



Tax Policy Center

Urban Institute and Brookings Institution

HOW BIG IS THE FEDERAL GOVERNMENT?

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March 26, 2012

ABSTRACT

The federal government is larger than conventional budget measures suggest. Many tax preferences are effectively spending programs. Adding these spending-like tax preferences to federal outlays and receipts makes the government appear about 4 percent of GDP larger. The 1986 tax reform cut these benefits, but they have since rebounded to a larger share of GDP than before. Using this broader measure of government size, many base-broadening reforms viewed as tax increases would be reclassified as spending cuts. Raising marginal tax rates would be recorded not only as a tax increase but also as a spending increase because it would boost the value of many tax preferences. Cutting tax preferences can thus reduce the size of government, while raising tax rates would increase it. Treating user fees as government receipts rather than negative spending, finally, leads to similar changes in measures of government size.

The views in this paper are those of the authors alone and do not represent the views of the Urban Institute, its board, or its funders.

The paper was presented at the National Tax Association Meetings, New Orleans, Louisiana, November 17, 2011. An edited version of the paper will appear in an upcoming edition of the conference proceedings.

INTRODUCTION

How big a role the government should play in the economy is always a central issue in political debates. But measuring the size of government is not simple. People often use shorthand measures, such as the ratio of spending to gross domestic product (GDP) or of tax revenues to GDP. But those measures leave out important aspects of government action. For example, they do not capture the ways governments use deductions, credits, and other tax preferences to make transfers and influence resource use.

This paper examines various measures of how fiscal policies affect the size of government. We review the conceptual differences between measures based on budget accounting and national income accounting and explore how fiscal measures would change with different treatments of key government actions. Most notably, we argue that many tax preferences are effectively spending through the tax system. As a result, traditional measures of government size understate both spending and revenues. We then present data on trends in U.S. federal spending and revenues using both traditional measures and measures that reclassify “spending-like tax preferences” as spending rather than reduced revenue. We find that the Tax Reform Act of 1986 reduced the government’s size significantly, but only temporarily. Spending-like tax preferences subsequently expanded and are now larger, relative to the economy, than they were before tax reform. We also explore how size measures would change if various user charges were treated as government revenues rather than negative spending.

We conclude by examining how various tax and spending changes would affect different measures of government size. Reductions in spending-like tax preferences are tax increases in traditional budget accounting but are spending reductions in our expanded measure. Increasing marginal tax rates, in contrast, raises both taxes and spending in our expanded measure. Some tax increases thus reduce the size of government, while others increase it. Increasing user fees and premiums, in contrast, reduces government spending under traditional budget accounting but increases government revenues in our broader measure. Some spending reductions thus reduce the size of government, while others do not.

MEASURING GOVERNMENT SIZE

Any effort to measure the size of government must address three issues. The first is deciding which government activities to include. The federal government collects tax revenues, provides goods and services not produced by the private sector, engages in commercial-type activities, makes cash and in-kind transfers to families and businesses, and pays interest on its debts. It provides explicit and implicit financial guarantees against various risks, including natural disasters, terrorist attacks, and financial meltdowns. It regulates economic activity. And it implements monetary policy through the Federal Reserve. A comprehensive measure of government size would account for all these activities. But that is beyond our current effort. Instead, our goal is to develop measures that accurately reflect the scope of the government's fiscal policies. That focus is incomplete, but given the importance of fiscal policy, we believe it valuable for policymakers and analysts to have more accurate measures of the government's explicit fiscal size.

The second issue is deciding whether to measure government spending or revenue. These differ, sometimes substantially, because of government borrowing. In rough terms, a focus on spending emphasizes the economic resources whose use the government directs through fiscal policy. A focus on revenue, in contrast, emphasizes the resources that the government currently collects from taxpayers. People use both measures, so our framework considers both approaches. We believe, however, that spending is the better measure of government size. Barring default, taxpayers must eventually pay for all spending; debt financing today merely shifts that burden into the future.

The third issue is deciding what accounting concept to use in measuring government activities. The federal government currently publishes three sets of accounts that could provide such a foundation: the official Budget of the United States Government (Office of Management and Budget 2011); the government's financial statements, which adjust budget figures to more closely resemble the accrual accounting concepts used in the private sector (Department of the Treasury 2010); and the national income and product accounts (NIPA) used to track macroeconomic aggregates such as GDP and personal income (Bureau of Economic Analysis 2011).

These accounting systems differ in significant ways. The budget primarily tracks the government's cash flows—the outlays on spending programs and the receipts from taxes—with a

few accrual-type adjustments for activities for which cash accounting would be particularly misleading (e.g., loans and loan guarantees). The financial statements make much greater use of accrual accounting. For example, they measure annual capital expenses based on estimates of how much structures, equipment, and software depreciate each year, while the budget records outlays on any new investments. The NIPAs, finally, treat the government as a producer and consumer of goods and services. They rely more on accrual accounting than does the budget, and they count as receipts some payments, e.g., regulatory fees and Medicare premiums that are treated as negative spending in the budget.¹

One can make good arguments for greater use of accrual concepts in federal decisionmaking. For example, an emphasis on cash accounting understates the cost of federal employees who are accruing future retirement benefits and emphasizes the upfront cost of new capital investments while ignoring depreciation of existing capital. However, official budget measures dominate fiscal policy discussions in the media, in academia, and inside the Beltway. For that reason, we focus on ways to improve the traditional budgetary measures of government size.

GOVERNMENT SIZE IN MACROECONOMICS

Before turning to that discussion, it is important to consider how government size is measured in macroeconomics. That approach emphasizes how government activities contribute to gross domestic product and the allocation of income between spending and saving. Those relationships are summarized in two famous macroeconomic identities:

$$Y = C + I + G + NX$$

$$Y = C + S + T$$

Gross domestic product (Y) is the sum of consumer spending (C), investment spending (I), government spending (G), and net exports (NX, the excess of exports over imports). Gross domestic income (which is also equal to Y) is the sum of consumer spending, private saving (S), and net taxes (T).

Those familiar identities are the foundation of national income accounting. Unfortunately, it's easy to overlook two subtleties in how these terms are defined. G, for example, is not the same concept of government spending used in the budget, in the financial statements, or in the parts of the NIPAs that focus on the government sector. Instead, it

represents government spending on consumption and gross investment, which the NIPAs take as an estimate of government production. In essence, G captures what the government spends on federal employees, goods, and services, but it excludes transfer payments. The spending that results from transfers then shows up in C and, potentially, S and I. Given the importance of transfer programs like Social Security, Medicare, and Medicaid, the G used in GDP accounting is very different from the government spending that appears in budget discussions.

Transfer payments also show up in T. It's common to describe T as the taxes collected by the government, but in practice, it's really the net of the taxes paid and the transfers received:

$$T = \text{Taxes Paid} - \text{Transfers Received}$$

The details of how G and T are defined sometimes create confusion when macroeconomists discuss fiscal issues with public finance economists, policymakers, or journalists who use official budget concepts. We are primarily interested in enhancing traditional budget measures but, where appropriate, we will note how the concepts we develop might apply to the NIPA measures of G and T.

TRENDS IN GOVERNMENT SIZE USING TRADITIONAL MEASURES

To provide context for alternative measures of government size, it is useful to compare traditional budget and NIPA measures of government spending. These measures differ greatly (figure 1). Since 1985, federal outlays, including transfers and interest payments, have ranged between 18 and 25 percent of GDP, with an average of 21 percent. The macroeconomic measure of federal consumption and investment has been much lower, however, ranging between 6 and 10 percent of GDP, with an average of about 7.5 percent.

These two measures have diverged over time. By the NIPA measure, the federal government got smaller, relative to the economy, from 1985 through 2010. The government shrank sharply from 1985 through 2001, dropping from 9.7 percent of GDP down to just 5.9 percent, and then rebounded to 8.4 percent in 2010. The overall budget measure followed a similar pattern, declining under 2001 and then expanding, but the net effect has been an increase. The federal government spent 22.8 percent of GDP in 1985, but only 18.2 percent in 2011. Spending then rebounded to 24.1 percent in 2010. The wider gap between the budget and NIPA measures reflects the growing importance of transfers, which have expanded from roughly 10 percent of GDP in 1985 to about 15 percent today. That growth reflects both secular trends such

as the aging of the population and rising health care spending and the aftereffects of the recent financial crisis.

Another wrinkle in measuring government size is deciding how to treat interest payments. Those payments do not appear in the NIPA measure of government spending G , but they do appear in the standard budget measure. Those interest payments reflect the financing cost of past government decisions. One can argue, therefore, that they should be excluded if the goal is to measure the size of government today. Figure 1 thus includes a third line tracking the government's primary spending—official budget spending less interest payments. Primary government spending has been somewhat lower than overall spending, ranging between 16 and 24 percent of GDP, with an average of about 18.5 percent. Thanks to historically low interest rates, the gap between total outlays and primary outlays has actually narrowed in recent years in spite of the buildup of federal debt, but the gap could widen significantly if interest rates move back toward historical norms.

TAX PREFERENCES AND GOVERNMENT SIZE

Policymakers have long recognized that many social and economic goals can be pursued using tax preferences, not just government spending programs. Such preferences are recorded as revenue reductions, making the government appear smaller, but often have the same effects on income distribution and resource allocation as equivalent spending programs (Bradford 2003; Burman and Phaup 2011; Marron 2011). A complete measure of government size should treat these preferences as spending, not revenue reductions. Doing so raises measures of both spending and revenues, without affecting the deficit, and gives a different picture of the economic resources that the government directs.

Making these adjustments requires caution, however. It is tempting, for example, to simply add together all the provisions that the federal government identifies as “tax expenditures” and treat those effectively as spending. But that goes too far. Not all tax expenditures are the functional equivalent of spending.

The Congressional Budget Act of 1974 defines tax expenditures as “revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a

deferral of liability.” The key word in this definition is *special*. Identifying tax expenditures requires defining a theoretical baseline tax system including all general tax provisions and then identifying any deductions, credits, and other provisions that are exceptions to the general rules. The original definition of a “normal” tax baseline was meant to include provisions needed to implement a practical and broad-based income tax.² The system allows for the deduction of ordinary and necessary business expenses, for example, as well as graduated rates for individual taxpayers, alternative ways of defining the taxpaying unit (separate or joint filing for married couples), and personal exemptions to adjust for the effect of family size on ability to pay.

However, the normal tax baseline also allows some departures from a comprehensive income base. For example, it excludes accrued but unrealized capital gains from the tax base,³ includes inflationary gains, and allows a separate corporate income tax in addition to individual taxes on income from corporations.

A number of authors have suggested distinguishing between tax expenditures that represent disguised spending and those that represent structural departures from a comprehensive income base but do not replace any clearly identifiable direct spending program (Fiekowsky 1980; Kleinbard 2010; Marron 2011; Shaviro 2004; Toder 2005). Although these authors use different formulations and labels, they all focus on a subset of tax expenditures that replace subsidies or transfer payments that could otherwise be delivered as outlays. In this view, which we share, it is only those “spending-like tax preferences” that should be included in a “spending” total designed to measure the size of government.

Unfortunately, it is not always straightforward to decide which provisions should be classified as spending substitutes and which are fundamental tax policy choices. We provide a few clear examples, while noting that it is sometimes hard to distinguish the two categories.

Clear Spending Substitutes. Clear spending substitutes are those tax expenditures that encourage selected activities or aid specific groups of taxpayers and could be replaced by similar programs delivered as direct outlays. Examples are renewable energy credits, the home mortgage interest deduction, the exclusion from tax of employer-provided health insurance and health benefits, and tuition tax credits. All these provisions subsidize identifiable activities (renewable energy, housing investment, health insurance, and college tuition), try to promote definable social goals (reduced greenhouse gas emissions, increased homeownership, broader health insurance coverage, and increased college attendance), and could be designed as outlays

administered by program agencies (e.g., the Departments of Energy, Housing and Urban Development, Health and Human Services, and Education).

Broad Choices of Tax Structure. Other provisions represent broad choices in tax policy design but are not associated with any clear spending objective. For example, many economists favor consumption instead of income as a tax base, and our current income tax can be thought of as a hybrid between consumption and income taxation. The treatment of saving in qualified retirement saving plans, which allows most workers to defer tax on contributions until the proceeds of their contributions and investment earnings are withdrawn from the account, is an example of a provision that taxes the return to saving based on consumption instead of income tax principles.⁴ Other large tax expenditures represent basic choices in how to design an income tax, not hidden spending in the tax code. For example, the deferral of taxation of foreign source income until repatriation is identified as a tax expenditure provision because the normal income tax would include in the base all worldwide income of corporations as accrued. But, with the single exception of Brazil, no country in the world taxes the income of the controlled foreign corporations of its resident multinational corporations on a current basis. Elimination of deferral may be better policy, but the failure to enact an idealized international tax rule that virtually no one else uses can hardly be characterized as a disguised spending program. Similarly, the preferences for realized capital gains and dividends represent a compromise between taxing all sources of realized cash income at the same rate and the fact that accrued, but unrealized, capital gains escape tax entirely (so that taxing realizations creates a “lock-in” effect) and the fact that dividends and a portion of capital gains have already borne some income tax at the corporate level. Again, these provisions represent possibly flawed choices of income tax design but are not substitutes for an identifiable direct spending program.

The ten largest tax expenditures in terms of 2012–16 budgetary costs (revenue losses plus outlays for refundable credits) identified by OMB (2011) will cost \$4 trillion between 2012 and 2016—about 65 percent of the cost of all tax expenditures over that period (table 1).⁵ We classify six of them as spending substitutes: the exclusion of employer contributions for medical insurance and medical care, deductibility of mortgage interest on owner-occupied homes, exclusion of net imputed rental income on owner-occupied homes, deductibility of nonbusiness state and local taxes other than on owner-occupied homes, the earned income tax credit, and deductibility of charitable contributions other than education and health. Five of these provisions

are clear spending substitutes. The exclusion of employer contributions for medical insurance and medical care substitute for direct outlays to subsidize the purchase of health insurance. The deductibility of mortgage interest and the exclusion of net imputed rental income on owner-occupied homes substitute for direct outlays to subsidize capital costs of homeownership.⁶ The deductibility of charitable contributions substitutes for direct outlays that provide matching grants for contributions to eligible charitable organizations. The deductibility of nonbusiness state and local taxes substitutes for direct federal grants to state and local governments.

The earned income tax credit is a closer call. Arguably, it could be viewed as a component of the federal tax schedule that provides negative tax rates within certain income ranges, with the rate varying by number of children. While it subsidizes work effort, it does not subsidize any particular industry or sector. We choose instead to view it as a substitute for a transfer program that provides families with assistance that increases with the number of children, but limits that assistance to families with earnings and claws back the payments as income rises above threshold amounts.

We classify the other four among the ten largest provision—step-up in basis for capital gains at death, 401(k) plans, accelerated depreciation of machinery and equipment, and the special rate on capital gains (excluding other provisions that tax income in selected industries as capital gains)—as general tax policy choices instead of spending substitutes. Capital gains preferences do favor certain sectors (those with accruing asset values, such as new firms in the high-tech sector) over others, but we cannot think of a general rule for taxing capital gains that would be neutral across all possible margins. And we cannot think of a defined spending program that the capital gains preferences might replace. 401(k) plans do represent an exception to the rule that income is taxed as accrued under an income tax, but the provisions for retirement saving are so large and pervasive that we consider the ability in our system for workers to accrue tax-free saving for retirement (as they would under a consumption tax) to be a general characteristic of the U.S. income tax. Accelerated depreciation of machinery and equipment is a closer call; it obviously favors investment in machinery over investment in structures and inventory. But it is a broad-based rule that applies across many firms and industries and, like the tax treatment of retirement accounts, it can be viewed as a compromise between income taxation (which would use economic depreciation) and consumption taxation (which would allow immediate expensing). In addition, it is not obvious what the alternative correct depreciation rule

should be under a normal income tax or what a substitute spending program to encourage investment in machinery would look like.⁷

TAX EXPENDITURES SINCE 1985

Figure 2 tracks the size of tax expenditures, relative to GDP, from 1985 through 2016. These figures come from Rogers and Toder (2011), who created a tax expenditure database based on figures from OMB and consultations with Treasury staff. The most notable feature is the sharp drop in tax expenditures after the passage of the Tax Reform Act of 1986 (TRA86). Between 1985 and 1988, tax expenditures dropped from 8.7 percent of GDP to 6.0 percent. Many large tax expenditures were eliminated, including the investment tax credit, accelerated depreciation on rental housing, and preferential rates for capital gains, and others were substantially scaled back. In addition, lower marginal tax rates reduced the value of remaining individual and corporate income tax expenditures structured as exclusions, exemptions, deductions, and deferrals. Since then, however, tax expenditures have grown as policymakers enacted new provisions, as marginal tax rates increased, and as certain sectors, e.g., health insurance, grew faster than the economy.

Figure 2 also tracks our estimates of the tax expenditures that we identify as spending substitutes. In making this distinction, we exclude any provisions that we classify as general structural tax policy choices (table 2). TRA86 reduced both types of tax expenditures, but the decline among general structural policies was larger. As result, spending-like provisions increased from 55 percent to 60 percent of total tax expenditures between 1985 and 1988. Since then, “spending substitutes” have become a larger share of overall tax expenditures. Indeed, by 2008, spending substitutes were a larger share of GDP than they had been in 1985. This reflects a change in the composition of tax expenditures, with much of the new growth coming from new and expanded social programs in the tax code (the child credit, an expanded earned income tax credit, tuition credits, and others) and growth in the cost of some older tax spending programs (e.g., the exclusion of employer-provided health insurance).

Finally, figure 2 also tracks the budgetary effect of the refundable portion of tax credits. Those costs are already reported as spending, rather than revenue reductions, in official budget accounts. When we create our broader measure of government size—adding spending-like tax preferences to traditional spending—we need to ensure that the refundable portion of tax credits

are not double counted. (The difference between spending substitutes and the outlay portion of refundable credits is labeled as “net spending substitutes” in figure 2). The outlay portion of refundable credits, while relatively small, has increased steadily. TRA86 expanded the earned income tax credit and there were further expansions in 1990, 1993, 2001, and 2009. The child credit was initially enacted in 1997 and included only a small refundable portion for families with three or more children. But the credit was doubled in 2001 and was made generally refundable for families with earnings above a threshold amount. The scheduled expiration of the 2001, 2009, and 2011 increases in credits at the end of 2012 will reduce outlays associated with the child credit and the earned income credit beginning in 2013, but much of this reduction will be offset by a new premium support health insurance credit that was enacted in the Patient Protection and Affordable Care Act in 2010 and is scheduled to go into effect in 2013.

TRENDS IN A BROADER MEASURE OF GOVERNMENT SIZE

We use these estimates of spending-like tax preferences to construct a revised series of total federal spending and revenue in 1985 and from 1988 through 2016. To do this, we define gross spending as outlays as measured in the budget plus spending-like tax preferences minus the refundable portion of those tax expenditures (since they are already scored as outlays). Gross revenues are similarly calculated as revenues in the budget plus spending-like tax expenditures minus the refundable portion of those tax expenditures. This accounting approach does not change the deficit—gross spending and revenues increase by the same amount. It does recognize, however, that the government raises significant revenues and then spends them without the money ever reaching the U.S. Treasury. Accounting for those resources, the federal government has been around 4 percent of GDP larger in recent years than budget figures indicate. In 2010, for example, both federal spending and revenues were about \$600 billion more than the official budget measures.

This reclassification does not change the basic story of how receipts and outlays have changed over the past quarter century, but there are differences (figures 3 and 4). For one thing, adding spending-like tax preferences to both outlays and receipts makes the burden of government look bigger, whether measured by spending or revenues. Budget spending ranged from 18.2 percent of GDP in 2000 to 25.0 percent in 2009, while gross spending ranged from

22.3 percent in 2000 to 29.6 percent in 2011. Receipts ranged from 14.4 percent in 2011 to 20.6 percent in 2000, while gross receipts range from 18.7 percent in 2011 to 24.7 percent in 2000.

The trends in gross spending and receipts are roughly similar to trends in budget spending and receipts. The only clear qualitative difference occurred right after TRA86. Spending fell between 1985 and 1988 due to a decline in defense and nondefense discretionary spending under the Gramm-Rudman spending restrictions, but gross spending declined even more due to the cut in tax expenditures in TRA86. Revenues increased between 1985 and 1988 as the economy boomed, but nonetheless gross revenues declined slightly because of the cut in tax expenditures. By this measure, then, TRA86 significantly reduced the size of government.

During the Clinton years (1993–2000), spending-like tax preferences, net of refundable credits, increased from 3.8 percent of GDP to 4.1 percent, but this did not qualitatively alter the general story of declining spending and rising receipts during that period. They increased again (to 4.3 percent of GDP) between 2000 and 2008, but that did not change the basic Bush years' story of rising spending and falling receipts. Looking forward from 2008 to 2016, OMB projections show a further increase in reclassified receipts to 4.7 percent of GDP. But, while this accentuates the trend a bit, it does not alter the long-term story of increases in both outlays and receipts as a percentage of GDP over that period.

USER FEES AND PREMIUMS

Thus far, we have emphasized that some tax provisions are really spending in disguise. It is also important to consider whether some spending provisions may be revenues in disguise. The budget records the cash inflows from some policies as negative spending rather than as revenues. These inflows are known as offsetting collections and receipts because they are viewed as reducing government spending rather than adding to revenues. The premiums that beneficiaries pay for Medicare coverage, for example, are recorded as negative spending because they reduce the net subsidy that the government provides through the program. The same is true for other user charges such as fees for licenses and regulatory services, premiums for other types of insurance, and payments for business-like activities such as buying postage stamps or purchasing electricity from the Tennessee Valley Authority.

That accounting makes sense if the goal is measuring the amount of government activity that must be funded collectively through taxes or borrowing rather than charging users. If your

interest is in measuring the total scope of government activities, however, you may also want to consider the gross size of those activities, not just the net. For example, you may want to consider the complete Medicare program, rather than just the portion financed through broad-based taxes or borrowing. Only a gross measure captures the full extent of the economic activities managed by the government. For such a broader measure of spending or revenues, you would add back any user charges recorded as offsetting collections or receipts.

To provide a sense of the relative importance of spending-like tax preferences and these premiums and user fees, figure 5 reports federal spending in 2007 using three measures (we hope to extend these calculations to other years in future research). The first, official measure records federal spending (including interest payments) as 19.6 percent of GDP in 2007 (the last fiscal year before distortions from the financial and economic crises). Adding back spending-like tax preferences increases federal spending to 23.7 percent of GDP. In other words, the federal government was about one-fifth larger than usually reported.

When we add in about \$230 billion in user charges, finally, effective federal spending rises to 25.4 percent of GDP. By this metric, federal spending was more than one-quarter of economic activity in 2007, almost 30 percent more than officially reported.

HOW POLICY CHANGES AFFECT GOVERNMENT SIZE

When we take spending-like tax preferences, user fees, and premiums into account, the federal government appears larger than standard measures suggest. Traditional budget measures understate both the amount that the government effectively collects in revenue and the amount that it effectively spends in pursuit of social and economic goals.

That insight has some surprising implications when we consider how various policy options might affect the size of government. To illustrate, we first consider how the size of government would be affected by three tax policy options for reducing the deficit: introducing a broad-based carbon tax, eliminating the mortgage interest deduction, and increasing individual income tax rates.

Under traditional budget accounting, these proposals would all increase federal revenues and have no effect on federal spending (table 3). People who emphasize revenues as a measure of government size would view all three of these policies as expanding the size of government;

people who emphasize spending would view them all as reducing the deficit but having no effect on government size.

The three policies appear quite different, however, under our broader measure of government size. A new carbon tax would still be viewed as a pure tax increase with no effect on spending (as long as no special carve-outs created new spending through the tax system). Eliminating the mortgage interest deduction, however, would be a spending cut, not a tax increase. Under existing law, the federal government has asserted a claim to taxpayer resources, but has chosen not to collect them. Instead, it allows qualifying taxpayers to keep those monies as long as they do what the government wants—pay mortgage interest. Eliminating the mortgage interest deduction would reduce those payments (thus lowering the broader measure of spending), while having no effect on the amount of resources that the government has asserted a claim to (thus leaving the broader measure of revenues unchanged). Eliminating the mortgage interest deduction would thus reduce the size of government under the broader spending measure, even though the policy would be officially scored as a tax increase.

Increasing marginal tax rates is more complex still. Raising tax rates would boost taxes under both traditional budget accounting⁸ and our broader measure including spending-like tax preferences. But that is not the only effect. Our current tax system has numerous exclusions, exemptions, and deductions whose value depends on marginal tax rates. If those rates go up, the value of those tax preferences goes up as well, thus boosting revenue (further) and spending. Raising marginal tax rates thus increases spending through the tax code and boosts the size of government under our broader spending measure.

The reverse also holds true. Cutting marginal tax rates reduces the size of government under our broader spending measure. Indeed, this is what happened following the Tax Reform Act of 1986. That act reduced spending through the tax code not only by cutting back on preferences, but also by lowering marginal tax rates. The idea of “starving the beast” through tax cuts has not fared well over the past decade; lower tax revenues do not appear to have driven official spending down. If one adopts our broader spending measures, however, “starving the beast” does have some effect if done through marginal rate cuts. All else equal, lower tax rates reduce spending through the tax code, albeit not enough to offset the reduction in government receipts.

We also consider how government size would be affected by three spending policies: reducing weapons procurement, reducing unemployment insurance benefits, and increasing Medicare premiums. Under traditional budget accounting, these proposals would all reduce government spending and have no effect on revenues (table 4). People who emphasize spending as a measure of government size would view all three of these policies as reducing the size of government; people who emphasize revenues would view them all as reducing the deficit, but having no effect on government size.

The policies look different, however, under our broader measure of government size. Cutting weapons procurement and reducing unemployment benefits would still be viewed as cutting government spending. Increasing Medicare premiums, however, would appear as a revenue increase, not a spending cut. We use the word “revenue” intentionally here, to emphasize these receipts result from voluntary participation in the program, rather than the exercise of the government’s taxing authority.

Table 4 also shows how these policies would appear under macroeconomic accounting. Cutting weapons procurement would be a direct reduction in government spending G. Cuts to unemployment benefits would reduce transfer payments, which would be recorded as an increase in T, not a decrease in G. Higher Medicare premiums, finally, would increase contributions for social insurance, thus increasing T. (All three of the tax policies considered earlier would be recorded as increases in T as well. It is worth considering, however, whether the existence of spending-like tax preferences means that the NIPA distinction between G and T also deserves reconsideration.)

CONCLUSION

This paper illustrates how our recognizing tax expenditures that represent spending substitutes as hidden spending (and revenues), rather than as tax cuts, and recognizing user fees and premiums as revenue increases, rather than spending cuts, changes our understanding of government size. When we include spending-like tax provisions as outlays (and revenues), the federal government in recent years appears about 4 percent of GDP larger than traditional budget figures indicate. Trends in “reclassified” spending and receipts mostly mirror trends in “budget” spending and receipts. The only qualitative difference in trends came between 1985 and 1988 when, following the Tax Reform Act of 1986, conventionally measured receipts as a percentage

of GDP increased, but reclassified receipts declined due to the large drop in spending substitute tax expenditures. The federal government would appear larger still if user fees and premiums were treated as revenues rather than as negative spending.

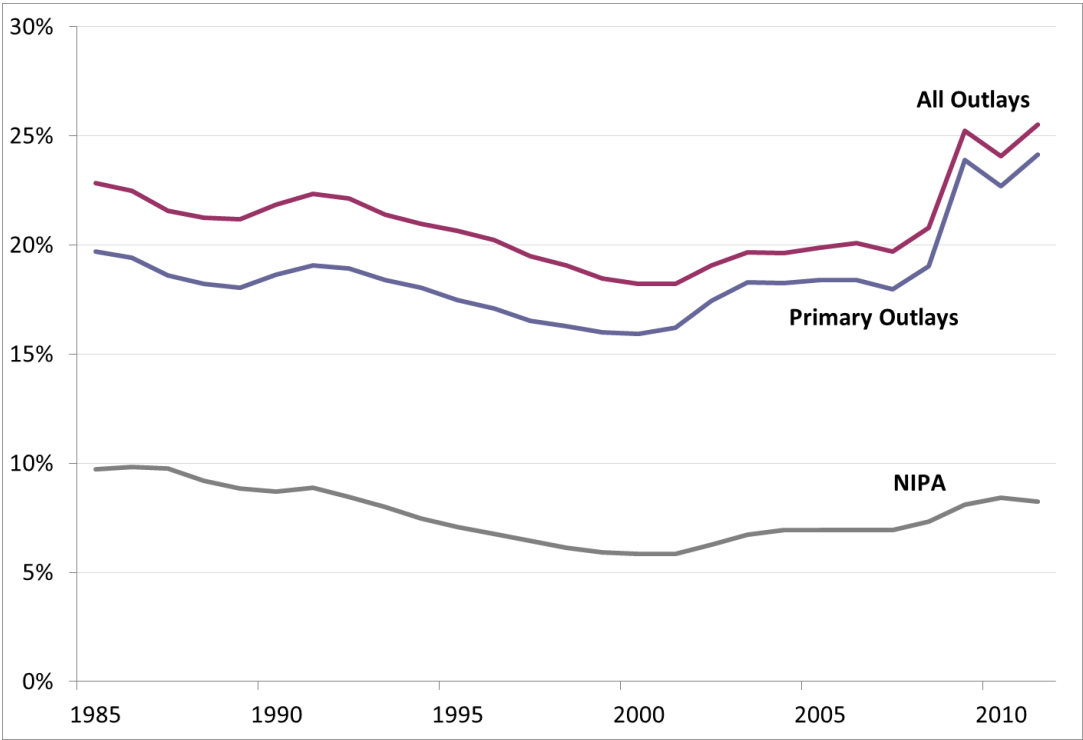
Our broader measure of government size provides a different perspective on how policy changes on the size of government. Eliminating spending-like tax preferences such as the mortgage interest deduction would raise the conventional measure of federal revenues and leave outlays unchanged. Under our broader measure, in contrast, eliminating the deduction would reduce outlays and leave revenues unchanged. More broadly, budget reform proposals that reduce marginal tax rates and eliminate tax expenditures would be shown under this alternative measure to accomplish a much larger share of deficit reduction through spending cuts instead of tax increases than they would under conventional measures. Proposals that emphasize higher user fees and premiums, however, accomplish less deficit reduction through spending cuts than conventional measures suggest.

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Figure 1. Federal Spending as a Percent of GDP, 1985–2011



Source: Authors’ calculations based on Bureau of Economic Analysis and Office of Management and Budget (2011).

Table 1. Ten Largest Tax Expenditures, 2012–16

Provision	Budgetary Cost, 2012–16^a (\$ Billion)	Classification
Exclusion of employer contributions for medical insurance and medical care	\$1,071	Spending substitute
Deductibility of mortgage interest on owner-occupied homes	\$609	Spending substitute
Step-up in basis of capital gains at death	\$357	Tax policy choice
401(k) plans	\$356	Tax policy choice
Exclusion of net imputed rental income ^b	\$303	Spending substitute
Deductibility of nonbusiness state and local taxes other than on owner-occupied homes	\$292	Spending substitute
Accelerated depreciation of machinery and equipment	\$270	Tax policy choice
Earned income tax credit	\$266	Spending substitute
Capital gains (except agriculture, timber, iron ore, and coal)	\$256	Tax policy choice
Deductibility of charitable contributions, other than education and health	\$249	Spending substitute

Source: Office of Management and Budget (2011) and authors' categorizations.

a. Equals the sum of revenue losses and outlays from refundable credits.

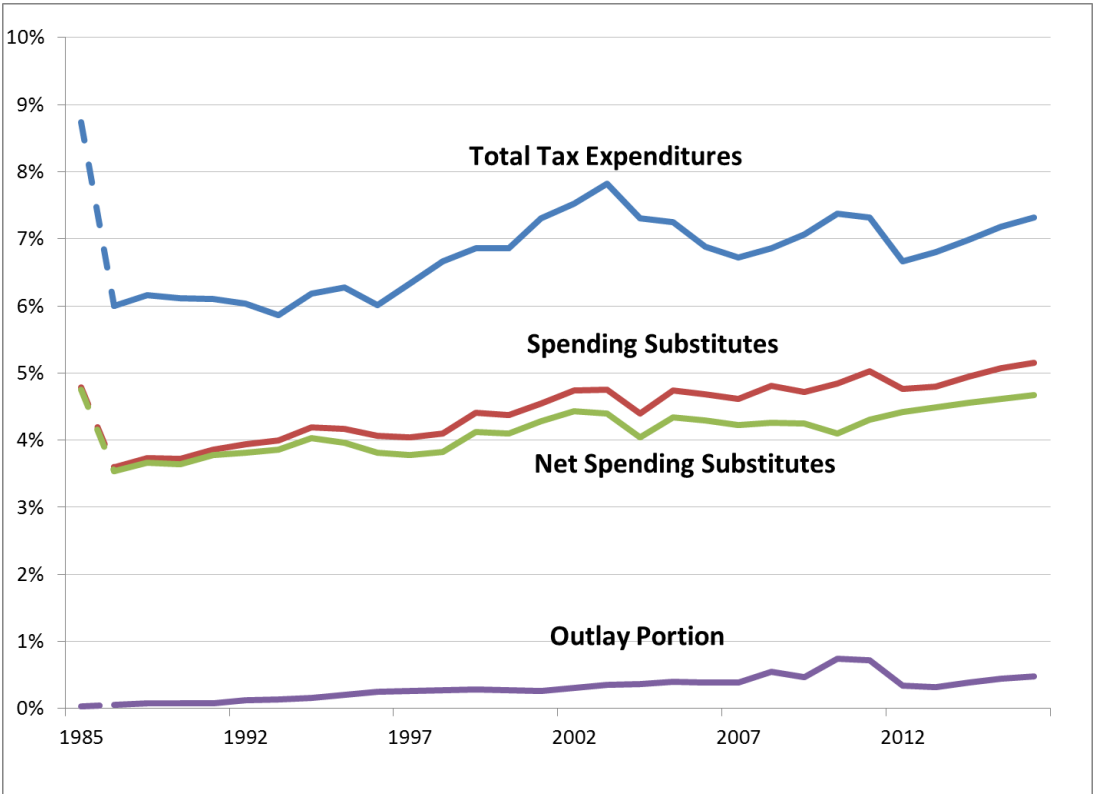
b. We did not include imputed rental income on owner-occupied homes in our summary measures of tax expenditures. OMB has only reported this value in recent years, and JCT does not count imputed rent as a tax expenditure provision.

Table 2. Tax Expenditures Classified as Structural Tax Provisions

Provision	Revenue Loss, 2010 (\$ billions)
Deferral of Income from Controlled Foreign Corporations	38.1
Deferred Taxes for Certain Financial Firms on Certain Income Earned Overseas	2.3
Excess bad debt reserves of financial institutions	repealed
Treatment of qualified dividends	31.1
Capital gains (except agriculture, timber, iron ore, and coal)	36.3
Step-up basis of capital gains at death	18.5
Carryover basis of capital gains on gifts	1.4
Accelerated depreciation of buildings other than rental housing	-11.1
Accelerated depreciation of machinery and equipment	40.0
Making work pay credit	60.3
Distributions from retirement plans for premiums for health and long-term care insurance	0.3
Net exclusion of pension contribution and earnings	
- Employer plans	39.6
- 401(k) plans	52.2
- Individual retirement accounts	12.4
- Keogh plans	13.8
Social Security benefits	
- Retired workers	21.4
- Disabled workers	7.0
- Spouses, dependents, survivors	3.9

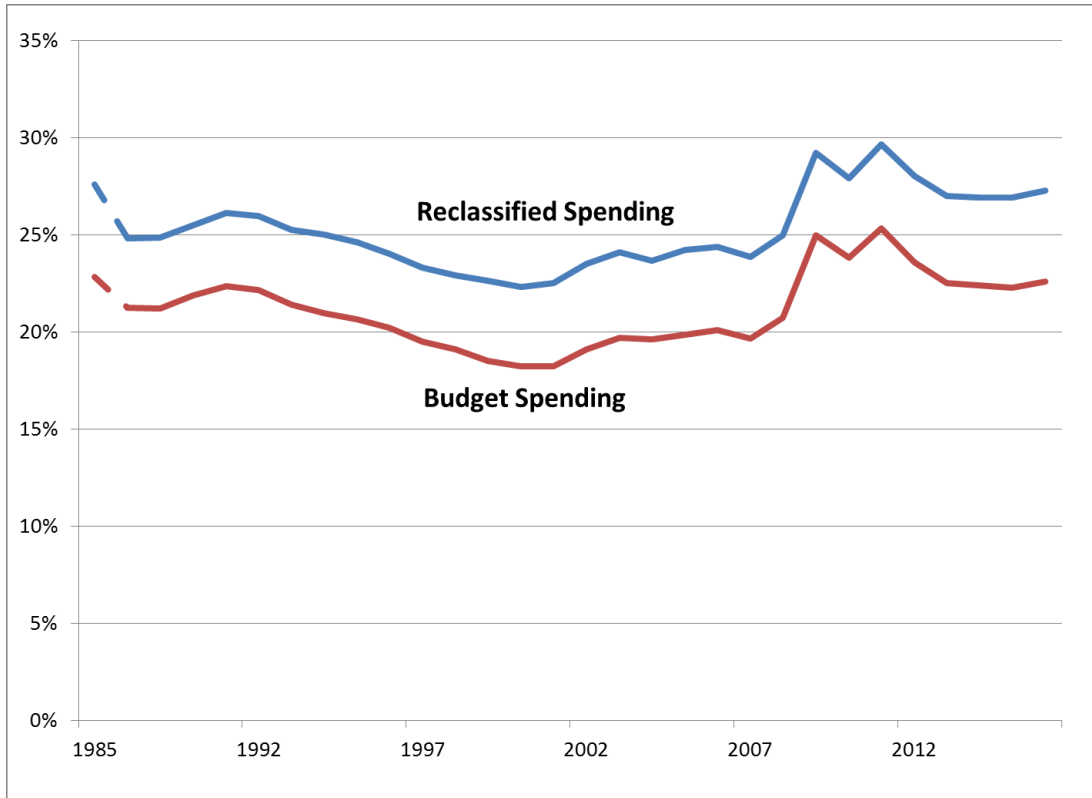
Source: Authors' calculations, based on data reported in Office of Management and Budget, *Budget of the United States Government*, Fiscal Years 1987–2012.

Figure 2. Tax Expenditures as a Percent of GDP, 1985–2016



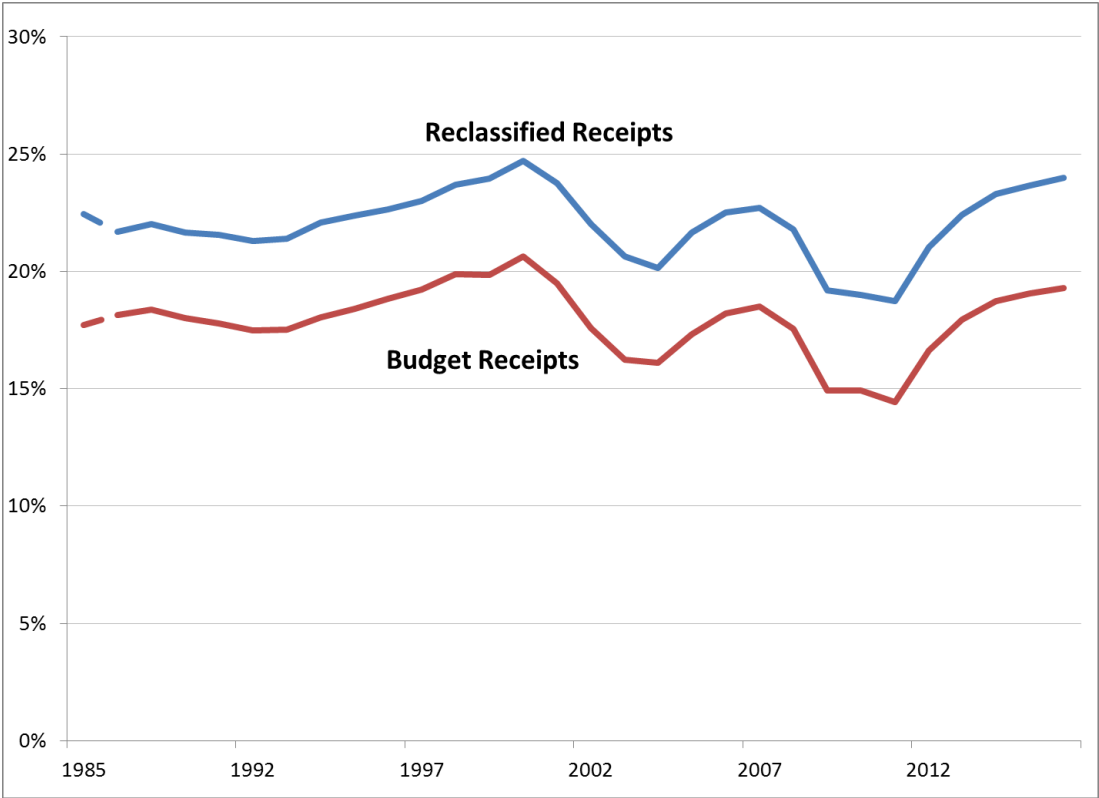
Source: Authors’ calculations based on the database created by Rogers and Toder (2011).

Figure 3. Spending Measures as a Percent of GDP, 1985–2016



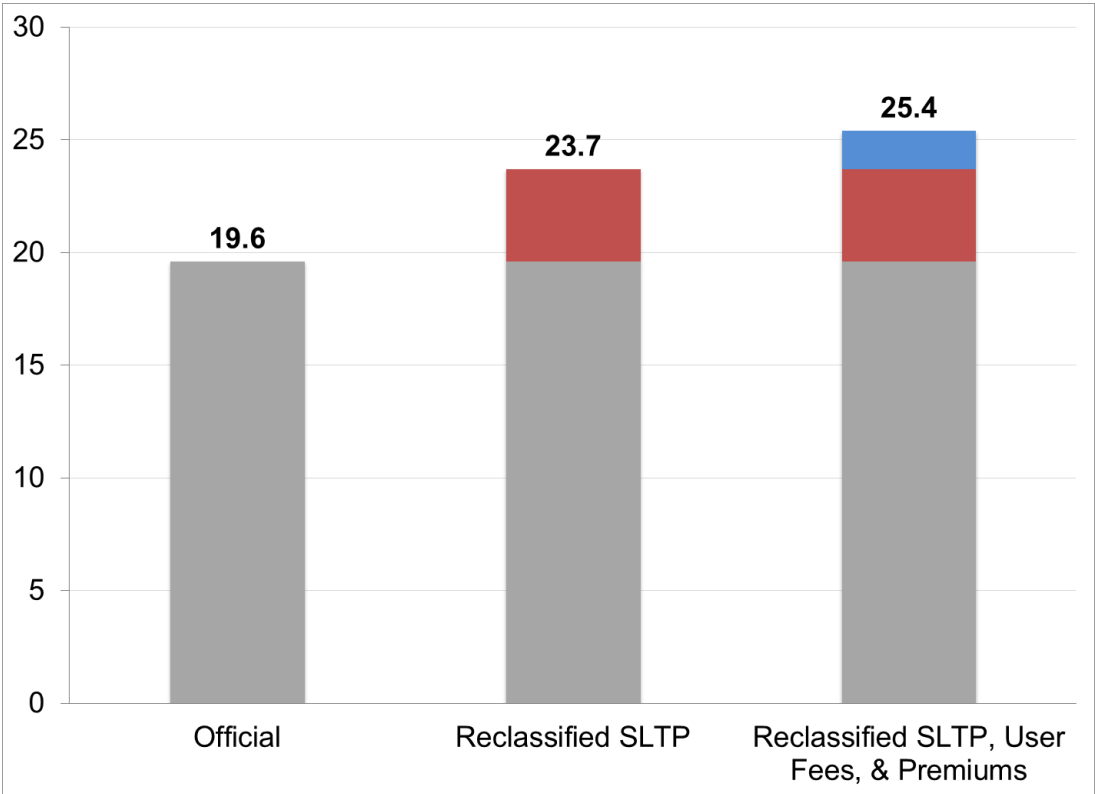
Source: Office of Management and Budget (2011) and authors' calculations.

Figure 4. Revenue Measures as a Percent of GDP, 1985–2016



Source: Office of Management and Budget (2011) and authors' calculations.

Figure 5. Measures of Federal Spending, 2007



Source: Authors' calculations based on Office of Management and Budget (2011).

Table 3. How Tax Policy Changes Affect Government Size

	Official Budget	Broader Measure that Reclassifies Spending-Like Tax Preferences
Introduce a broad-based carbon tax	Tax Increase	Tax Increase
Eliminate the mortgage interest deduction	Tax Increase	Spending Cut
Increase marginal individual income tax rates	Tax Increase	Tax Increase & Spending Increase

Table 4. How Spending Policy Changes Affect Government Size

	Official Budget	Broader Measure that Reclassifies User Fees & Premiums	NIPA
Reduce weapons procurement	Spending Cut	Spending Cut	G Cut
Reduce unemployment compensation	Spending Cut	Spending Cut	T Increase (Transfer Cut)
Increase Medicare premiums	Spending Cut	Revenue Increase	T Increase

NOTES

¹ For a detailed discussion of the differences between the three accounting conventions, see Congressional Budget Office (2006, 2009) and Ludwick and Cook (2011).

² OMB, although not JCT, later added a concept called the “reference” tax baseline, in which some provisions that departed from accurate income measurement but were judged to be general provisions of the existing system, were included in the baseline. As a result, some provisions that OMB calls tax expenditures relative to the “normal” tax baseline are not tax expenditures relative to the “reference” tax baseline.

³ JCT, but not OMB, also allows exclusion from the normal tax base of net imputed rental income from owner-occupied homes.

⁴ Nonetheless, we view provisions that allow consumption tax treatment to a narrow class of investments, such as expensing of qualified equipment for small businesses under section 179 of the Internal Revenue Code, as spending substitutes.

⁵ Here and elsewhere, we add up individual tax expenditure estimates to derive a total cost. Strictly speaking, the sum of the costs of separate tax expenditures need not equal the cost of all tax expenditures; Treasury (which prepares the estimates for OMB) and JCT estimate the cost of each provision as if all other components of the tax law were in place. If some tax expenditures were eliminated, the cost of others would change. Toder and Baneman (2011) estimate that, taking account of interactions among provisions, the cost of all tax expenditures is roughly 10 percent higher than the cost that would be computed by adding up all the separate line items. Therefore, these figures understate to some degree the cost of tax expenditures. It should be noted, however, that there are negative, as well as positive interactions; itemized deductions cost less than three-fourths of the cost calculated as the sum of all the separate deductions.

⁶ If the gross rental value of owner-occupied housing were taxed, the mortgage interest deduction would not be a tax expenditure line item. To capture the full cost of not taxing gross imputed rent, it is necessary to add together Treasury’s estimates for the exclusion of net imputed rent (the net return on housing equity) and the mortgage interest deduction.

⁷ The tax treatment of capital investment illustrates some challenges of drawing a sharp line between spending-like provisions and tax provisions. First, there’s the issue of how to handle

exceptions from general rules. Even if accelerated depreciation generally isn't a spending-like provision, reduced class lives for some assets, such as corporate jets, should be viewed as the equivalent of spending programs that favor a narrowly defined activity. Lacking information about such narrow provisions, we exclude them from our calculations. Second is the issue of how depreciation rules interact with the deductibility of interest. By itself, accelerated depreciation can be viewed as a compromise between income and consumption taxation. If investment is debt-financed, however, the combination of consumption tax treatment for investment and income tax treatment for borrowing can produce a significant subsidy for some types of capital investment. That happens because interest should be deductible under an income tax but should not be deductible under a consumption tax. Lacking data on the value of interest deductions, we exclude them from our measure.

⁸ As long as we are on the left side of the Laffer curve.