The Global Economy

Fiscal Policy

American Recovery and Reinvestment Act

Spending		355.0b
Infrastructure & Science	111.0	
Protecting the Vulnerable	81.0	
Health Care	59.0	
Education & Training	53.0	
Energy	43.0	
Others	8.0	
Tax Cuts		432.0b
State & Local Tax Relief	144.0	
"Making Work Pay" Tax Credit	55.5	

Source: www.recovery.org

Tonight's questions

- What are the effects of an increase in government expenditures?
- What are the effects of a deficit–financed tax cut?
- Do large budget deficits imply high real interest rates in the future?

Introducing the Government

- What are the governments objectives?

- Budget constraint:

$$V_t + G_t + r_t B_t = T_t + (B_{t+1} - B_t)$$

Introducing the Government

- What is the impact on households budget constraint?

$$c_t + a_{t+1} = w_t L_t + V_t + a_t(1 + r_t) - T_t$$

- What about the commodity market?

$$Y_t = C_t + I_t + G_t$$

- The capital market?

$$K_{t+1} + B_{t+1} = a_{t+1}$$

Government Purchases

- Which kind of goods/services does the government provide (purchase)?
- How are the purchases financed?
  - Taxes or deficit?
  - If taxes, what kind of taxes?

Taxes

- Distortionary
  - All those we know of (income tax among them)
  - Income taxes have a negative effect on wages and interest rates
- Non–distortionary (lump–sum)
  - Examples: *Poll Tax* in the UK, *Europe Tax* in Italy
  - Have no effect on either wages or interest rates

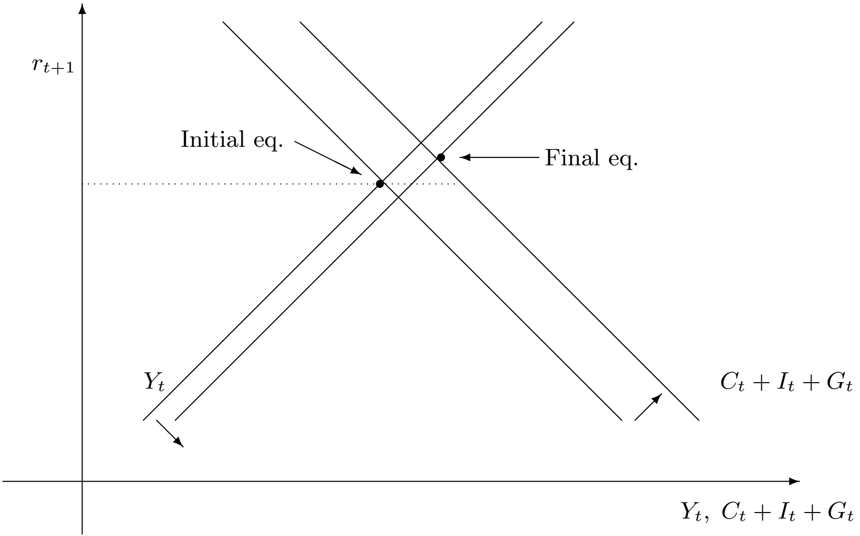
From the policy debate

Paul Krugman: ... The answer, almost surely, is good old Keynesian fiscal stimulus.

Now, the United States tried a fiscal stimulus in early 2008; both the Bush administration and congressional Democrats touted it as a plan to "jump-start" the economy. The actual results were, however, disappointing, for two reasons. First, the stimulus was too small, accounting for only about 1 percent of GDP. The next one should be much bigger, say, as much as 4 percent of GDP. Second, most of the money in the first package took the form of tax rebates, many of which were saved rather than spent. The next plan should focus on sustaining and expanding government spendingsustaining it by providing aid to state and local governments, expanding it with spending on roads, bridges, and other forms of infrastructure.

The New York Review of Books, December 18, 2008

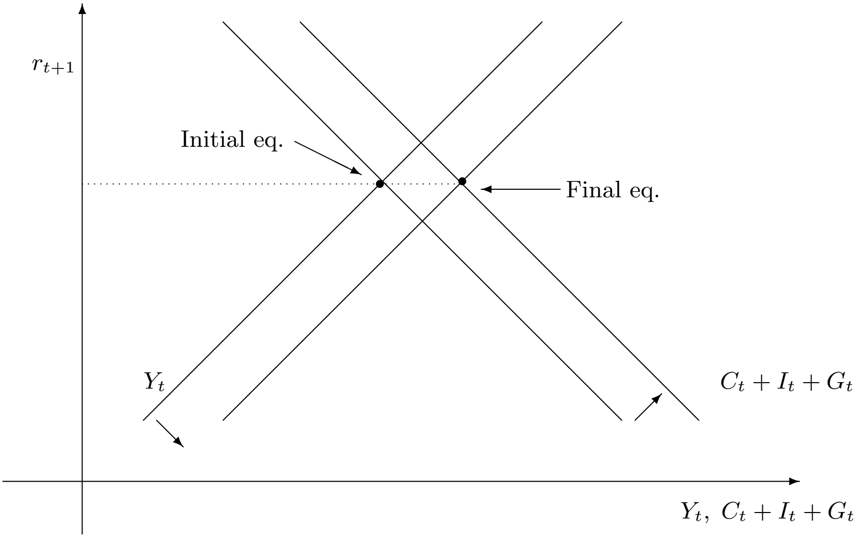
A temporary increase financed with lump–sum taxes



A temporary increase financed with lump–sum taxes

- GDP increases
- 1$ increase in government expenditures leads to a less than 1$ increase in aggregate demand. Why? Because there is partial crowding out of private consumption and investment.
- Are people better off? After all, private consumption drops and hours worked increase.
- The answer depends on:
  - What the government provides them with
  - Whether those goods/services are available on the market

A permanent increase financed with lump–sum taxes



A permanent increase financed with lump–sum taxes

- How does our analysis change if (as it is the case in reality), the government imposes distortionary taxes (e.g. income taxes)?
- Net wage: $w_t(1-\tau)$
- Net interest rate: $r_t(1-\tau)$
- Effects on labor supply?
- Effects on savings/capital supply?

Effects of war–related expenditures

	WWI (1915)	WWII (1947)	Korea (1950)
Excess military spending ($ billion)	81.4	645.3	146.3
Excess as % of trend real GNP	16.8	66.2	11.4
Excess of real GNP	13.7	405.7	101.9
Excess as % of trend real GNP	2.8	41.6	8.0
Ratio to excess military spending for the excess of			
Real GNP	0.17	0.63	0.70
Personal Consumption	–0.45	–0.08	-0.05
Gross Private Investment	–0.19	–0.16	–0.26
Excess of employment (millions)			
Total	2.1	8.4	1.5
Military Personnel	2.7	9.9	1.9
Civilian Employment	–0.6	–1.5	–0.4
Excess of total employment as % of trend value	5.3	14.8	2.4

From the media

www.cnn.com ... President Bush on Wednesday signed the Economic Stimulus Act of 2008, calling it a "booster shot" for the American economy.

..."The bill I'm signing today is large enough to have an impact, amounting to more than $152 billion this year, or about 1 percent of GDP," the president said in the brief ceremony in the East Room of the White House.

...The package also includes tax breaks for equipment purchases by businesses, as well as payments to disabled veterans and some senior citizens... The rebates will put about $120 billion in the hands of individuals in the hope that they will spend it and boost a faltering U.S. economy.

From the Policy Debate

Stephen Moore ... President Bush's tax cut has the potential to substantially increase economic growth, boost the stock market, and increase business investment. The jewel of the President's tax plan is the elimination of the dividend tax on individuals. Another key economic growth provision of the tax plan is the acceleration of income tax rate reductions. My estimates are that the tax plan, if fully implemented, would increase stock values immediately by 5% to 15% and would reduce the cost of capital for businesses by 10% – 30%, depending on the industry.

Cato Institute - March 18, 2003

A deficit–financed tax cut

- What are the effects of a deficit–financed tax rebate?
- Permanent income hypothesis: little effect on consumption expenditures.
- Empirical Evidence
  - Matthew Shapiro and Joel Slemrod
  -

A deficit–financed tax cut

- What are the effects of a cut in tax rates?
  - In the short–run it might have some positive effects on GDP (notice that the reason is completely different from what people ordinarily believe)
  - In the long–run most likely it has no effect

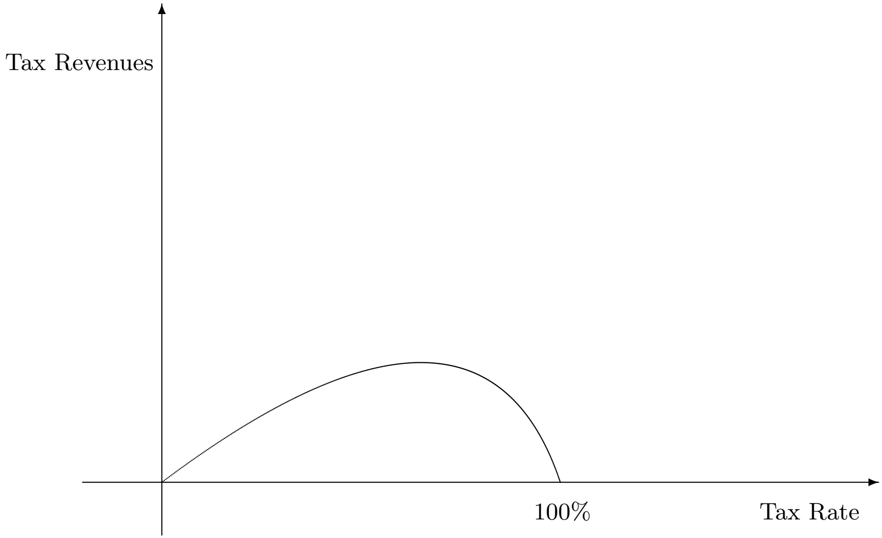
From the business press

The New York Times: When Ronald Reagan ran for President in 1980, he promised to cut taxes in what seemed, at the time, a magical way. Tax revenue would go up, not down, he said, as the economy boomed in response to lower rates.

Martin Feldstein, a Harvard economist that was the first chairman of President Reagan's Council of Economic Advisers and now support Senator McCain, estimates that a 10% tax cut would in fact reduce tax revenue – but only by 3 to 5 percent.

March 26, 2008

The Laffer Curve



The Laffer Curve

- United States: study on the Reagan tax cuts in 1982-84
  - Tax revenues increased only for taxpayers with gross incomes in excess of $ 200,000
  - Tax revenues decreased for all other taxpayers
  - Total effect: Tax revenues dropped
- Sweden: study in the early '80s
  - Highest income tax rate was 80%
  - Turning point of the Laffer curve was estimated to be at 70%

From the Policy Debate

Brookings Institution: The U.S. federal budget is on an unsustainable path... The scale of the nation's projected budgetary imbalances is now so large that the risk of severe adverse consequences must be taken very seriously, although it is impossible to predict when such consequences may occur

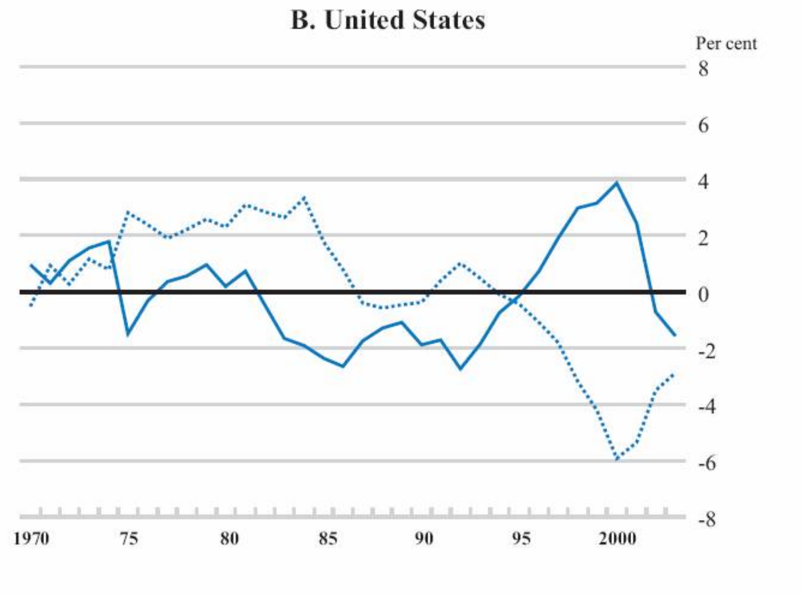
Conventional analyses of sustained budget deficits demonstrate the negative effects of deficits on long-term economic growth. Under the conventional view, ongoing budget deficits decrease national saving, which reduces domestic investment and increases borrowing from abroad. Interest rates play a key role in how the economy adjusts. The reduction in national saving raises domestic interest rates, which dampens investment and attracts capital from abroad.

Allen Sinai, Peter Orszag, and Robert Rubin – January 5, 2004

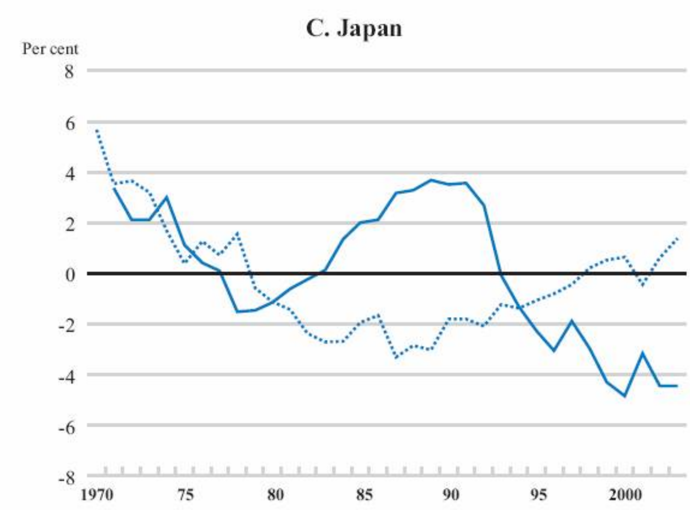
Effects of Budget Deficits: Data

- What is the effect on interest rates?
- There has been a large number of studies
  - Some did not find any significant effect
  - Some did find that interest rates increase: Our own Paul Wachtel, along with John Young, found that a 1% increase in the deficit/GDP ratio led to an avg. 12 basis points increase in interest rates.
- What is the effect on national savings?

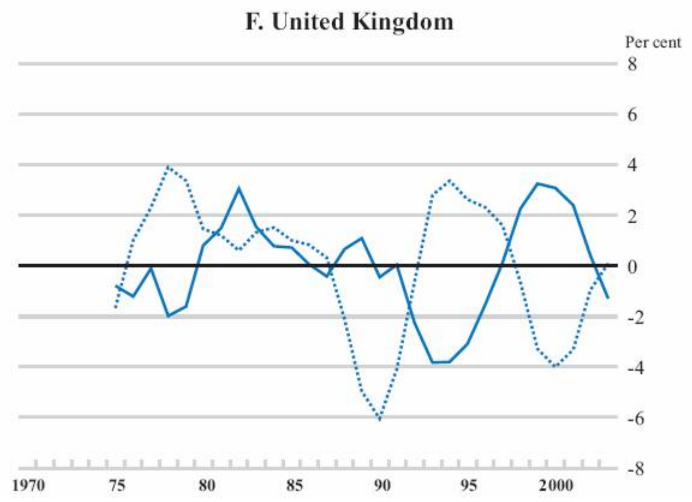
Budget Deficits: Private Sector Response



Budget Deficits: Private Sector Response



Budget Deficits: Private Sector Response



Takeaways

- What are the likely effects of an increase in government expenditures?
  - The increase in expenditures per–se (without considering the effect of distortionary taxes) would lead to an increase in GDP and to a decrease in personal consumption and investment. Most likely, there wouldn't be a sizeable effect on households well–being
  - However, since taxes distort the labor supply and saving decisions, it is likely that GDP won't increase and investment will drop, leading to less capital in the future. People may be worse off.

Takeaways

- What are the effects of a deficit–financed tax cut?
  - In the short-run it might have some positive effects on GDP. The reason is that people may have the incentives to work harder.
  - In the long–run most likely it will have no effect. Taxes will have to increase to pay back the resulting debt!

Takeaways

- Do larger budget deficits imply higher interest rates?
  - The state of the art response: it is likely that in average there is a small positive impact
- What is the effect on national savings?
  - Very small, if any. The fact is that private savings generally increase when government deficits increase

Shapiro & Slemrod

Survey question: "Thinking about (your family's) financial situation this year, will the tax rebate lead you mostly to increase spending, mostly to increase saving, or mostly to pay off debt?"

	Number of responses	Percent
Mostly Spend	447	19.9%
Mostly Save	715	31.9%
Mostly Pay Debt	1,083	48.2%
Will Not Get Rebate	212	
Don't Know, Refused	61	
Total	2,518	100.0%

Source: Survey of Consumers, February 2008 through June 2008

◂ Return