Ch 16. Government Debt and Budget Deficits

Macroeconomics, 7th ed.

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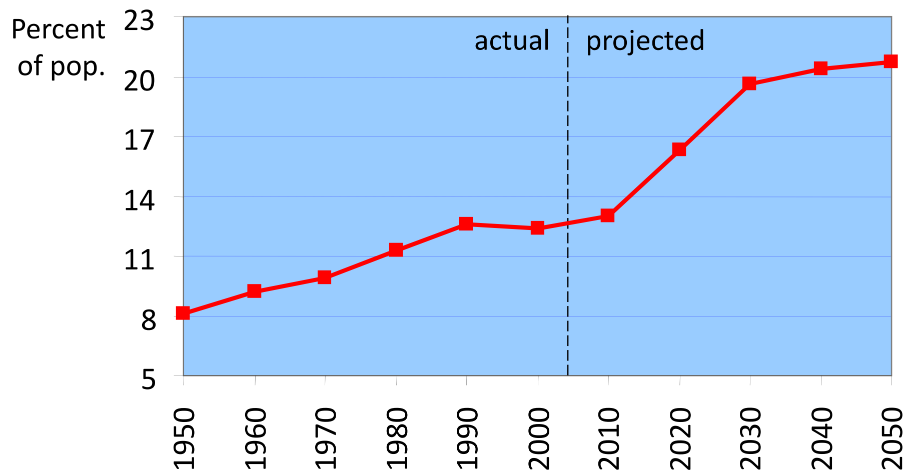
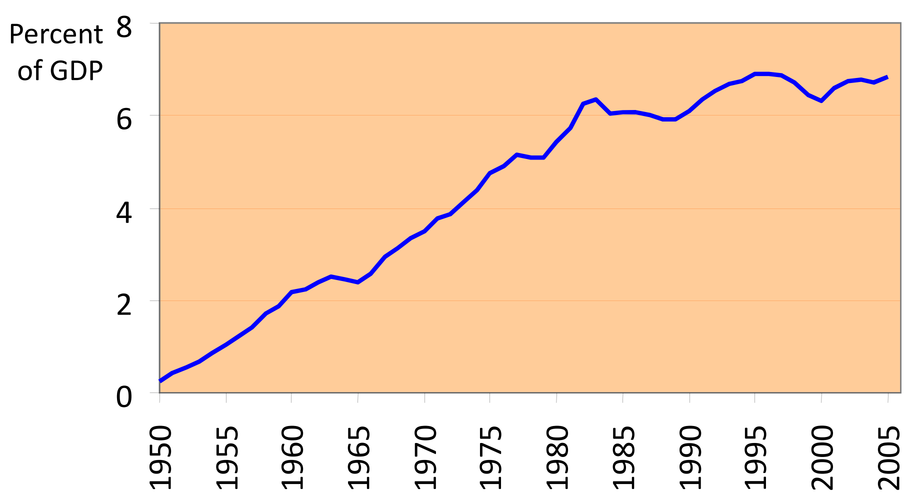
The troubling long-term fiscal outlook

- The U.S. population is aging.
- Health care costs are rising.
- Spending on entitlements like Social Security and Medicare is growing.
- Deficits and the debt are projected to significantly increase…

Percent of U.S. population age 65+



U.S. government spending on Medicare and Social Security



Problems measuring the deficit

1. Inflation
2. Capital assets
3. Uncounted liabilities
4. The business cycle

MEASUREMENT PROBLEM 1:

Inflation

- Suppose the real debt is constant, which implies a zero real deficit.
- In this case, the nominal debt $\boldsymbol{D}$ grows at the rate of inflation:

  $\Delta \boldsymbol{D}/\boldsymbol{D} = \pi$ or $\Delta \boldsymbol{D} = \pi \boldsymbol{D}$
- The reported deficit (nominal) is $\pi \boldsymbol{D}$ even though the real deficit is zero.
- Hence, should subtract $\pi \boldsymbol{D}$ from the reported deficit <u>to correct for inflation</u>.

MEASUREMENT PROBLEM 1:

Inflation

- Example: In 2010,

  nominal deficit = $600 billion

  inflation = 3.0%

  debt = $15 trillion

  πD = 0.03 × $15000b = $450b

  real deficit = $600b – $450b = $150b deficit

- What if inflation = -1.0% ?

MEASUREMENT PROBLEM 2:

Capital Assets

- Currently, deficit = change in debt
- Better, **capital budgeting:**
  deficit = (change in debt) – (change in assets)
- EX: Suppose govt sells an office building and uses the proceeds to pay down the debt.
  - under current system, deficit would fall
  - under capital budgeting, deficit unchanged, because fall in debt is offset by a fall in assets.
- Problem w/ cap budgeting: Determining which govt expenditures count as capital expenditures.

CASE STUDY:
Accounting for TARP

- Troubled Asset Relief Program (TARP):
  - The U.S. Treasury gave money to help struggling banks.
  - In return, the Treasury became part owner of the banks, will receive dividends, will eventually relinquish ownership when banks repay principal.

CASE STUDY:
Accounting for TARP

- Should the TARP outlays count toward the deficit?
  - The U.S. Treasury considered TARP outlays to be expenditures that increased the deficit, and will consider bank repayments as revenues that will reduce the deficit.
  - Congressional Budget Office (CBO) counted the net present value of the program – outlays minus eventual repayments – adjusted for the risk of non-repayment. This works out to 25 cents for each dollar spend on TARP.

More recent news on TARP

- The Treasury now estimates that over the next 10 years TARP will cost $141 billion at most, down from the $341 billion the White House projected in August.
  - The reduction stems in large part from faster-than-expected repayments by some of the nation's largest banks, as well as less spending on programs to help shore up the financial sector.
- (Altogether, it invested $204 billion in 690 firms.)

MEASUREMENT PROBLEM 3:

Uncounted liabilities

- Current measure of deficit omits important liabilities of the government:
  - future pension payments owed to current govt workers*
  - future Social Security payments
  - contingent liabilities, *e.g.*, covering federally insured deposits when banks fail, mortgages for low-income families, student loans, etc

    (Hard to attach a dollar value to contingent liabilities, due to inherent uncertainty.)

MEASUREMENT PROBLEM 4:
The business cycle

- The deficit varies over the business cycle due to automatic stabilizers (unemployment insurance, the income tax system). It rises during recessions and falls during booms
- These are not measurement errors, but do make it harder to judge fiscal policy stance.
  - *E.g.*, is an observed increase in deficit due to a downturn or an expansionary shift in fiscal policy?

MEASUREMENT PROBLEM 4:
The business cycle

- Solution: **cyclically adjusted budget deficit** (aka "full-employment deficit") – based on estimates of what govt spending & revenues would be if economy were at the natural rates of output & unemployment.

Is the govt debt really a problem?

Consider a tax cut with corresponding increase in the government debt. (no change in G)

Two viewpoints:

1. Traditional view
2. Ricardian view

The traditional view

- Short run: $\uparrow \boldsymbol{Y}$, $\downarrow \boldsymbol{u}$
  - *IS-LM Model for a closed economy:* $\uparrow \boldsymbol{Y}$, $\uparrow \boldsymbol{r}$
  - *IS-LM Model for an open economy:* $\uparrow \boldsymbol{Y}$, $\uparrow \mathrm{E}$
- Long run:
  - ***Y*** and ***u*** back at their natural rates
  - closed economy: $\uparrow \boldsymbol{r}$, $\downarrow \boldsymbol{I}$
  - open economy: $\uparrow \boldsymbol{\varepsilon}$, $\downarrow \boldsymbol{NX}$
    (or higher trade deficit)
- Very long run:
  - slower growth until economy reaches new steady state with lower income per capita and more foreign debt

The Ricardian view

- due to David Ricardo (1820),
  more recently advanced by Robert Barro
- According to **Ricardian equivalence**,
  a debt-financed tax cut has no effect on consumption, national saving, the real interest rate, investment, net exports, or real GDP, even in the short run.

The logic of **Ricardian Equivalence**

- Consumers are forward-looking, know that a debt-financed tax cut today implies an increase in future taxes that is equal – in present value – to the tax cut.
- The tax cut does not make consumers better off, so they do not increase consumption spending.

  Instead, they save the full tax cut in order to repay the future tax liability.
- Result: Private saving rises by the amount public saving falls, leaving national saving (= Y-C-G) unchanged.

Problems with **Ricardian Equivalence**

- **Myopia**: Not all consumers think so far ahead, some see the tax cut as a windfall.
- **Borrowing constraints**: Some consumers cannot borrow enough to achieve their optimal consumption, so they spend a tax cut.
- **Future generations**: If consumers expect that the burden of repaying a tax cut will fall on future generations, then a tax cut now makes them feel better off, so they increase spending.

Evidence against **Ricardian Equivalence**?

Early 1980s:
Reagan tax cuts increased deficit.
National saving fell, real interest rate rose, exchange rate appreciated, and ***NX*** fell.

1992:
Income tax withholding reduced to stimulate economy.
- This delayed taxes but didn't make consumers better off.
- Almost half (43%) of consumers increased consumption.

Evidence against **Ricardian Equivalence**?

- Proponents of R.E. argue that the Reagan tax cuts did not provide a fair test of R.E.
  - Consumers may have expected the debt to be repaid with future spending cuts instead of future tax hikes.
  - Private saving may have fallen for reasons other than the tax cut, such as optimism about the economy.
- Because the data is subject to different interpretations, both views of govt debt survive.

OTHER PERSPECTIVES: **Balanced budgets vs. optimal fiscal policy**

- Some politicians have proposed amending the U.S. Constitution to require balanced federal govt budget every year.
- Many economists reject this proposal, arguing that deficit should be used to:
  - stabilize output & employment
  - smooth taxes in the face of fluctuating income
  - redistribute income across generations when appropriate

OTHER PERSPECTIVES:

Fiscal effects on monetary policy

- Govt deficits may be financed by printing money
- A high govt debt may be an incentive for policymakers to create inflation (to reduce real value of debt at expense of bond holders)

Fortunately:

- little evidence that the link between fiscal and monetary policy is important
- most governments know the folly of creating inflation
- most central banks have (at least some) political independence from fiscal policymakers

OTHER PERSPECTIVES:

Debt and politics

"Fiscal policy is not made by angels…"

– N. Gregory Mankiw, p.487

- Some do not trust policymakers with deficit spending. They argue that:
  - policymakers do not worry about true costs of their spending, since burden falls on future taxpayers
  - since future taxpayers cannot participate in the decision process, their interests may not be taken into account
- This is another reason for the proposals for a balanced budget amendment.

OTHER PERSPECTIVES:

International dimensions

- Govt budget deficits can lead to trade deficits, which must be financed by borrowing from abroad. (Twin deficits)
- Large govt debt may increase the risk of capital flight, as foreign investors may perceive a greater risk of default.
- Large debt may reduce a country's political clout in international affairs.

The Taylor's Monetary-Policy Rule

$$i_t = \pi_t + r + \theta(\pi_t - \pi_t^*) + \phi(\bar{Y}_t - Y_t)/\bar{Y}_t$$

nominal interest rate, set each period by the central bank

central bank's inflation target

natural rate of interest

The Taylor Rule

$$i_t = \pi_t + r + \theta(\pi_t - \pi_t^*) + \phi(\bar{Y}_t - Y_t)/\bar{Y}_t$$

measures how much the central bank adjusts the interest rate when inflation deviates from its target

measures how much the central bank adjusts the interest rate when output deviates from its natural rate

CASE STUDY
The Taylor Rule

- Economist John Taylor proposed a monetary policy rule very similar to ours:

$$\boldsymbol{i}_{\text{ff}} = \boldsymbol{\pi} + 2 + 1.5(\boldsymbol{\pi} - 2) - 0.5(\text{GDP gap})$$

  where

  - $\boldsymbol{i}_{\text{ff}}$ = nominal federal funds rate target
  - GDP gap = 100 x $(\bar{Y} - Y)/\bar{Y}$

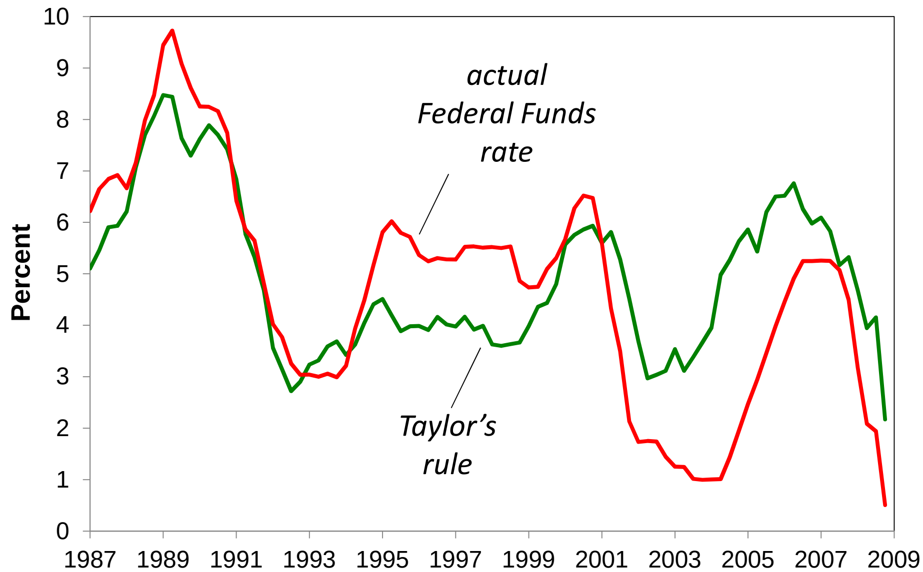
    = percent by which real GDP is below its natural rate

- Example:

  (a) GDP gap = 1%, target π = 2%, actual π = 3%. Find $\boldsymbol{i}_{\text{ff}}$.

  (b) GDP gap = -3%, target π = 2%, actual π = 5%. Find $\boldsymbol{i}_{\text{ff}}$.

CASE STUDY
Taylor Rule matches Fed policy fairly well….



Questions for Review (Ch 16)

- Describe four problems **a**ffecting <u>measurement of the govt budget deficit</u>.
- According to the <u>traditional view of govt debt</u>, how does a debt-financed tax cut affect public saving, private saving, and national saving?
- According to the <u>Ricardian view of govt debt</u>, how does a debt-financed tax cut affect public saving, private saving, and national saving?
- Give three reasons why a <u>budget deficit might be a good policy choice</u>.

Problem 16-3

- The Social Security system levies a tax on workers and pays benefits to the elderly. Suppose that Congress increases both the tax and the benefits. For simplicity, assume that Congress announces that the increase will last for one year only.

a. How do you suppose this change would affect the economy? (Hint: Think about the marginal propensities to consume of the young and the old.)

b. Does your answer depend on whether generations are altruistically linked?

Problem 16-4

- Some economists have proposed that the rule that the cyclically adjusted budget deficit always be balanced.

a. Compare this proposal to a strict balanced-budget rule. Which is preferable?

b. What problems do you see with the rule requiring a balanced cyclically adjusted budget?