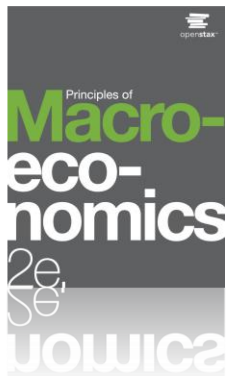
PRINCIPLES OF MACROECONOMICS 2e

Chapter 17 Government Budgets and Fiscal Policy

PowerPoint Image Slideshow



CH.17 OUTLINE

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17.4: Using Fiscal Policy to Fight Recession, Unemployment, and Inflation

17.5: Automatic Stabilizers

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Shut Downs and Parks

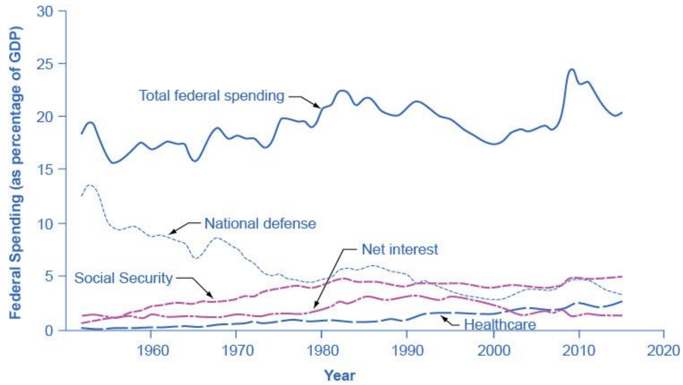
- Yellowstone National Park is one of the many national parks forced to close down during the government shutdown in October 2013.

(Credit: modification of work by “daveynin”/flickr Creative Commons)

17.1 Government Spending

- **Budget deficit** - when the federal government spends more money than it receives in taxes in a given year.
- **Budget surplus** - when the government receives more money in taxes than it spends in a year.
- **Balanced budget** - when government spending and taxes are equal.
- Major federal spending categories:
    - national defense
    - Social Security
    - health programs
    - interest payments

Federal Spending, 1960–2014

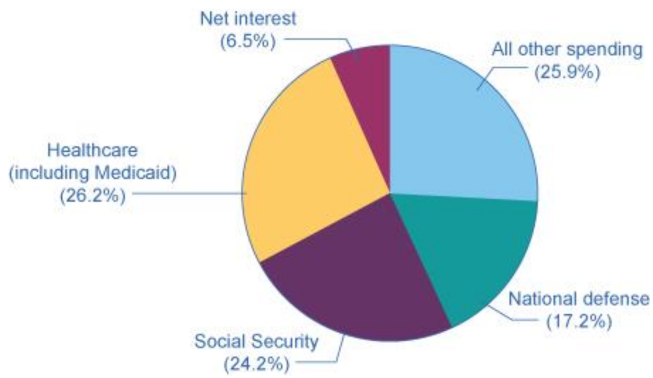


- Since 1960, total federal spending has ranged from about 18% to 22% of GDP, although it climbed above that level in 2009, but quickly dropped back down to that level by 2013.
- The share that the government has spent on national defense has generally declined, while the share it has spent on Social Security and on healthcare expenses (mainly Medicare and Medicaid) has increased. (Source: Economic Report of the President, Tables B-2 and B-22, http://www.gpo.gov/fdsys/pkg/ERP-2014/content-detail.html)

Deficit vs Debt

- The deficit is *not* the debt.
- The government deficit (or surplus) refers to what happens with the federal government budget *each year*.
- The government debt is *accumulated over time* and is the sum of all past deficits and surpluses.

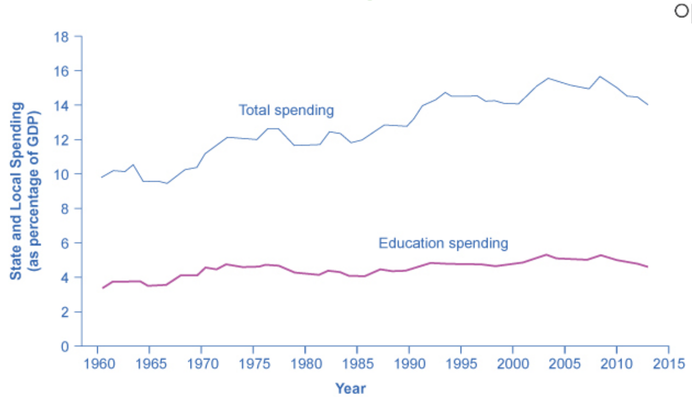
Slices of Federal Spending, 2014



- About 73% of government spending goes to four major areas: national defense, Social Security, healthcare, and interest payments on past borrowing.
- This leaves about 29% of federal spending for all other functions of the U.S. government.

(Source: https://www.whitehouse.gov/omb/budget/Historicals/)

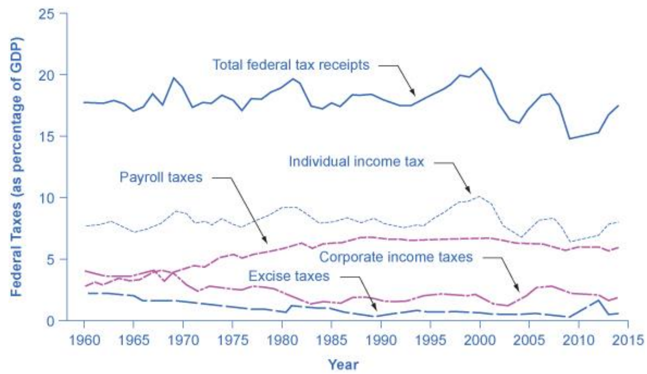
State and Local Spending, 1960–2013



- Spending by state and local government increased from about 10% of GDP in the early 1960s to 14–16% by the mid-1970s.
- It has remained at roughly that level since.
- The single biggest spending item is education, including both K–12 spending and support for public colleges and universities, which has been about 4–5% of GDP in recent decades.

(Source: Bureau of Economic Analysis.)

17.2 Taxation



- Federal tax revenues have been about 17–20% of GDP during most periods in recent decades.
- The primary sources of federal taxes are individual income taxes and the payroll taxes that finance Social Security and Medicare.
- Corporate income taxes and social insurance taxes provide smaller shares of revenue. (Source: Economic Report of the President, 2015. Table B-21, https://www.whitehouse.gov/administration/eop/cea/ economic-report-of-the-President/2015)

Taxes Collected by the Federal Government

- **Individual income tax** - a tax based on the income, of all forms, received by individuals.
- **Payroll tax** - a tax based on the pay received from employers.
  - These taxes provide funds for Social Security and Medicare.
- **Progressive tax** - a tax that collects a greater share of income from those with high incomes than from those with lower incomes.
  - What the U.S. income tax is.

Taxes Collected by the Federal Government, Continued

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- **Marginal tax rate** - the tax rate an individual would pay on one additional dollar of income; the tax percentage on the last dollar earned. Currently ranges from 10% to 35%.
  - Example: Using the table below, if a person earns $35,000, their marginal tax rate is 15%.

Income bracket	Tax rate
$0 - $9,075	10%
$9,075 - $36,900	15%
$36,900+	25%

Taxes Collected by the Federal Government, Continued

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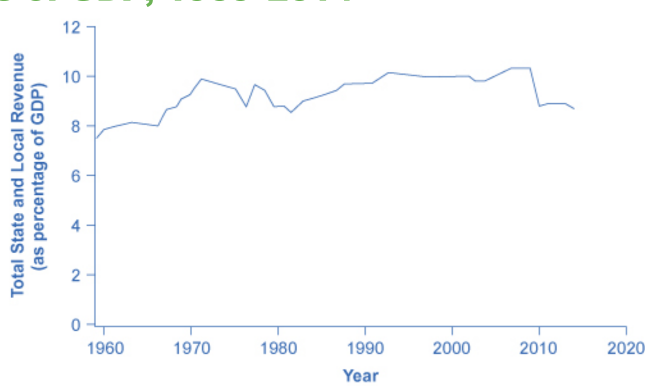
- **Proportional tax** - a tax that is a flat percentage of income earned, regardless of level of income.
- **Regressive tax** - a tax in which people with higher incomes pay a smaller share of their income in tax.
- **Corporate income tax** - a tax imposed on corporate profits.
- **Excise tax** - a tax on a specific good, like on gasoline, tobacco, and alcohol.
- **Estate and gift tax** - a tax on people who pass assets to the next generation - either after death or during life in the form of gifts.

State and Local Taxes

- The revenue sources for state and local governments are:
  - sales taxes,
  - property taxes,
  - revenue passed along from the federal government,
  - personal and corporate income taxes,
  - a variety of fees and charges.

State and Local Tax Revenue as a Share of GDP, 1960–2014



- State and local tax revenues have increased to match the rise in state and local spending.
  (Source: *Economic Report of the President, 2015*. Table B-21, https://www.whitehouse.gov/administration/eop/cea/economic-report-of-the-President/2015)

17.3 Federal Deficits and the National Deb

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- Annual budget deficit (or surplus) - the difference between the tax revenue collected and spending over a fiscal year.
  - Fiscal year starts October 1 and ends September 30 of the next year.
- The budget deficit refers to how much the government has borrowed in *one particular year*.
- **National debt** - the total accumulated amount the government has borrowed, over time, and not yet paid back.
  - The dollar value of all the outstanding Treasury bonds on which the federal government owes money.

Pattern of Federal Budget Deficits and Surpluses, 1929–2014

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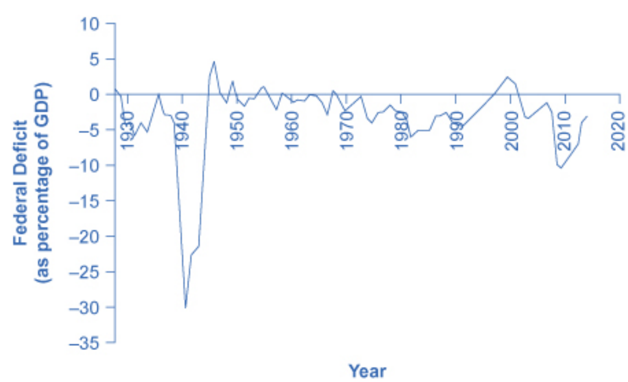

- The federal government has run budget deficits for decades.
- The budget was briefly in surplus in the late 1990s, before heading into deficit again in the first decade of the 2000s - and especially deep deficits in the 2008-2009 recession.
  (Source: Federal Reserve Bank of St. Louis (FRED). http://research.stlouisfed.org/fred2/series/FYFSGDA188S)

Federal Debt as a Percentage of GDP, 1942–2014

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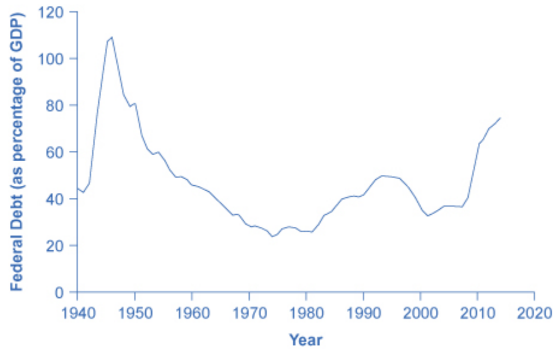

- Federal debt is the sum of annual budget deficits and surpluses.
- Annual deficits do not always mean that the debt/GDP ratio is rising.
- During the 1960s and 1970s, the government often ran small deficits, but since the debt was growing more slowly than the economy, the debt/GDP ratio was declining over this time.
- In the 2008–2009 recession, the debt/GDP ratio rose sharply. (Source: Economic Report of the President, Table B-20, http://www.gpo.gov/fdsys/pkg/ERP-2015/content-detail.html)

Total Government Spending and Taxes as a Share of GDP, 1990–2014

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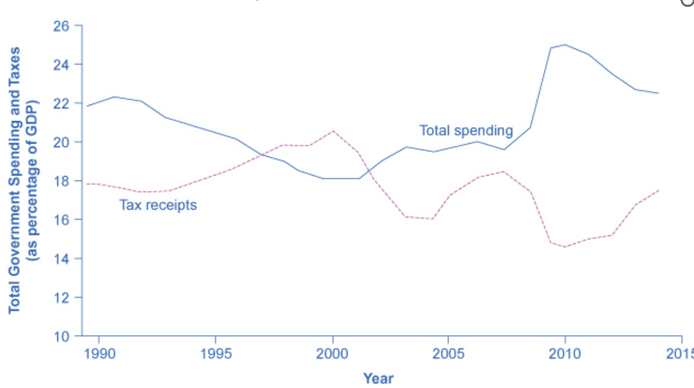
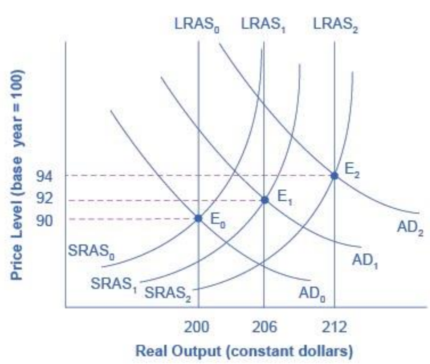


- When government spending exceeds taxes, the gap is the budget deficit.
- When taxes exceed spending, the gap is a budget surplus.
- The recessionary period starting in late 2007 saw higher spending and lower taxes, combining to create a large deficit in 2009. (Source: Economic Report of the President, Tables B-21 and B-1,"http://www.gpo.gov/fdsys/pkg/ERP-2015/ content-detail.html)

17.4 Using Fiscal Policy to Fight Recession, Unemployment, and Inflation

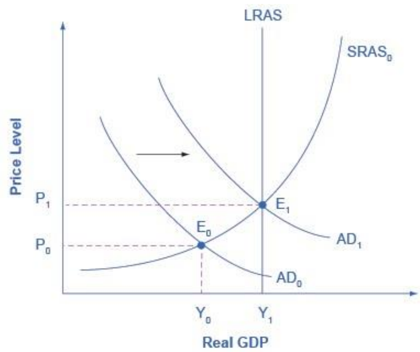
- Fiscal policy is the use of government spending and tax policy to influence the path of the economy over time.
- **Expansionary fiscal policy** - fiscal policy that increases the level of aggregate demand, either through increases in government spending or cuts in taxes.
- **Contractionary fiscal policy** - fiscal policy that decreases the level of aggregate demand, either through cuts in government spending or increases in taxes.

A Healthy, Growing Economy



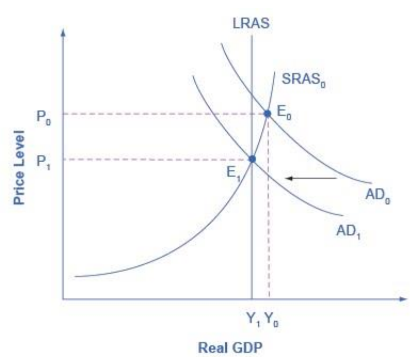
- In this well-functioning economy, each year aggregate supply and aggregate demand shift to the right so that the economy proceeds from equilibrium E_0 to E_1 to E_2.
- Each year, the economy produces at potential GDP with only a small inflationary increase in the price level.
- However, if aggregate demand does not smoothly shift to the right and match increases in aggregate supply, growth with deflation can develop.

Expansionary Fiscal Policy, Illustrated



- The original equilibrium (E_0) represents a recession, occurring at a quantity of output (Y_0) below potential GDP.
- However, a shift of aggregate demand from AD_0 to AD_1, enacted through an expansionary fiscal policy, can move the economy to a new equilibrium output of E_1 at the level of potential GDP which the LRAS curve shows.
- Since the economy was originally producing below potential GDP, any inflationary increase in the price level from P_0 to P_1 that results should be relatively small.

Contractionary Fiscal Policy, Illustrated



- The economy starts at the equilibrium quantity of output Y_0, which is above potential GDP.
- The extremely high level of aggregate demand will generate inflationary increases in the price level.
- A contractionary fiscal policy can shift aggregate demand down from AD_0 to AD_1, leading to a new equilibrium output E_1, which occurs at potential GDP, where AD_1 intersects the LRAS curve.

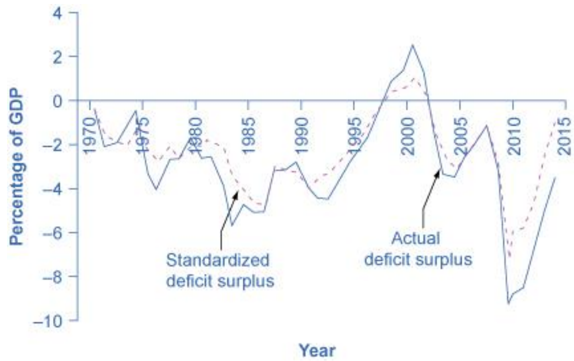
17.5 Automatic Stabilizers

- **Discretionary fiscal policy -** the government passes a new law that explicitly changes overall tax or spending levels with the intent of influencing the level of overall economic activity.
  - The 2009 stimulus package is an example.
- **Automatic stabilizers -** tax and spending rules that have the effect of slowing down the rate of decrease in aggregate demand when the economy slows down and restraining aggregate demand when the economy speeds up, without any additional change in legislation.
  - Examples are unemployment insurance and food stamps.

The Standardized Employment Deficit or Surplus

- **Standardized employment budget -** the budget deficit or surplus in any given year adjusted for what it would have been if the economy were producing at potential GDP.
  - If people who look for work were finding jobs and businesses were making normal profits.
  - Eliminates the impact of the automatic stabilizers.

Comparison of Actual Budget Deficits with Standardized Employment Deficit



- When the economy is in recession, the standardized employment budget deficit is less than the actual budget deficit because the economy is below potential GDP, and the automatic stabilizers are reducing taxes and increasing spending.

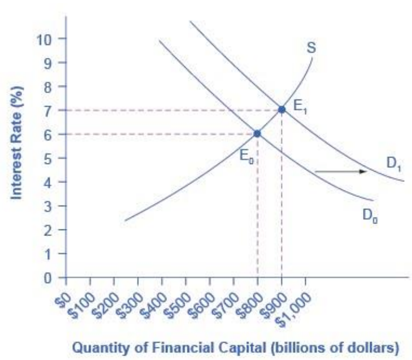
Comparison of Actual Budget Deficits with Standardized Employment Deficit, Cont.

- When the economy is performing extremely well, the standardized employment deficit (or surplus) is higher than the actual budget deficit (or surplus) because the economy is producing about potential GDP, so the automatic stabilizers are increasing taxes and reducing the need for government spending. (Sources: Actual and Cyclically Adjusted Budget Surpluses/Deficits, http://www.cbo.gov/publication/43977; and Economic Report of the President, Table B-1, http://www.gpo.gov/fdsys/pkg/ERP-2013/content-detail.html)

17.6 Practical Problems with Discretionary Fiscal Policy

- Fiscal policy and monetary policy are interconnected.
- **Crowding out** - where government borrowing and spending results in higher interest rates, which reduces business investment and household consumption.

Fiscal Policy and Interest Rates Example



- When a government borrows money in the financial capital market, it causes a shift in the demand for financial capital from D_0 to D_1.
- As the equilibrium moves from E_0 to E_1, the equilibrium interest rate rises from 6% to 7%.
- In this way, an expansionary fiscal policy intended to shift aggregate demand to the right can also lead to a higher interest rate, which has the effect of shifting aggregate demand back to the left.

Long and Variable Time Lags

- It can take time to enact fiscal policy.
- **Recognition lag** - the time it takes to determine that a recession has occurred.
- **Legislative lag** - the time it takes to get a fiscal policy bill passed.
- **Implementation lag -** the time it takes for the funds relating to fiscal policy to be dispersed to the appropriate agencies to implement the programs.

17.7 The Question of a Balanced Budget

- Discussion Question: What are the arguments for and against requiring the U.S. federal budget to be balanced?
- In the short term, economists would expect the budget deficits and surpluses to fluctuate up and down with the economy and the automatic stabilizers.
  - Recessions -> larger deficits or smaller surpluses.
  - Economic booms -> smaller deficits or larger surpluses.
- In the long-term, running large budget deficits, through long-term investments in human capital and physical infrastructure could build the country's long-term productivity.
  - This could not be done with a required balanced budget.