
Government Spending and its Financing, Part 2

19-1

Agenda

- The Government Budget: Facts and Figures
 - Gov't Spending, Taxes, and the Economy
 - Government Deficits and Debt
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The Government Budget: Facts & Figures

- Government outlays:
 - Government purchases (*G*)
 - Transfer payments (*TR*)
 - Net interest payments (*INT*)
 - Also: Subsidies less surpluses of government enterprises.
 - Relatively small, so ignore it.
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The Government Budget: Facts & Figures

- Government outlays:
 - Government purchases (*G*)
 - Government consumption expenditures.
 - About 5/6 of total government purchases.
 - Government investment is purchases of capital goods.
 - About 1/6 of total government purchases.
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The Government Budget: Facts & Figures

- Government outlays:
 - Transfer payments (*TR*)
 - Transfers are expenditures for which the government receives no current goods or services in return.
 - Examples: social security benefits, pensions for government retirees, welfare payments

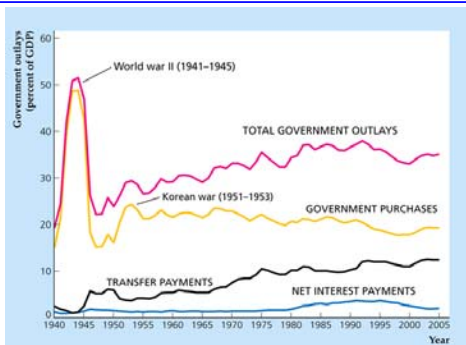
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The Government Budget: Facts & Figures

- Government outlays:
 - Net interest payments (*INT*)
 - Interest paid to holders of government bonds less interest received by the government.

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The Government Budget: Facts & Figures



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The Government Budget: Facts & Figures

- Government outlays:
 - U.S. government spending is a smaller percentage of GDP than almost any other OECD country.

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The Government Budget: Facts & Figures

Country	
United States	36.6
Japan	36.9
Germany	46.8
France	54.4
Italy	48.2
United Kingdom	45.1
Canada	39.3
Australia	34.9
Austria	49.6
Belgium	50.1
Denmark	53.0
Finland	50.8
Greece	46.7
Iceland	44.5
Ireland	34.6
Netherlands	45.7
Spain	38.2
Sweden	56.4

Source: OECD, National Accounts, Economic Outlook Annex Tables, www.oecd.org.

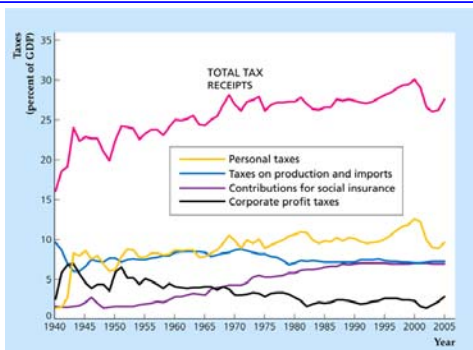
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The Government Budget: Facts & Figures

- Taxes:
 - Personal taxes (income taxes and property taxes)
 - Contributions for social insurance
 - Taxes on production and imports
 - »
 - Corporate taxes

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The Government Budget: Facts & Figures



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The Government Budget: Facts & Figures

- The composition of outlays and taxes:
 - To get an overall picture of government spending, combine Federal, state, and local government spending.
 - The composition of the Federal government budget is quite different from state and local government budgets.

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The Government Budget: Facts & Figures

	Federal		State and local	
	Billions of dollars	Percentage of current expenditures	Billions of dollars	Percentage of current expenditures
Current Expenditures				
Consumption expenditures	768.6	30.5	1207.2	79.2
National defense	176.9	20.5	0.0	0.0
Nondefense	251.7	10.0	1207.2	79.2
Transfer payments	1115.6	44.3	402.3	26.1
Grants-in-aid	361.1	14.3	0.0	0.0
Net interest paid	237.9	9.4	30.8	2.0
Subsidies less surpluses of government enterprises**	36.8	1.5	-96.0	-6.2
Total current expenditures	2520.0	100.0	1544.3	100.0
Receipts				
Personal taxes	927.9	42.0	275.2	17.9
Contributions for social insurance	352.3	38.7	25.3	1.6
Taxes on production and imports	101.1	4.6	821.2	53.3
Corporate taxes	306.4	14.8	58.0	3.8
Grants-in-aid	0.0	0.0	363.1	23.4
Total receipts	2219.7	100.0	1543.8	100.0
Current deficit				
(Current expenditures less receipts; negative if surplus)	300.3		33.5	
Primary Current Deficit				
(negative if surplus)	71.4		-27.3	

**Subsidies less surpluses of government enterprises, taxes from the rest of the world, dividends, rents and royalties, and transfer receipts.
Note: Components may not add exactly to totals owing to rounding.
Source: HSA web site www.fisc.gov, Tables 3.2, 3.3, and 3.5.

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The Government Budget: Facts & Figures

- The composition of outlays and taxes:
 - Consumption expenditures
 - About 75% of state and local current expenditures are purchases of goods and services.
 - About 30% of Federal current expenditures are for purchases.
 - About 2/3 of those are for national defense.
 - For all government purchases of nondefense goods and services, over 80% is done by state and local governments.

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The Government Budget: Facts & Figures

- The composition of outlays and taxes:
 - Transfer payments
 - The Federal government budget is more heavily weighted to transfers than state and local budgets.
 - Grants-in-aid are payments from the Federal government to state and local governments.

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The Government Budget: Facts & Figures

- The composition of outlays and taxes:
 - Net interest paid
 - Net interest is significant and positive for the Federal government.
 - It is small and sometimes negative for state and local governments.

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The Government Budget: Facts & Figures

- Composition of taxes:
 - About 80% of Federal receipts are accounted for by personal taxes and contributions for social insurance.
 - Only about 20% of state and local government receipts are accounted for by personal taxes and contributions for social insurance.

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The Government Budget: Facts & Figures

- Composition of taxes:
 - About half of state and local government receipts are accounted for by taxes on production and imports.
 - Only about 5% of Federal receipts are accounted for by taxes on production and imports.

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The Government Budget: Facts & Figures

- Deficits and surpluses:
 - Budget balance = outlays – tax revenues
 - When outlays exceed revenues, there is a deficit.
 - When revenues exceed outlays, there is a surplus.
 - Budget balance = outlays – tax revenues
 - $BB = G + TR + INT - T$

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The Government Budget: Facts & Figures

- Deficits and surpluses:
 - The primary government budget balance excludes net interest payments.
 - Primary government budget balance = outlays – tax revenues – net interest
 - Primary $BB = G + TR - T - INT$

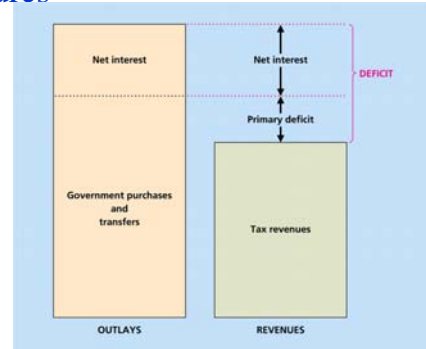
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The Government Budget: Facts & Figures

- Deficits and surpluses:
 - The total deficit is the amount the government must borrow to cover all its expenditures.
 - The primary deficit indicates if the government's receipts are enough to cover its current purchases and transfers.
 - The primary deficit ignores interest payments because those are payments for past government spending.

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The Government Budget: Facts & Figures



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The Government Budget: Facts & Figures

- Deficits and surpluses:
 - The current deficit equals the deficit minus government investment.
 - The primary current deficit equals the primary deficit minus government investment.
 - Which equals the current deficit minus interest payments.

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The Government Budget: Facts & Figures

- Deficits and surpluses:
 - The current deficit and primary current deficit usually move together over time.
 - Large current deficits occurred in World War II, the mid-1970s, and the early 1980s.
 - The primary current deficit became a primary surplus in some years in the 1980s and 1990s, but large interest payments kept the overall deficit large until the late 1990s.

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The Government Budget: Facts & Figures



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Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - An increase in government purchases increases aggregate demand and shifts the *IS* curve right.
 - This results in higher economic activity and a higher real interest rate.

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Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - The effect of tax changes depends:
 - 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 will increase consumption and decrease saving, thus increasing aggregate demand.

19-27

Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - Classical and Keynesians disagree about using fiscal policy to stabilize the economy.
 - Classical oppose activist fiscal policy while Keynesians favor it.

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Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - Classical and Keynesians disagree about using fiscal policy to stabilize the economy.
 - 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.

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Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - Automatic stabilizers, the full-employment deficit.
 - Automatic stabilizers cause fiscal policy to be countercyclical by changing government spending or taxes automatically when economic activity changes.
 - The most important automatic stabilizer is the income tax system.
 - People pay less tax when their incomes are low in recessions and they pay more tax when their incomes are high in booms.

19-30

Gov't Spending, Taxes, & the Economy

- 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.

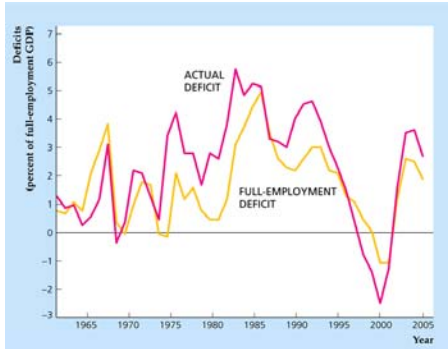
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Gov't Spending, Taxes, & the Economy

- Fiscal policy and aggregate demand:
 - Because of automatic stabilizers, the government budget deficit rises in recessions and falls in booms.
 - 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.

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Gov't Spending, Taxes, & the Economy



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Gov't Spending, Taxes, & the Economy

- Government capital formation:
 - Fiscal policy can also affect the economy through the formation of government capital—long-lived physical assets owned by the government, like roads, schools, and sewer systems.
 - Fiscal policy can also affect human capital formation through expenditures on health, nutrition, and education.

19-34

Gov't Spending, Taxes, & the Economy

- Government capital formation:
 - Data on government investment include only physical capital, not human capital.
 - In 2005, 2/3 of federal government investment was on national defense and 1/3 on nondefense capital.
 - Most federal government investment is in equipment, but most state and local government investment is for structures.

19-35

Gov't Spending, Taxes, & the Economy

- Incentive effects of fiscal policy:
 - Average versus marginal tax rates.
 - Average tax rate = total taxes / pretax income
 - Marginal tax rate = taxes due from an additional dollar of income

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Gov't Spending, Taxes, & the Economy

- Incentive effects of fiscal policy:
 - Suppose there is a 25% income tax rate on incomes over \$10,000.
 - The marginal tax rate and average tax rate are both zero on income of less than \$10,000.
 - The marginal tax rate would be 25% on income of over \$10,000.

Income	Income - \$10,000	Tax	Average tax rate	Marginal tax rate
\$ 18,000	\$ 8,000	\$ 2,000	11.1%	25%
50,000	40,000	10,000	20.0%	25%
100,000	90,000	22,500	22.5%	25%

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Gov't Spending, Taxes, & the Economy

- Incentive effects of fiscal policy:
 - Average versus marginal tax rates:
 - The distinction between average and marginal tax rates affects people's labor supply decisions.
 - 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 (negative) 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.

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Gov't Spending, Taxes, & the Economy

- 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

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Gov't Spending, Taxes, & the Economy

- Labor supply and tax reform in the 1980s:
 - 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%.

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Gov't Spending, Taxes, & the Economy

- Labor supply and tax reform in the 1980s:
 - Supply-side economists promoted the tax rate reductions, arguing that labor supply, saving, and investment would all increase substantially.

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Gov't Spending, Taxes, & the Economy

- Labor supply and tax reform in the 1980s:
 - Both marginal and average tax rates declined from the 1981 tax cut.
 - The decline in the marginal tax rate should lead to increased labor supply.
 - The decline in the average tax rate should lead to decreased labor supply.
 - The overall effect is ambiguous and may be small.
 - The data suggest little effect, as the labor force participation rate didn't change much after 1981.

19-42

Gov't Spending, Taxes, & the Economy

- Labor supply and tax reform in the 1980s:
 - The 1986 tax reform lowered marginal tax rates on labor income and raised average tax rates.
 - Both should lead to increased labor supply.
 - The data confirm this result, as men's labor force participation, which had been falling over time, leveled off in 1988 and rose in 1989.

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Gov't Spending, Taxes, & the Economy

- Labor supply and tax reform in the 1980s:
 - The changes in labor supply are consistent with theory, but not nearly as dramatic as projected by the supply-siders.

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Gov't Spending, Taxes, & the Economy

- Tax-induced distortions, tax rate smoothing:
 - In the absence of taxes, the free market works efficiently.
 - Taxes change economic behavior, reducing welfare.
 - Tax-induced deviations from free-market outcomes are called distortions.

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Gov't Spending, Taxes, & the Economy

- Tax-induced distortions, tax rate smoothing:
 - The difference between the number of hours a worker would work without taxes and the number of hours he or she actually works when there is a tax reflects the tax distortion.
 - The higher the tax rate, the greater the distortion.
 - Fiscal policymakers would like to raise the needed amount of government revenue while minimizing distortions.

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Gov't Spending, Taxes, & the Economy

- Tax-induced distortions, tax rate smoothing:
 - It's better to keep the tax rate constant over time than to raise it and lower it, because the higher tax rate has a higher distortion.
 - For example, keeping the tax rate at a steady 15% is better than having it at 10% one year and 20% the next, since the distortions in the second year are much higher.
 - Keeping a constant tax rate over time is called tax rate smoothing

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Gov't Spending, Taxes, & the Economy

- Tax-induced distortions, tax rate smoothing:
 - Empirical studies suggest that the Federal government hasn't always smoothed tax rates as much as it could to minimize distortions.
 - But borrowing to finance wars, thus avoiding the need to raise taxes a lot in war years, is consistent with the idea of tax rate smoothing.

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Government Deficits and Debt

- The growth of the government 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 deficit is the change in the debt in a year.
 - B = nominal value of government bonds outstanding.
 - ΔB = nominal government budget deficit.

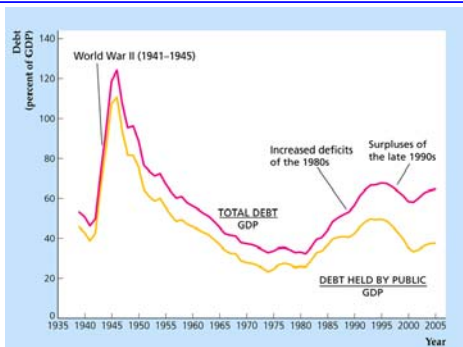
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Government Deficits and Debt

- 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 fell from over 1 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.

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Government Deficits and Debt



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Government Deficits and Debt

- The growth of the government debt:
 - Change in debt-GDP ratio = deficit/nominal GDP
– [(total debt/nominal GDP) × growth rate of nominal GDP]
 - Two things cause the debt-GDP ratio to rise:
 - A high deficit relative to GDP, and
 - A slow rate of GDP growth

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Government Deficits and Debt

- The growth of the government debt:
 - During World War II, large deficits raised the debt–GDP ratio.
 - For the next 35 years, deficits were small or negative, and GDP growth was rapid, so the debt–GDP ratio fell.

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Government Deficits and Debt

- The growth of the government debt:
 - During the 1980s and early 1990s, the debt–GDP ratio rose because of high deficits.
 - Large surpluses reduced the debt–GDP ratio in the late 1990s, but large deficits raised it beginning in 2002.

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Government Deficits and Debt

- The burden of the government debt on future generations:
 - Some people worry that their children will have to pay back the debt that past generations have accumulated.
 - But U.S. citizens own most government bonds so future generations will just be paying themselves.

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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 non-bondholders, when the debt was repaid there would be a large transfer from the poor to the rich.

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Government Deficits and Debt

- The burden of the government debt on future generations:
 - Finally, government deficits may reduce national saving.
 - 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.

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