stimulus

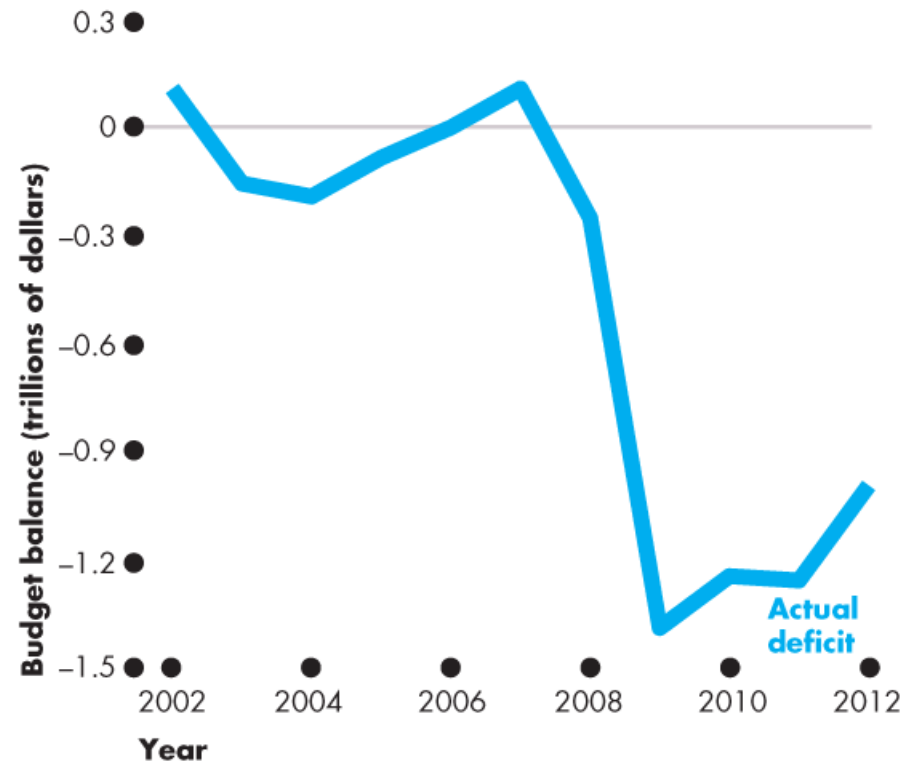
U.S. Structural Budget Balance in 2012

Figure 30.10 shows the actual budget deficit.

In 2012, the budget deficit was \$1.1 trillion.

With a recessionary gap of \$0.85 trillion, how much of the deficit was a cyclical deficit?

How much was structural?



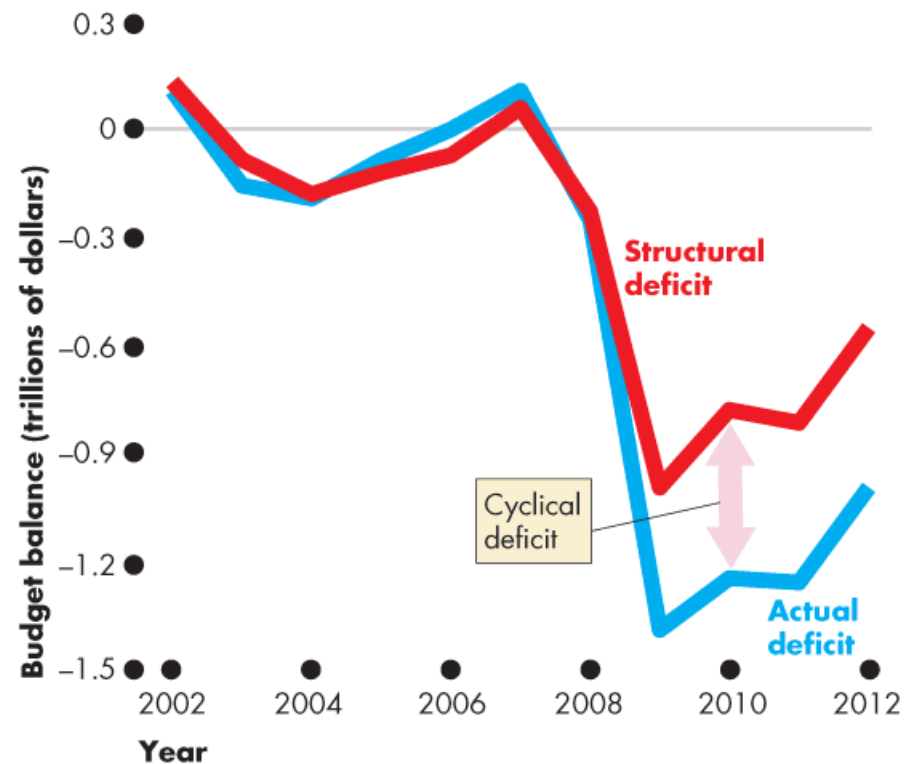
Fiscal Stimulus

The figure shows the structural deficit, calculated by the CBO.

The gap between the structural deficit and the actual deficit is the cyclical deficit.

The cyclical deficit in 2012 was \$0.4 trillion.

Most of the 2012 budget deficit was a structural deficit.



Fiscal Stimulus

Discretionary Fiscal Stimulus

Most discretionary fiscal stimulus focuses on its effects on aggregate demand.

Fiscal Stimulus and Aggregate Demand

Changes in government expenditure and taxes change aggregate demand and have multiplier effects.

Two main fiscal multipliers are

- Government expenditure multiplier
- Tax multiplier

Fiscal Stimulus

The **government expenditure multiplier** is the quantity effect of a change in government expenditure on real GDP.

Because government expenditure is a component of aggregate expenditure, an increase in government expenditure increases real GDP.

When real GDP increases, incomes rise and consumption expenditure increases. Aggregate demand increases.

If this were the only consequence of the increase in government expenditure, the multiplier would be >1 .

Fiscal Stimulus

But an increase in government expenditure increases government borrowing and raises the real interest rate.

With the higher cost of borrowing, investment decreases, which partly offsets the increase in government expenditure.

If this were the only consequence of the increase in government expenditure, the multiplier would be < 1 .

Which effect is stronger?

The consensus is that the crowding-out effect dominates and the multiplier is < 1 .

Fiscal Stimulus

The **tax multiplier** is the quantity effect of a change in taxes on aggregate demand.

The demand-side effects of a tax cut are likely to be smaller than an equivalent increase in government expenditure.

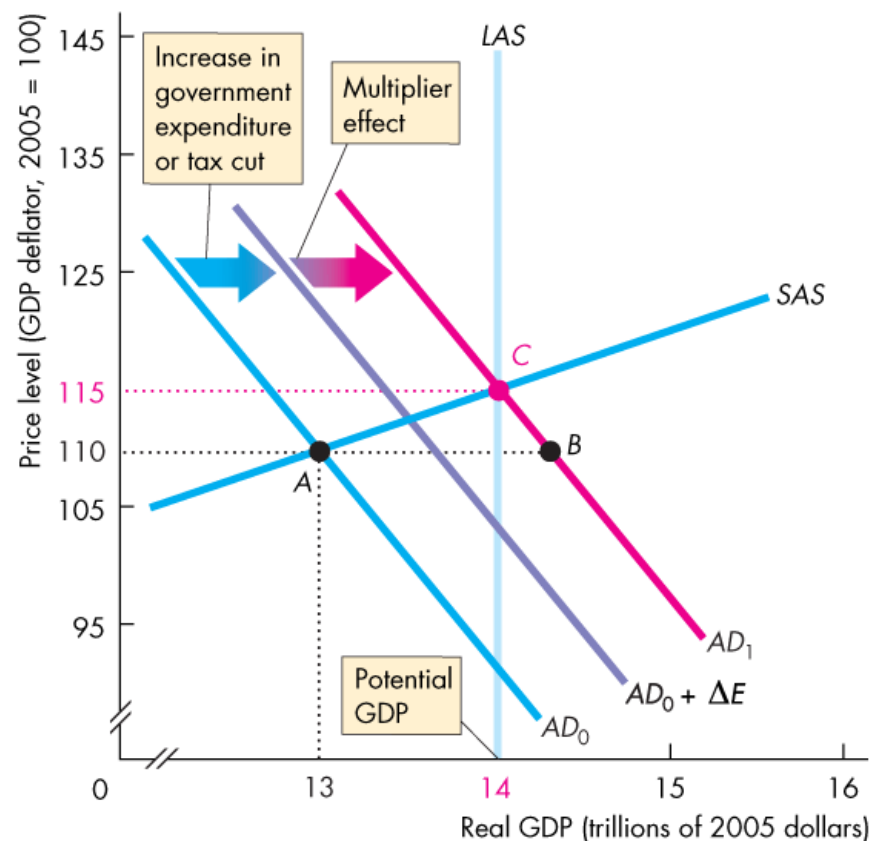
Fiscal Stimulus

Graphical Illustration of Fiscal Stimulus

Figure 30.11 shows how fiscal policy is supposed to work to close a recessionary gap.

An increase in government expenditure or a tax cut increases aggregate demand.

The multiplier process increases aggregate demand.



Fiscal Stimulus

Fiscal Stimulus and Aggregate Supply

Taxes drive a wedge between the cost of labor and the take-home pay and between the cost of borrowing and the return on lending.

Taxes decrease employment, saving, and investment and decrease real GDP and its growth rate.

A tax cut decreases these negative effects and increases real GDP and its growth rate.

The supply-side effects of a tax cut probably dominate the demand-side effects and make the multiplier larger than the government expenditure multiplier.

Fiscal Stimulus

Magnitude of Stimulus

Economists have diverging views about the *size* of the fiscal multipliers because there is insufficient empirical evidence on which to pin their size with accuracy.

This fact makes it impossible for Congress to determine the amount of stimulus needed to close a given output gap.

Also, the actual output gap is not known and can only be estimated with error.

So discretionary fiscal policy is risky.

Fiscal Stimulus

Time Lags

The use of discretionary fiscal policy is also seriously hampered by three time lags:

- Recognition lag—the time it takes to figure out that fiscal policy action is needed.
- Law-making lag—the time it takes Congress to pass the laws needed to change taxes or spending.
- Impact lag—the time it takes from passing a tax or spending change to its effect on real GDP being felt.