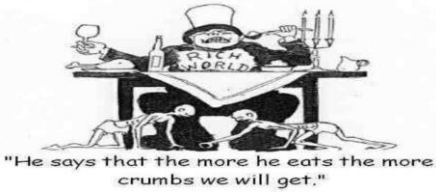


# Chapter 15 - Government Spending and its Financing

## Chapter 15 - Government Spending and its Financing

### The Republican Trickle-Down Theory



## The Government Budget: Some Facts and Figures

- Government outlays; three categories of government expenditures
  - Government purchases ( $G$ )
  - Transfer payments ( $TR$ )
  - Net interest payments ( $INT$ )
- Also: Subsidies less surpluses of government enterprises; relatively small, so we ignore it

15 - 2

## The Government Budget: Some Facts and Figures

- Deficits and surpluses
  - When outlays exceed revenues, there is a deficit; when revenues exceed outlays, there is a surplus
  - Formally, deficit = outlays - tax revenues
 
$$= [\text{government purchases} + \text{transfers} + \text{net interest}] - \text{tax revenues}$$

$$= (G + TR + INT) - T \quad (15.1)$$

15 - 3

## Government Spending, Taxes, and the Macroeconomy

- Fiscal policy and aggregate demand
  - An increase in government purchases increases aggregate demand by shifting the  $IS$  curve up
  - The effect of tax changes depends on the economic model
    - Classical economists accept the Ricardian equivalence proposition that lump-sum tax changes have no effect on national saving or on aggregate demand
    - Keynesians think a tax cut is likely to increase consumption and decrease saving, thus increasing aggregate demand

15 - 4

## Government Spending, Taxes, and the Macroeconomy

- Fiscal policy and aggregate demand
  - Classical and Keynesians disagree about using fiscal policy to stabilize the economy
    - Classical economists oppose activist policy while Keynesians favor it
    - But even Keynesians admit that fiscal policy is difficult to use
      - There is a lack of flexibility, because much of government spending is committed years in advance
      - There are long time lags, because the political process takes time to make changes

15 - 5

## Government Spending, Taxes, and the Macroeconomy

- Fiscal policy and aggregate demand
  - Automatic stabilizers and the full-employment deficit
    - Automatic stabilizers cause fiscal policy to be countercyclical by changing government spending or taxes automatically
    - One example is unemployment insurance, which causes transfers to rise in recessions
    - The most important automatic stabilizer is the income tax system, since people pay less tax when their incomes are low in recessions, and they pay more tax when their incomes are high in booms

15 - 6

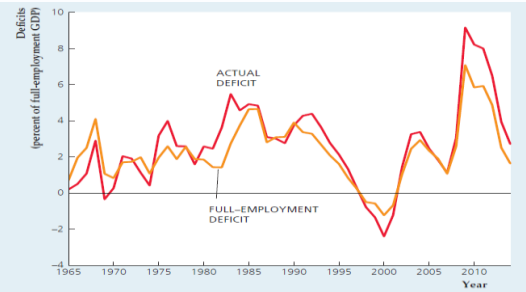
# Chapter 15 - Government Spending and its Financing

## Government Spending, Taxes, and the Macroeconomy

- Fiscal policy and aggregate demand
  - Because of automatic stabilizers, the government budget deficit rises in recessions and falls in booms
    - The full-employment deficit is a measure of what the government budget deficit would be if the economy were at full employment
    - So the full-employment deficit doesn't change with the business cycle, only with changes in government policy regarding spending and taxation
    - The actual budget deficit is much larger than the full-employment budget deficit in recessions (Fig. 15.5)

15 - 7

**Figure 15.5: Full-employment and actual budget deficits, 1962–2014**



Source: Congressional Budget Office.

15 - 8

## Government Spending, Taxes, and the Macroeconomy

- Government capital formation
  - Fiscal policy affects the economy through the formation of government capital—long-lived physical assets owned by the government, like roads, schools, and sewer systems
  - Also, fiscal policy affects human capital formation through expenditures on health, nutrition, and education

15 - 9

## Government Spending, Taxes, and the Macroeconomy

- Incentive effects of fiscal policy
  - Average versus marginal tax rates
    - Example: Suppose taxes are imposed at a rate of 25% on income over \$10,000 (Table 15.3)
      - For someone earning less than \$10,000, the marginal tax rate and average tax rate are both zero
      - Anyone earning over \$10,000 would have a marginal tax rate of .25

15 - 10

## Government Spending, Taxes, and the Macroeconomy

- Incentive effects of fiscal policy
  - Average versus marginal tax rates
    - The distinction between average and marginal tax rates affects people's decisions about how much labor to supply
      - If the average tax rate increases, with the marginal tax rate held constant, a person will increase labor supply
      - The higher average tax rate causes an income effect
      - With lower income, a person consumes less and wants less leisure, so he or she works more
      - The labor supply curve shifts right

15 - 11

## Government Spending, Taxes, and the Macroeconomy

- Incentive effects of fiscal policy
  - Average versus marginal tax rates
    - If the marginal tax rate increases, with the average tax rate held constant, a person will decrease labor supply
      - The higher marginal tax rate causes a substitution effect
      - With a lower after-tax reward for working, a person wants to work less
      - The labor supply curve shifts left

15 - 12

# Chapter 15 - Government Spending and its Financing

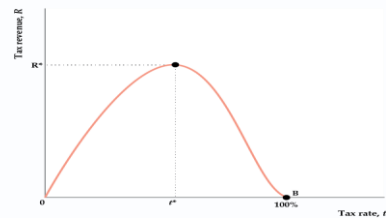
## Government Spending, Taxes, and the Macroeconomy

- Application: Supply-side economics
  - Congress reduced tax rates twice in the 1980s
    - At the beginning of the decade the highest marginal tax rate on labor income was 50%
    - The 1981 tax act (ERTA) reduced tax rates in three stages, phased in until 1984
    - The tax reform of 1986 further reduced personal tax rates, dropping the top marginal tax rate to 28%
  - Supply-side economists promoted the tax rate reductions, arguing that labor supply, saving, and investment would all increase substantially

15 - 13

Figure 15.6: The Laffer Curve

Application: Supply-side economics  
If tax cuts caused labor supply to increase enough, tax revenues might rise, rather than declining



15 - 14

## Government Spending, Taxes, and the Macroeconomy

- Application: Supply-side economics
  - If the current tax rate is beyond the peak of the Laffer curve, then a cut in tax rates will cause tax revenue to increase, rather than to decline
  - The data suggest that although labor supply is affected by tax rates, the response is not large
  - Overall, it appears that the U.S. economy was on the left side of the Laffer curve
  - As a result, tax cuts cause tax revenue to decline, and tax increases cause tax revenue to rise

15 - 15

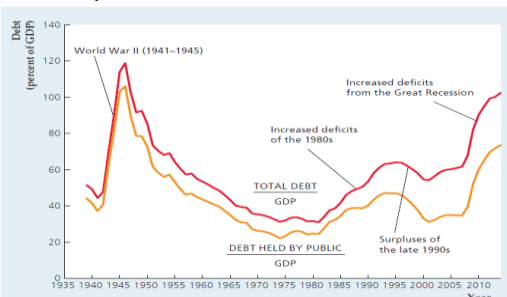
## Government Deficits and Debt

**The deficit is the difference between expenditures and revenues in any fiscal year**  
**The debt is the total value of outstanding government bonds on a given date**

- The growth of the government debt
  - A useful measure of government's indebtedness that accounts for the ability to pay off the debt is the debt-GDP ratio
    - The U.S. debt-GDP ratio (Fig. 15.7) fell from over 100 after World War II to a low point in the mid-1970s
    - From 1979 to 1995, the debt-GDP ratio rose significantly, but it fell from 1995 to 2001, then began to rise in 2002 and grew dramatically in the Great Recession

15 - 16

Figure 15.7: Ratio of Federal debt to GDP, 1939–2014



Source: Economic Report of the President, downloaded from Federal Reserve Bank of St. Louis FRED database, variables FYGDPUB (publicly held debt), FYGFD (gross debt), GDP (GDP).

15 - 17

## Government Deficits and Debt

- Application: Social Security: How can it be fixed?
  - The Social Security system may not be able to pay future promised benefits
  - The system is mostly pay as you go, so that most taxes collected today go to paying benefits to current retirees—there is only a small trust fund

15 - 18

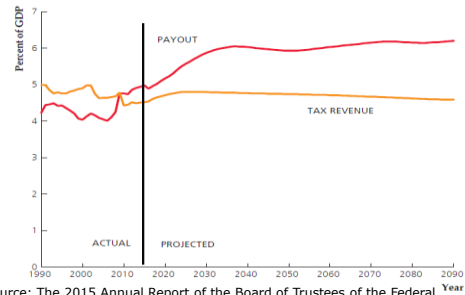
# Chapter 15 - Government Spending and its Financing

## Government Deficits and Debt

- Application: Social Security: How can it be fixed?
  - The pay-as-you-go system worked as long as the number of workers greatly exceeded the number of retirees, but demographic changes will soon decrease the ratio of workers to retirees
  - The result will be payouts in excess of tax revenue (Fig. 15.8)

15 - 19

**Figure 15.8: Social security payout and tax revenue as a percent of GDP, 1990–2090**



Source: The 2015 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, available at [www.socialsecurity.gov/OACT/TR/2015/tr6g4.html](http://www.socialsecurity.gov/OACT/TR/2015/tr6g4.html). 15 - 20

## Government Deficits and Debt

- Application: Social Security: How can it be fixed?
  - Fixing the social security system
    - Increase tax revenue by raising taxes, but this distorts labor supply decisions
    - Increase the rate of return by investing in the stock market, but this is risky
    - Reduce benefits by increasing retirement age

15 - 21

## Government Deficits and Debt

- The burden of the government debt on future generations
  - People worry that their children will have to pay back the debt that past generations have accumulated
  - To the extent that U.S. citizens own government bonds, future generations will just be paying themselves; but now more than half of U.S. debt is owned by foreigners, so this argument is no longer valid

15 - 22

## Government Deficits and Debt

- The burden of the government debt on future generations
  - However, there could be a burden, because if tax rates have to be raised in the future to pay off the debt, the higher tax rates could be distortionary
  - Also, since bondholders are richer on average than nonbondholders, when the debt was repaid there would be a large transfer from the poor to the rich

15 - 23

## Government Deficits and Debt

- The burden of the government debt on future generations
  - Finally, government deficits reduce national saving according to many economists
    - If so, with lower saving there will be lower investment
    - Lower investment means a smaller capital stock
    - A smaller capital stock means less output in the future
    - So the future standard of living will be lower
    - However, this assumes that government deficits reduce national saving; that is a key and unsettled question

15 - 24