

THE BUDGET ARITHMETIC TEST Repairing Federal Fiscal Policy

by Lee Price and Max B. Sawicky

The current federal budget debate is sharply focused on implausible solutions that are bound to fail. The unsustainable deficits that are now anticipated cannot be repaired by the popular rhetorical fallback on cuts in domestic discretionary spending. A truly effective budget policy will require difficult political compromises amidst a tangle of political “third rails”: abandoning the unnecessary goal of a balanced budget, cutting funds for defense and entitlements, and increasing taxes. The public debate on budget reform should also recognize that the supply-side virtues of tax cuts and deficit reduction have been overblown, while the benefits of public investment for economic and social welfare have been routinely and blindly undervalued.

Policies that cannot succeed at putting the U.S. budget in order—for example, reductions in domestic discretionary spending—will be rendered increasingly irrelevant by the inexorable and unsustainable growth in health care entitlement costs, an issue that will come to the forefront of the budget debate with the retirement of the baby boom generation. Ill-conceived cuts in domestic spending and unnecessary obstacles to public investment will only exacerbate problems, not solve them. Policies aimed at accomplishing tax increases, defense cuts, and slower growth in entitlement spending must be put on the table.

Any realistic and prudent budget policy for the next decade must reckon with the need to sustain non-security discretionary spending (NSD) in real per capita terms. Maintaining the necessary level of NSD spending requires the following coordinated fiscal choices:

- Foregoing the goal of a balanced budget and focusing on limiting the growth of federal debt;
- Striving for policies that make possible a new “peace dividend”;
- Reducing the rate of growth of health care spending; and
- Increasing revenues through tax increases and better tax law enforcement.

This report begins with a critical overview of prevailing misconceptions in the federal budget debate. The focus then shifts to an analysis of budget decisions made over the past three years and the implications of the current debate for domestic spending. Finally, inescapable choices for the future are examined, including policy recommendations and conclusions.

Background

Most budget partisans fall into one of two camps: those who prioritize tax cuts and those whose primary goal is a balanced budget. Tax cut advocates want to increase incentives to work, save, take financial risks, and invest. They also commonly argue that tax cuts “put money in your pocket” and increase consumer spending and employment. Those who elevate balanced budgets over tax cuts point to current, unsustainable deficit trends and claim that lower deficits exert downward pressure on interest rates, encouraging business investment in both the short and long term. Budget hawks tend to be more even-handed in regard to tax increases versus spending cuts, but they habitually treat each as a matter of arithmetic. Getting the numbers to add up properly tends to supersede the *economic* effects of measures aimed at garnering budget savings, outside of the favored deficit/interest rate/investment chain of causation.

Both of these narrow viewpoints undervalue public spending, which provides three types of important benefits. First, spending may finance public services that private-sector markets provide inadequately or not at all. Second, public spending may fulfill an objective of equalizing, to some degree, the distribution of income. And third, public spending can provide a boost to flagging demand during recessions.

With the baby boomers’ retirement necessitating strong economic growth, public investment looms as particularly important among federal programs. For example, there is broad agreement on the importance of education in economic growth. Heightened concern about the nation’s dependence on increasingly expensive fossil fuels points to the priority of investment in public transportation and in substitutes for petroleum-based energy sources. Investment in money-saving technologies could moderate the rise in health care spending.

To be sure, equalization of income is not a prominent political cause these days, but there remains public concern about the balance between rich and poor. For instance, some support for tax cuts enacted since 2001 is founded on those few provisions benefiting the “middle class”: expansion of the Child Tax Credit, the new 10% individual income tax bracket, and marriage penalty relief. In the previous administration, President Clinton’s signature tax cut was an expansion of the Earned Income Tax Credit.

On the spending side, providing benefits to welfare recipients conditional on work—particularly child care—is a well-regarded policy. It seems likely that Congress’s reluctance to reduce aggregate domestic spending has some basis in the mass popularity of public programs, something Congress learned to its regret during the abortive shutdown of government in 1995, when people were forced to do without some government-provided services.

The disappointing economic recovery of the past three years is a salient case in point for a third benefit of public spending—stimulating consumer spending to speed the economy out of recessions. Since the end of the recession in the third quarter of 2001, employment has failed to resume acceptable growth. Dependence on tax cuts rather than public spending as an anti-recession device unnecessarily lengthened the slump in employment.

Many people have been lulled into believing that hard budget choices can be avoided, first by the surprising surpluses of the late 1990s and then by the low interest rates alongside a \$650 billion swing from surplus to deficit in the last three years. This reverie cannot last. In the next few years, as budget deficits become associated with higher interest rates, the political pressure to make difficult budget decisions will ratchet up. When that happens, a better gauge of the trade-offs between taxes, deficits, and public spending will be needed to make intelligent budget choices.

Three years of profligate, ineffectual budgets

Major policy changes in both taxes and spending have altered the budget picture dramatically over the past three years. The swing from surplus to deficit is the largest three-year decline in the budget surplus since World War II. Although temporary fiscal pump-priming makes sense, the budgets of the past three years have created long-term deficits and provided remarkably little stimulus.

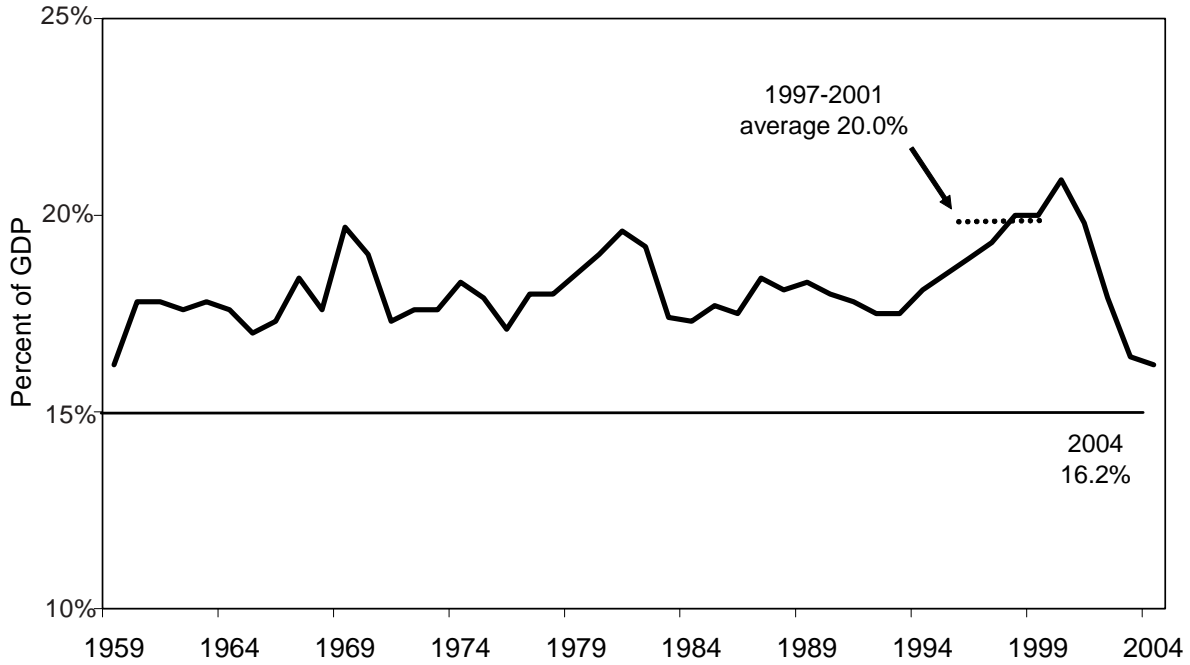
For fiscal years 1997 through 2001, the ratio of revenues to GDP averaged 20.0%. For FY2004, that ratio is projected to fall to 16.2% (CBO 2004c), the lowest level since FY1959 (OMB 2004) (see **Figure 1**). Both policy changes and changed economic conditions have contributed to the decline in revenue of 4.7% of GDP since FY2000, while tax policy changes have lowered revenues by 2.8% of GDP (Zandi 2004).

The historically low level of current revenues must be considered in light of the sharp rise in payroll taxes since 1959. The creation of Medicare and increases in Social Security benefits were the primary reasons that payroll taxes swelled from 2.4% of GDP in FY1959 to 6.3% in FY2004 (see **Figure 2**). In 2004, individual income taxes are expected to decline to 7.0% of GDP, lower than any year since FY1951. As a source of revenue, corporate income taxes have eroded from about 4% of GDP through 1970 to less than 2% in recent years.

Spending increases in the past three years have also contributed to higher budget deficits. Federal spending (excluding interest) has expanded from 16.1% of GDP in 2000 to 18.4% in FY2004 (CBO 2004c). **Figure 3** shows the three-year changes in non-interest spending since 1965. The bulk of this spending increase was in defense and health care (primarily Medicare and Medicaid). At the same time, domestic discretionary spending unrelated to security increased by 0.5% of GDP between 2001 and 2003, but fell as a share of GDP in 2004.

FIGURE 1

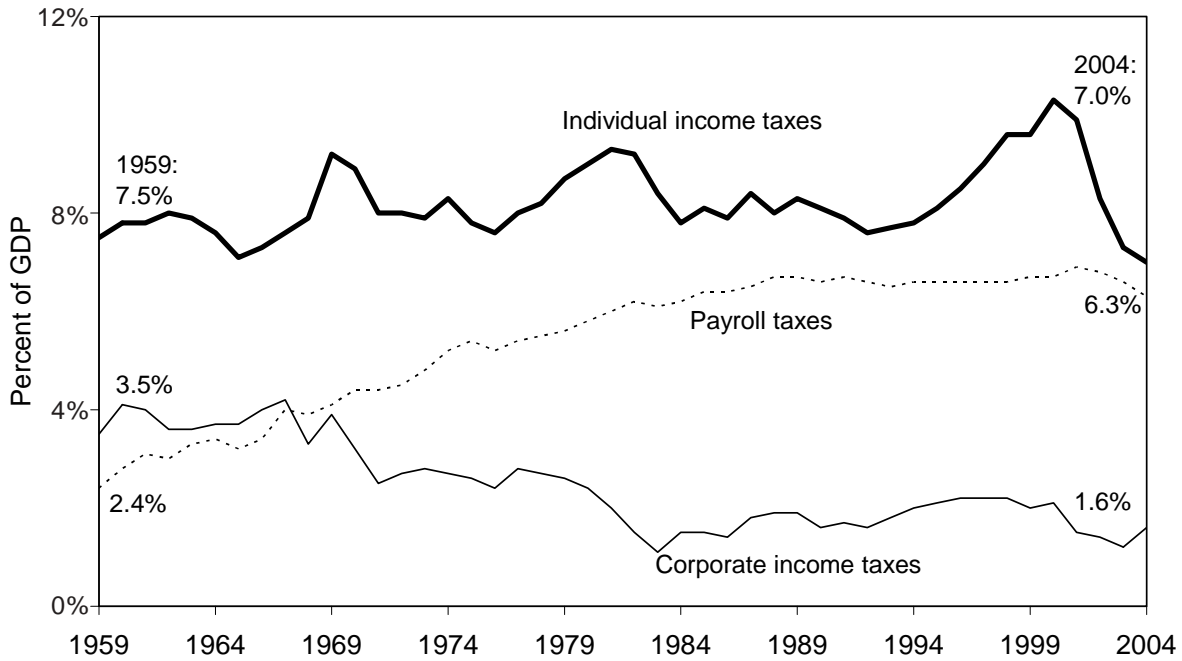
Receipts as percent of GDP, 1959-2004



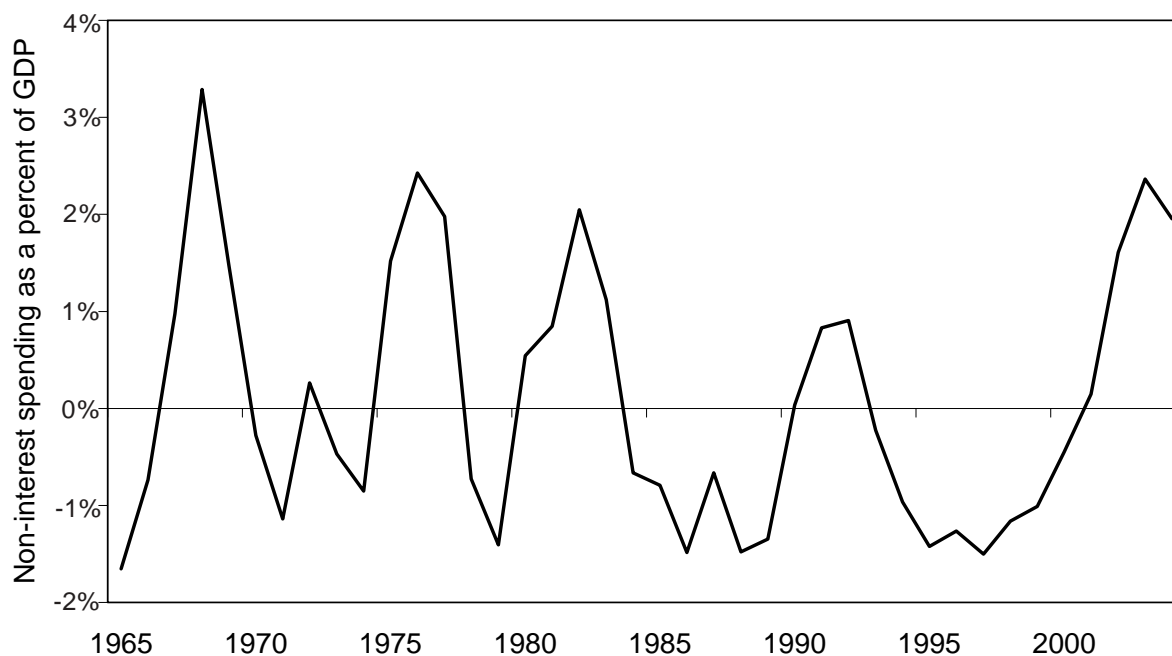
Source: CBO (2004c).

FIGURE 2

Trends in three largest sources of revenue, 1959-2004



Source: CBO (2004c).

FIGURE 3**Three-year change in non-interest spending, 1965-2004**

Source: CBO (2004c).

Since 2001 the budget has deteriorated from a surplus equivalent to 1.3% of GDP to a deficit of 3.6%.¹ The three-year erosion of the U.S. budget balance in 2003 is far and away the largest decline since World War II (see **Figure 4**).

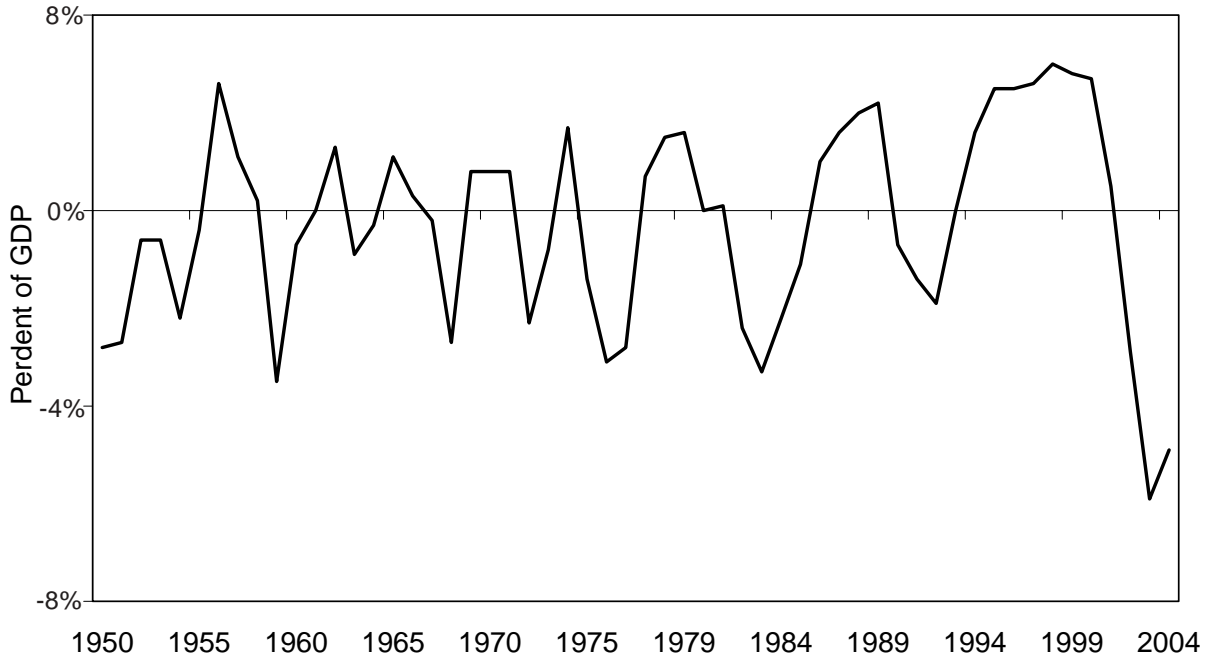
The 2001 recession and sluggish economic growth through early 2003 can account for only a modest portion of the extraordinary budget deterioration in the last three years. The Congressional Budget Office (CBO) estimates a “full employment” deficit by adjusting receipts and outlays to account for the effects of the business cycle. In other words, they estimate what the deficit would be if the economy was operating at sustainable, peak capacity. They then compare that “cyclically adjusted” deficit or surplus to that estimated “potential” GDP (CBO 2004d).

By this measure, the level of the budget surplus/deficit dropped by 4.3% of GDP in 2004, more than the spending-driven swing of 3.4% of GDP from 1965 to 1968 or the tax-cut-driven swing of 2.9% in 1985, and most of the observed 4.9% swing (see **Figure 5**). So the bulk of the deterioration of the deficit—4.3 out of 4.9 percentage points of GDP—has not been due to the 2001 recession.

Because the recession and slower growth do not explain the bulk of the deterioration in the budget, the economy cannot be expected to “grow its way out of the deficit” through any ordinary economic expansion. Policies that cause a temporary swing from surplus to deficit

FIGURE 4

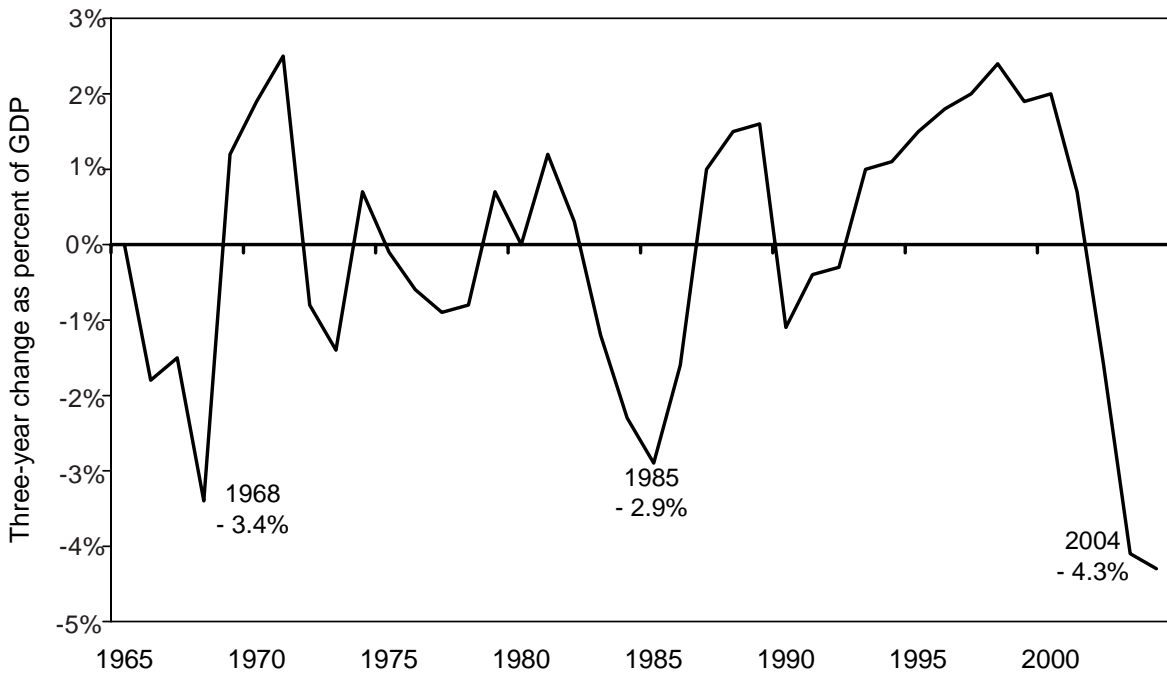
Three-year change in deficit as percent of GDP



Source: CBO (2004c).

FIGURE 5

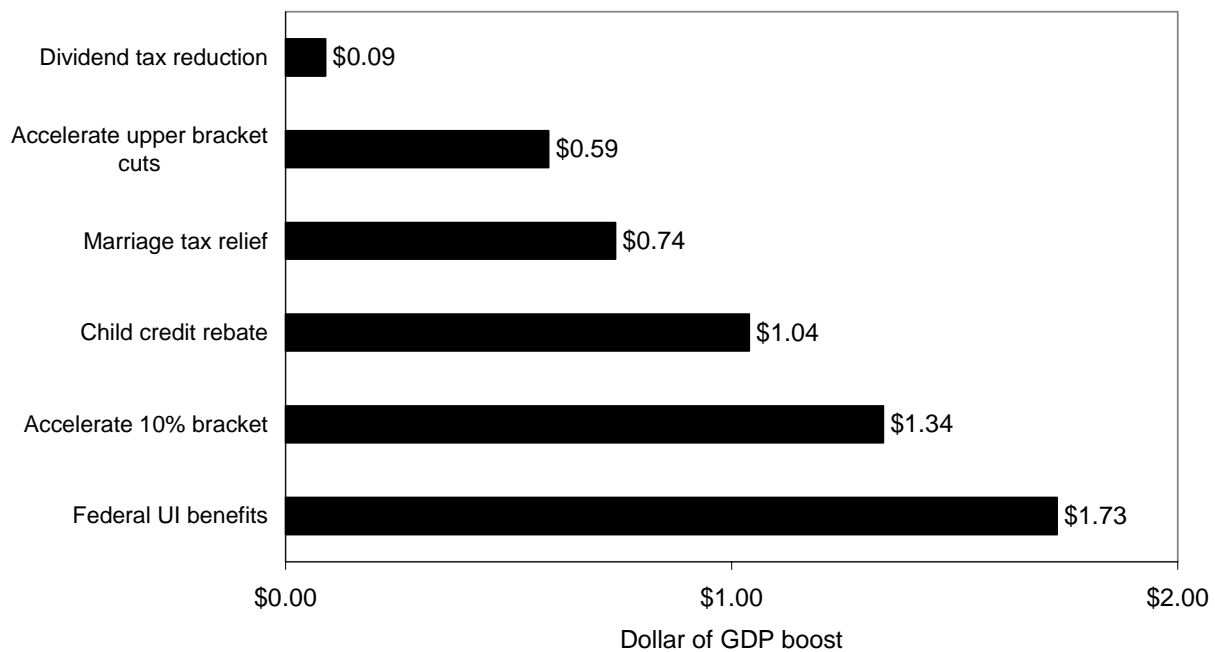
Cyclically adjusted budget balance, three-year change



Source: CBO (2004d).

FIGURE 6

GDP boost per dollar of deficit increase



Source: Zandi (2004).

could be justified to pull the economy out of recession. Borrowing in the face of unexpected contingencies, such as national security emergencies, is also reasonable. With the economy in recession in 2001 and with jobs declining through August 2003, it made sense to temporarily boost private and public spending with tax cuts and government spending increases. In the wake of 9/11, it made sense to forego immediate tax financing for emergency security and relief spending.

Unfortunately, the policy changes that have raised deficits, in the case of both tax cuts and spending increases, are not temporary and lack any delayed offsetting measures. Furthermore, as stimulus, the tax measures had a very low “bang for the buck.” Tax legislation in 2001 and 2003 both aimed to achieve permanent reductions in taxes, not to counteract the business cycle.

Much greater stimulus could have been provided with a different package that had the same increase in short-term deficits, without resort to permanent deficit increases. Zandi (2004) estimated the stimulative effect of alternative policies. As shown in **Figure 6**, he found that neither reductions of taxes on dividends nor upper-bracket tax rate reductions had strong effects compared to extension of unemployment insurance benefits, the new 10% tax bracket, aid to state and local governments, and the Child Tax Credit rebate.

Deficits that might otherwise have contributed efficiently to employment recovery over the past three years instead financed the opening wedge of prolonged tax cuts for persons with high incomes and great wealth. This is a major factor in the 10-year outlook’s lurch from surplus to

deficit. Zandi (2004) estimates that different policies based on the most efficient devices could have generated an additional two million jobs over the past three years and avoided permanent deficit impacts.

In January 2001, the Congressional Budget Office (CBO 2001) projected 10-year cumulative surpluses of \$5.6 trillion between FY2002 and FY2011. Putting aside tax cuts and spending increases since 2000, budget analysts have revised their assumptions and believe that the 10-year surplus estimate should have been \$2.2 trillion.² The CBO estimates that under current policies, with tax cuts extended as promised by the Bush Administration and the congressional majority, the 10-year outlook is now for a cumulative *deficit* of \$4.5 trillion. Thus, policy changes in the past three-and-a-half years have caused the 10-year budget balance to decline by \$7 trillion, an average of \$670 billion a year.

Deficits rise over time because the tax cuts are structured to increase, often referred to as “back-loading.” The motive is political—to conceal the full cost of controversial legislation. For example, the outlook for FY2011 has deteriorated by \$871 billion since 2000, after adjusting for subsequent changes in economic and technical assumptions. Instead of a \$345 billion surplus in FY2011, with no change in policy since 2000, current policies would create a \$530 billion deficit (CBO 2001, CBO 2004c) (see **Figure 7**).

Forecast for the future: Budget train wreck ahead

Absent new tax cuts, revenues should grow faster than GDP in the next few years, but not quickly enough to avoid a major budget crunch. By convention, the CBO baseline calculations are founded on the assumption that temporary tax cuts expire on schedule and the Alternative Minimum Tax (AMT) affects an increasing number of taxpayers. Under these assumptions, estimated revenues rise to 19.8% of GDP by 2014 (CBO 2004c).

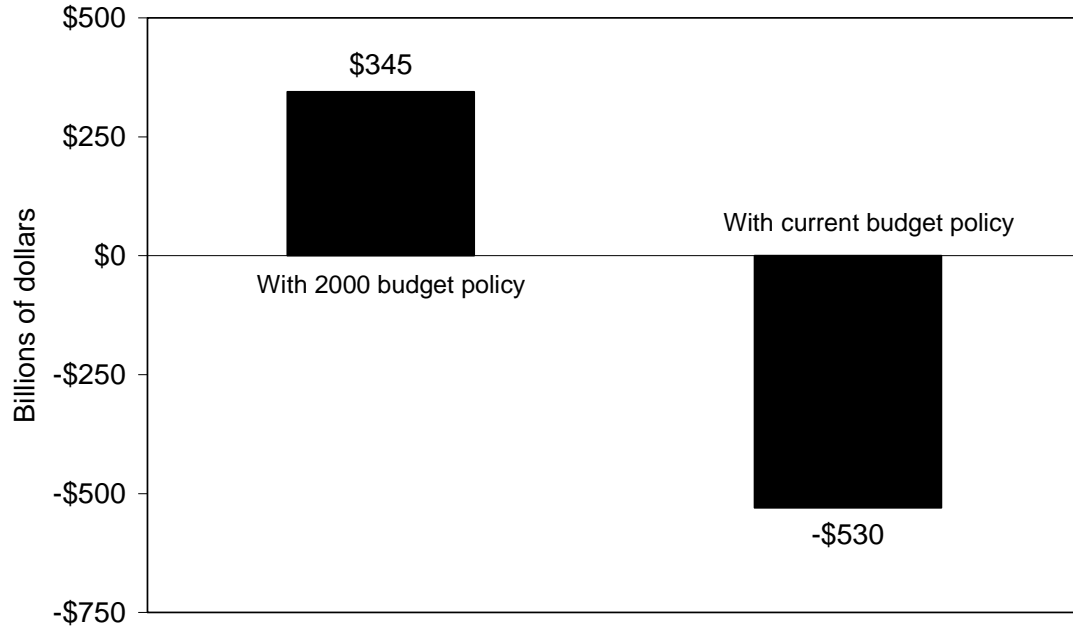
On the other hand, the Bush Administration and the majority leadership in Congress have promised to permanently extend all the expiring individual tax cuts. In addition, it is widely known among budget analysts that Congress will have to modify the Alternative Minimum Tax (a provision of the individual income tax affecting relatively high-income persons) to prevent a large increase in the number of people required to pay it. With expiring tax cuts extended and the AMT fixed on a modest scale, revenues would reach just 17.6% of GDP in 2014 (see **Figure 8**).

Comparing the revenues expected under prevailing policy with the CBO’s estimate for baseline spending highlights the budget problem. The CBO’s baseline for total spending remains within a few tenths of a percent of 20% of GDP throughout the next decade, 2.5 percentage points above the level of revenues with prevailing policy in 2014 (CBO 2004c).

The budget crunch in the next decade does not result from future growth in program spending. Except for interest payments, spending is not projected to grow more rapidly than GDP in the coming decade, prior to the retirement of most baby boomers. The CBO’s baseline has a limited increase in mandatory spending offset by a similar decline in baseline security and non-security discretionary spending, leaving total non-interest spending at 18.2% of GDP in 2014 compared to

FIGURE 7

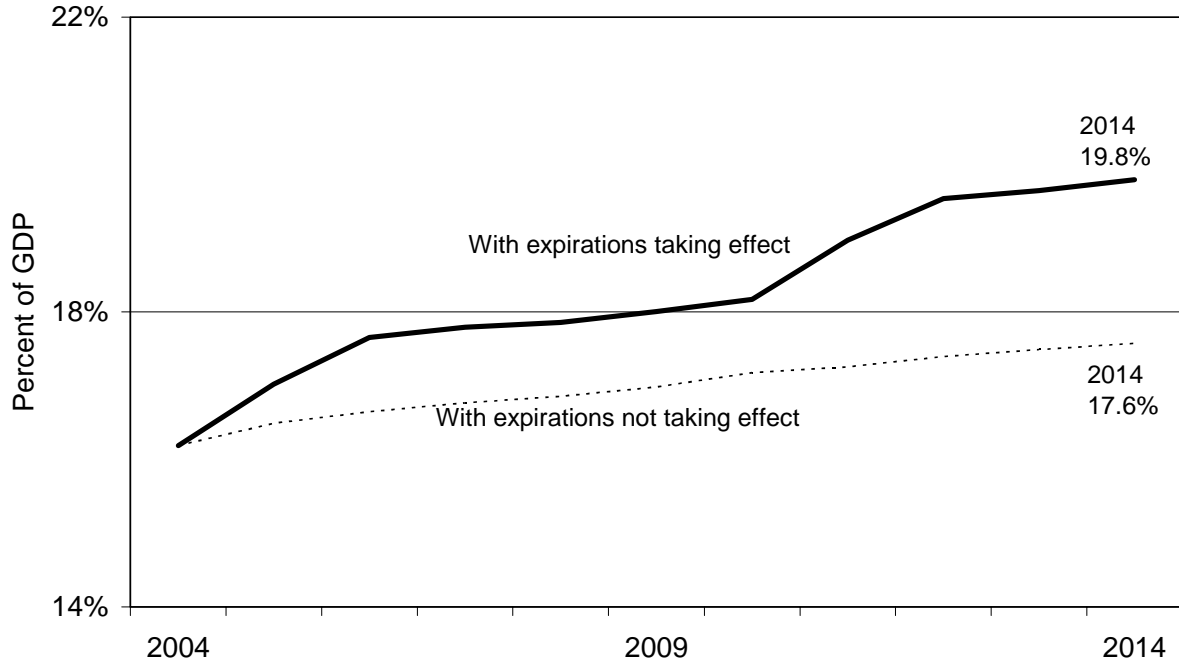
Projected surplus or deficit in FY2011



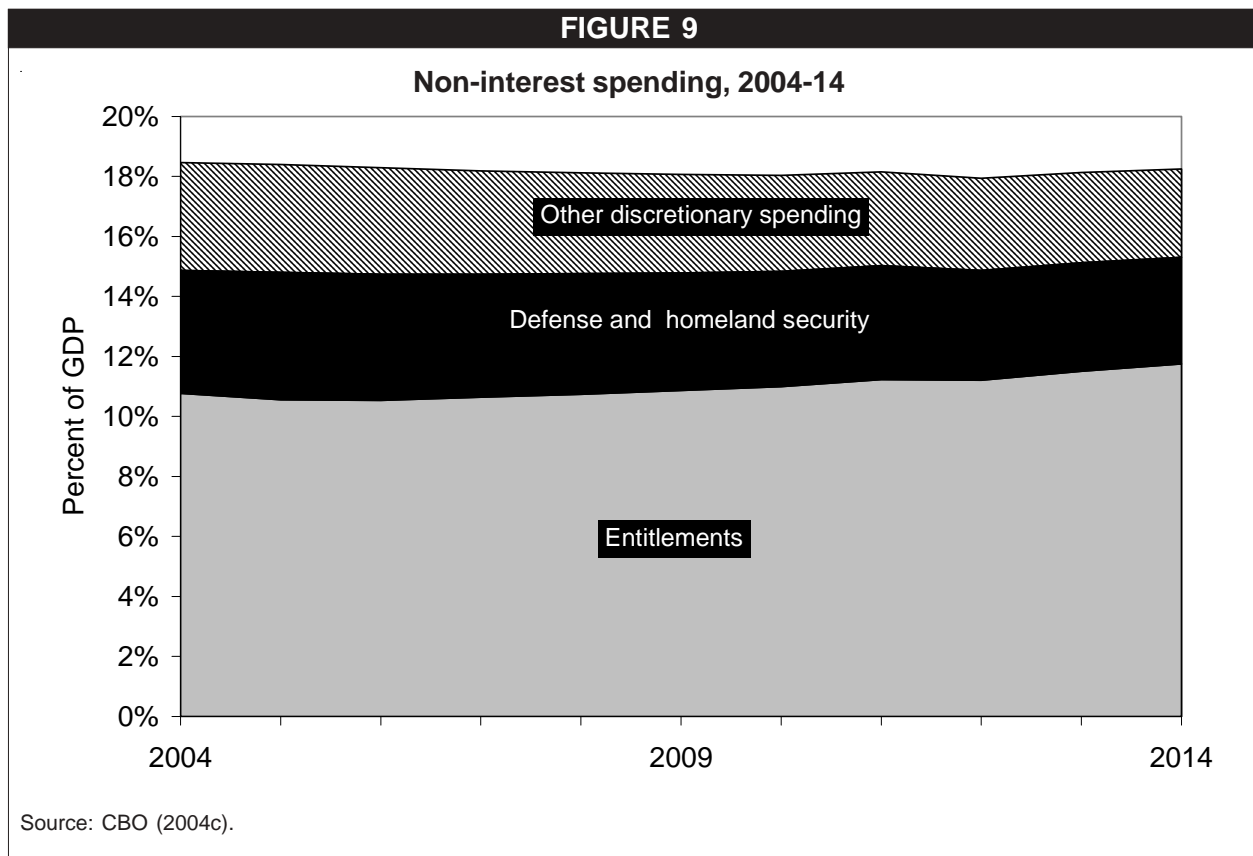
Source: CBO (2001), CBO (2004c).

FIGURE 8

Revenues, with and without expirations taking effect, 2004-14



Source: CBO (2004c) and authors' calculations.



18.5% in 2004 (see **Figure 9**).³ Baseline 2014 spending for entitlements, security, and interest alone totals 17.8% of GDP—more than exhausting the 17.6% for revenues with prevailing policy (see **Figure 10**).

Economists differ on many public policy issues, but they generally agree that fiscal policy should seek to prevent government debt from rising faster than gross domestic product. Otherwise, the burden of interest payments would increase over time. Unfortunately, the current trajectory for baseline spending and prevailing policy revenues creates such large deficits that the debt-to-GDP ratio steadily rises, from 36% at the end of FY2003 to over 50% by 2014 (see **Figure 11**).

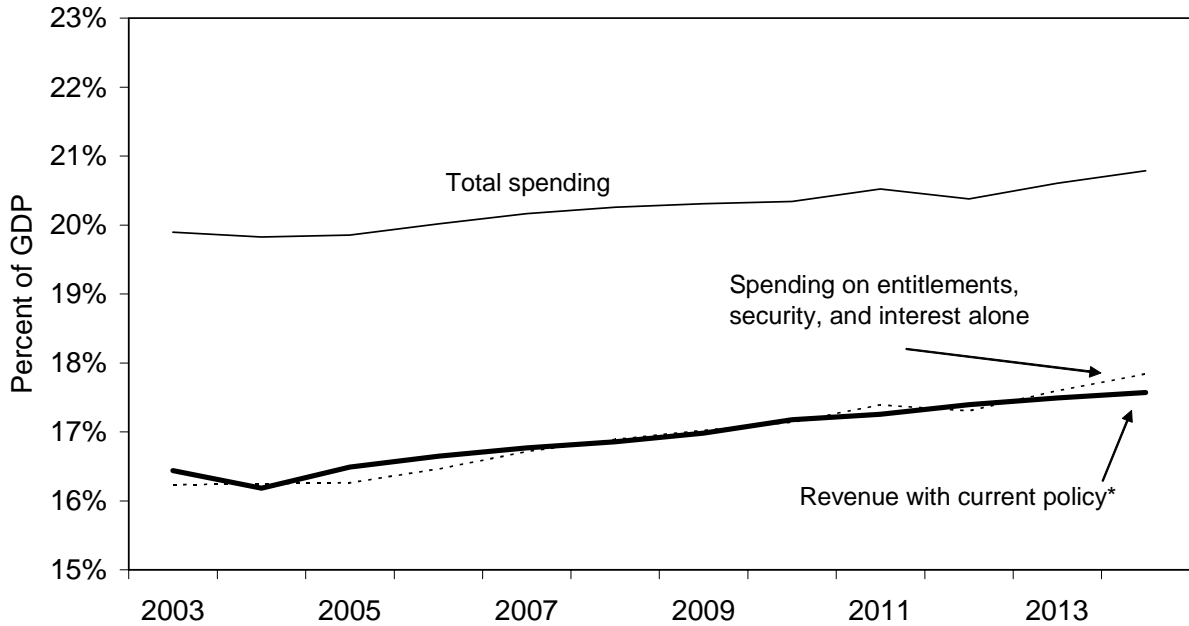
Non-security discretionary spending as buffer

In budget politics, non-security discretionary (NSD) spending traditionally resides at the bottom of the totem pole. In budget proposals, other major components tend to be held sacrosanct, leaving NSD spending to bear the brunt of any contemplated cutbacks. It is especially difficult in the current political climate for politicians to seriously oppose increases in the security budget. Likewise, specific reductions in entitlements are seldom proposed in budget packages.⁴

On the revenue front, the Democrats seem to have put a ceiling over tax increases, ruling out higher burdens for those with incomes under \$200,000, while promising relief to the “middle class” and corporations. According to the Kerry campaign, their proposals would raise \$860 billion over 10 years—well under 1% of GDP annually.

FIGURE 10

Revenues and spending under current policies, 2003-14

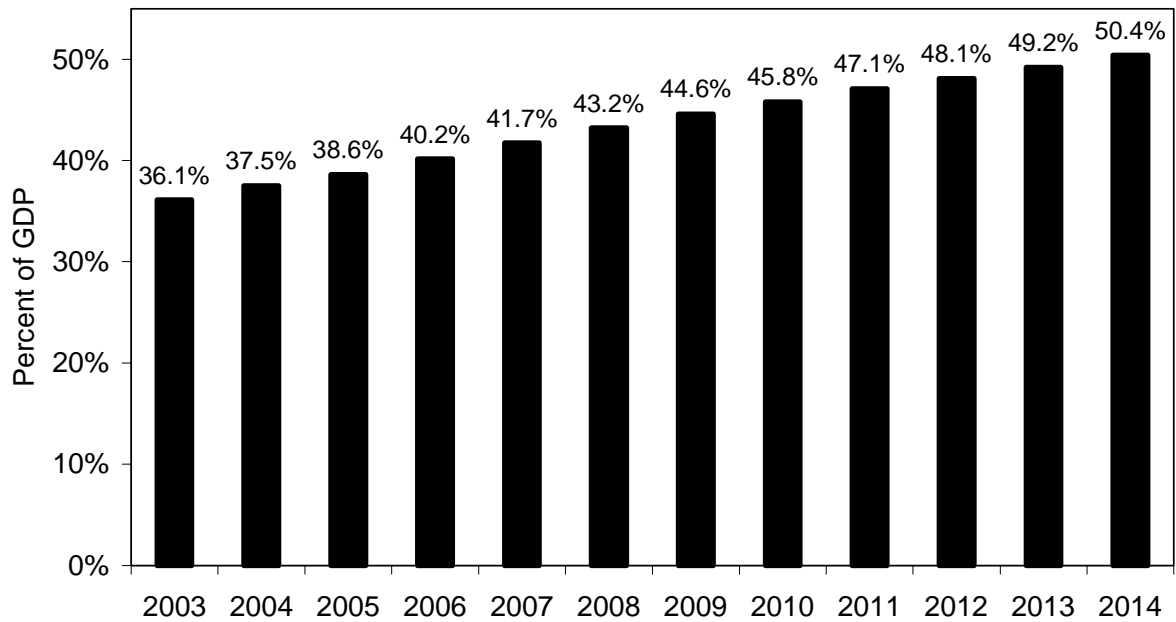


* Assumes modest AMT fix.

Source: CBO (2004c) and authors' calculations.

FIGURE 11

Unsustainable rise in federal debt as a share of GDP under current policy, 2003-14



Source: CBO (2004c) and authors' calculations.

When politicians propose budgets that claim to “cut the deficit in half in five years,” they are trying to echo the budget commitments of the late 1980s and early 1990s “to balance the budget in 10 years.” Under the current baseline, with no policy changes such as phase-outs of some tax cuts, the deficit falls to roughly half its 2004 level. Accordingly, all budget proposals claiming to cut the deficit in half are in fact shifting around other resources, not making any affirmative, discretionary actions that generate net budget savings.

The budget plans of the presidential candidates and budget committees embody the implicit assumption that any unanticipated increases in security-related spending, a desire for more rapid deficit reduction occasioned by financial market problems, or the costs of coping with natural disasters will be offset by cuts in domestic discretionary spending. *There is no budget slack*, as Eugene Steuerle (2003) pointed out. Such an operating policy would utterly fail in the business world. If the airlines fueled their planes this way, there would be crashes every week.

What are the implications of balancing the federal budget in 10 years?

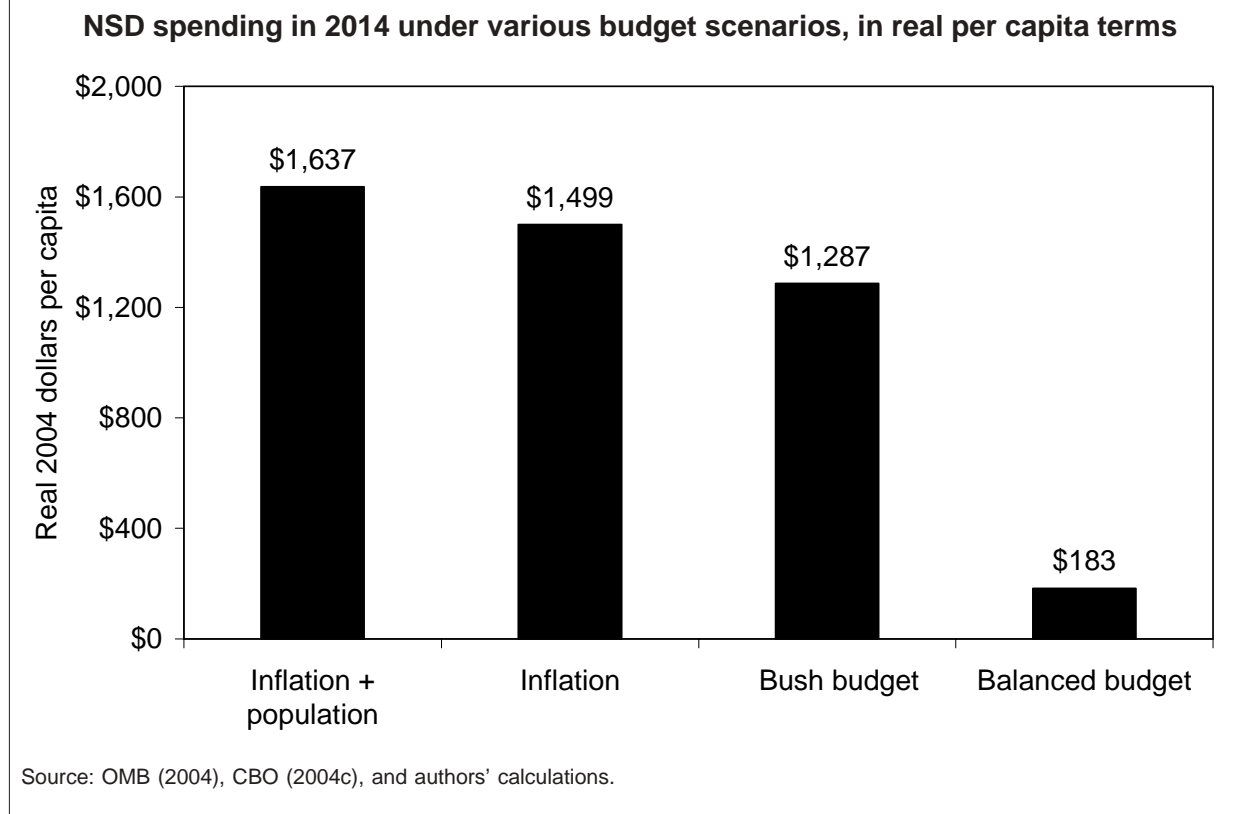
The Bush Administration’s budget proposal of February 2004 specifies non-security discretionary spending levels only through FY2009, the next five years. It calls for NSD spending to increase by only 1% nominally over five years, despite expected inflation of 11% and population growth of 5% over that period. The implied cut in real per capita NSD spending has not received the attention it deserves, partly because the cuts have not been identified on a program-by-program basis.

The CBO’s convention for estimating the baseline for future NSD spending takes account of inflation, but not increases in population, program caseload, or other program cost increases in excess of inflation. In FY2004, NSD spending is \$1,637 per capita. If NSD spending increases only with inflation, it falls on a per capita basis because of population growth. To extend the Bush Administration’s budget beyond 2009, the CBO assumed that spending would grow with inflation between 2009 and 2014. If NSD spending does not grow with population, in real per capita terms it would fall to \$1,499—a drop of 21% relative to present-day levels.

Achieving a balanced budget in 2014 solely through cuts in NSD spending would require cuts that could be described as either draconian or implausible. As noted earlier, baseline spending for entitlements, security, and interest largely exhausts the revenues projected with the extension of recent tax cuts and a modest AMT fix. Although steady and aggressive cuts in NSD spending over the next 10 years would generate some interest savings, the result by 2014 would still be an 89% reduction of current levels of real per capita NSD spending. These scenarios are summarized in **Figure 12**.

Previous swings in guns and butter: Harbingers of the future?

Previous slides into deep budget deficits (see Figure 5), over and above the effects of the business cycle, provide some indication of what may be in store. Understanding the recoveries from the

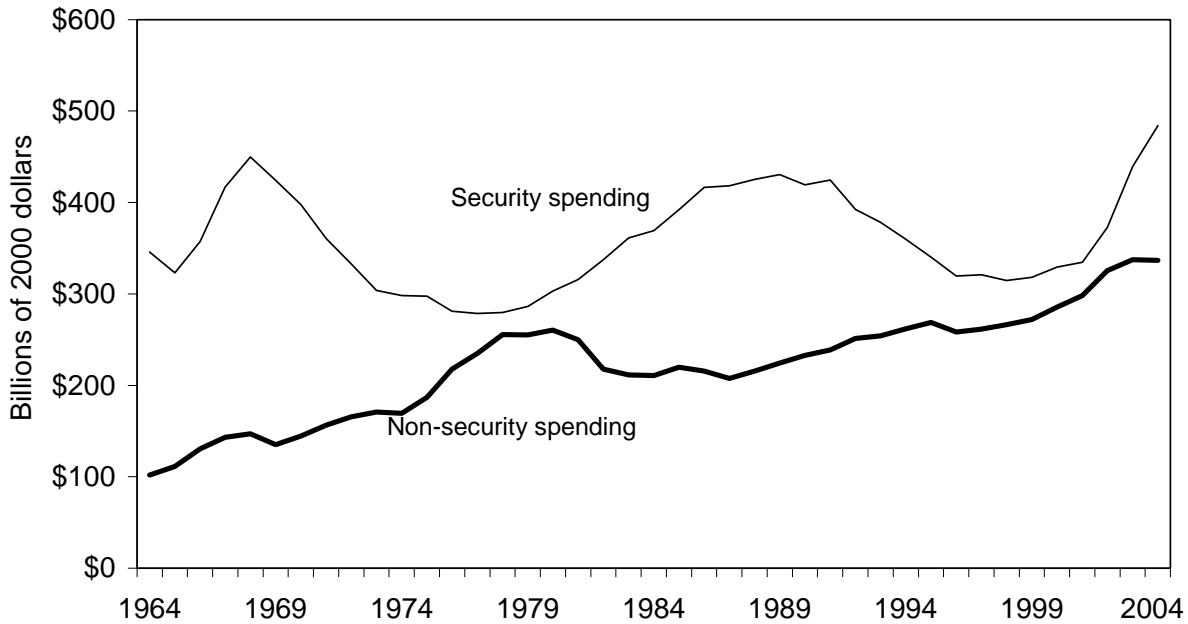
FIGURE 12

two budget slides in 1965-68 and the early 1980s requires first considering both how the deep budget holes were dug and the alternative routes to come back out of those holes.

Between 1965 and 1968, total outlays rose by 3.3 percentage points of GDP on a cyclically adjusted basis. With modest revenue increases over those three years, the deficit expanded by 2.9% of GDP. Over the next three years, the cyclically adjusted deficit shrank by 2.8% of GDP, with spending down 2.2 points and revenues up by 0.6 points.

Adjusted for inflation, security spending rose 39% between 1965 and 1968. Over the next three years, however, it was cut back by 20% and continued to decline through the late 1970s. Real non-security discretionary spending rose 32% from 1965 to 1968. That spending was cut in 1969, but resumed a steady rise through 1980. Spending on the space program was halved between 1968 and 1973, but it was the only major NSD category with a large spending cut in the period after 1968. Largely driven by creation of Medicare and benefit increases in Social Security, mandatory spending rose 45% from 1965 to 1968, and by another 29% over the following three years. In summary, spending on security and the space program bore the brunt of the cuts that lowered the deficit from 1968 to 1971. Other discretionary spending was spared substantial cuts.

The budget balance plunged even more in the early 1980s than in the late 1960s, as shown in Figure 5. The run-up in security spending in the early 1980s was less steep than that of the late

FIGURE 13**Swings in spending on guns and butter, 1964-2004**

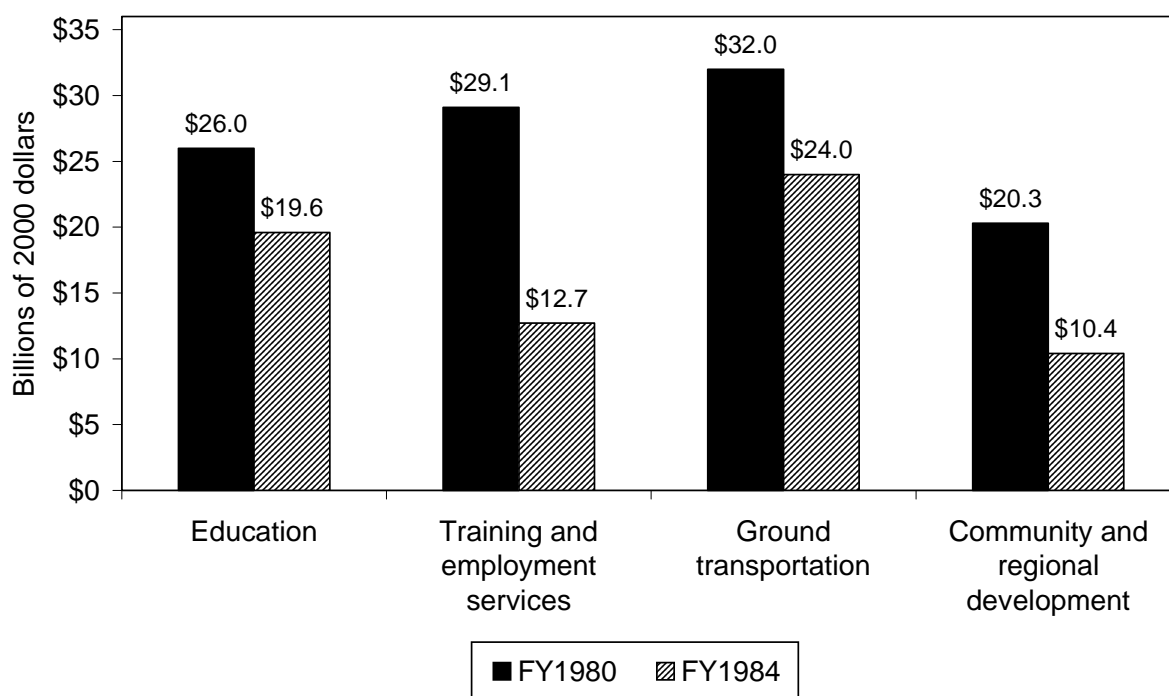
Source: OMB (2004) and authors' calculations.

1960s and, unlike the earlier period, was accompanied by deep cuts in non-security spending (see **Figure 13**). Between 1980 and 1987, real security spending rose by 37% while real non-security discretionary spending was cut by 17%. Since the population also grew 7% over those seven years, real NSD spending was cut by a quarter in per capita terms.

The cutbacks in NSD spending during the 1980s may be a harbinger of the types and extent of spending cuts that could occur in the years ahead. Between 1980 and 1984, inflation-adjusted spending was cut by 25% in education, 56% in training and employment services, 49% in community and regional development, and 25% in ground transportation (see **Figure 14**). In the coming budget crunch, it would be unwise to repeat such slashing of investments in the workforce of the future.

Budget trade-offs in the next decade

The fact that revenues under current policies can only cover baseline spending for entitlements, security, and interest with nothing left over for NSD spending (as shown in Figure 10), clarifies the budget bind. Simply allowing NSD spending to keep pace with inflation would require additional financing equivalent to 3.2% of GDP in 2014. Cutting NSD spending enough to achieve a balanced budget without changes in current policy on taxes and other spending would require NSD spending of only 1.2% of GDP in 2014.

FIGURE 14**Notable cuts in spending, 1980 and 1984**

Source: OMB (2004).

As a practical matter, Congress could not plausibly cut per capita NSD spending by 60% in the next decade to balance the budget. The public will strongly resist cuts of that magnitude for items such as law enforcement, education assistance, national parks, the judiciary, the weather service, health research, and drought relief. NSD outlays have grown since the administration of George H.W. Bush. They slowed down, but still grew, during Clinton's terms in office, and they took off after 2000 during the George W. Bush Administration. Ever since Ronald Reagan, politicians have promised to root out "waste, fraud, and abuse" in government spending. In practice, when programs of any size were cut, it was because of rejections of their goals, not any findings of waste, fraud, or abuse.

As a matter of undeniable arithmetic, making room for the equivalent of 2.0% of 2014 gross domestic product in the budget for NSD—enough to keep pace with inflation and population—requires asking critical questions about four other fiscal areas:

- 1) Should a balanced budget in the next 10 years be the goal, or should some budget deficits be accepted?
- 2) Should security spending be reduced from its current levels?

- 3) Should entitlement spending, particularly in health care, be constrained?
- 4) Should revenues be raised through tax increases?

The remaining part of the budget, interest spending, is off limits. Each of the four budget fronts listed above is considered in turn on the following pages from the perspectives of history, economic effect, and potential to provide space for NSD spending.

Should some budget deficits over the next 10 years be accepted?

From the appearance of large non-recessionary deficits in the 1980s, to the emergence of budget surpluses in the late 1990s, it became *de rigueur* to propose budgets that achieved balance within 10 years. For the past three years, only the Senate has proposed and debated 10-year budgets, but its budget resolutions have projected eventual balance largely through unrealistic and unspecific cuts in NSD spending. The House and the Bush Administration have shifted to five-year budgets that promise “to cut the deficit in half,” with the implication that balance could be achieved within 10 years.

Economists generally agree that fiscal policy should avoid sustained increases in the debt-to-GDP ratio. Episodic departures during employment slow-downs or booms would be appropriate. That guideline would be violated over the next 10 years under the prevailing fiscal policy of baseline spending increases and no increase in taxes (or in the number of people caught up in the Alternative Minimum Tax).

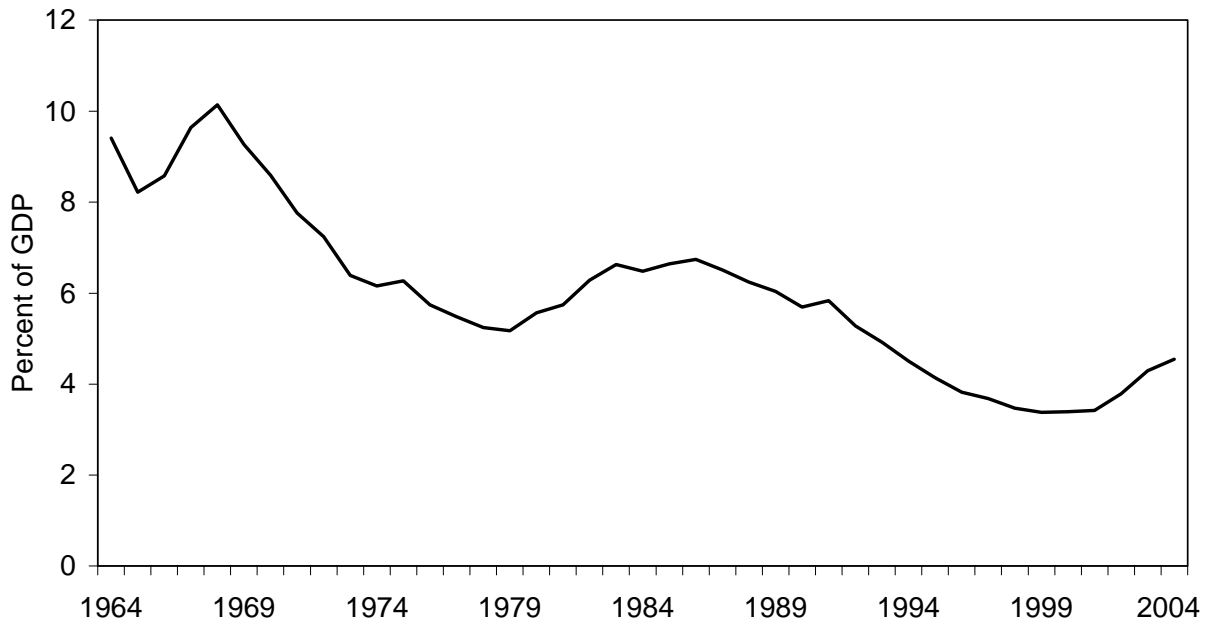
Economists do not hold that a balanced budget is necessarily preferable to one under which debt does not grow more rapidly than GDP. To the contrary, it is recognized that moderate deficits and growth in federal debt can be sustained indefinitely:

Other approaches could also create sustainable budgetary conditions. For instance, a budget that was permanently balanced would freeze the level of federal debt. Thus, as the economy grew, debt would gradually fall as a share of GDP. However, sustainable policies do not require balanced budgets. As long as deficits do not grow relative to the economy, the government could in principle keep the budget in deficit forever (CBO 1997).

Under the assumptions of CBO’s long-term simulations, if the government stabilized the NIPA deficit at its current share of GDP (about 1.7%), the debt would remain close to its current share of GDP indefinitely.

A deficit of 1.7% of GDP would imply an acceptable level of \$200 billion for the current calendar year. A similar view is put forth by the Government Accounting Office (GAO 1996). The logic is simple: A stable debt-to-GDP ratio—debt growing at the same rate as GDP—implies a stable interest payment-to-GDP ratio. The latter implies no growing burden of servicing debt over time, even though debt constantly grows.

Given historic average rates of economic growth, deficits of roughly 2% of GDP are consistent with a stable debt-to-GDP ratio. Each year’s deficit adds a comparable amount to the debt. The U.S. debt-to-GDP ratio will soon reach 40% of GDP, even with a prompt return to budget discipline. With nominal GDP growth of 4.4% (as projected by CBO over the next de-

FIGURE 15**Security spending as a percent of GDP, 1964-2004**

Source: OMB (2004).

cade), the deficit could run as high as 1.76% of GDP and not breach a ceiling of 40% debt-to-GDP ratio.

As a practical matter, because recessions regularly come along to push up the desirable size of the deficit, we need to aim for smaller deficits in good times to keep the average deficit at 1.8% of GDP over the long term.

The goal of lowering future deficits sufficiently to attain a stable projected ratio of debt to GDP is daunting, but still easier than eliminating deficits altogether. Revising the deficit goal from budget balance to a stable debt share of GDP would provide fiscal room in the range of 1.0% to 1.5% of GDP by 2014. That would go a long way toward buttressing domestic spending, but still fall short of the 2% required for GDP to keep pace with inflation and population.

Should security spending be reduced?

Reducing security spending (defense and homeland security) offers a second possibility to make space for NSD spending. Security spending reached a peak of more than 10% of GDP during the Vietnam War in the late 1960s (see **Figure 15**). It fell by five percentage points of GDP over the next decade, before rising again to 6.7% of GDP by 1986. With budget austerity and the end of the Cold War, security spending resumed its decline relative to GDP and reached 3.5% of GDP by the late 1990s. Since then, security spending has rebounded to 4.1% of GDP.

Although decisions on security spending are not necessarily driven by economic calculations, they do have economic consequences. In an economy at full employment, higher security spending reduces the resources available for civilian purposes, in either the private or public sectors. In addition, security spending pulls highly trained technical experts out of civilian research that might raise future productivity. Some have argued that the scientific and technical personnel freed up by the end of the Cold War helped to spur the productivity boom of the late 1990s.

To the extent that U.S. military and diplomatic efforts succeed in lowering future levels of security spending, that will create more fiscal space for NSD spending. But, at today's level of 4.1% of GDP, security spending no longer provides as much potential to create space for NSD spending as it did 35 years ago, when security spending was at 10.5% of GDP.

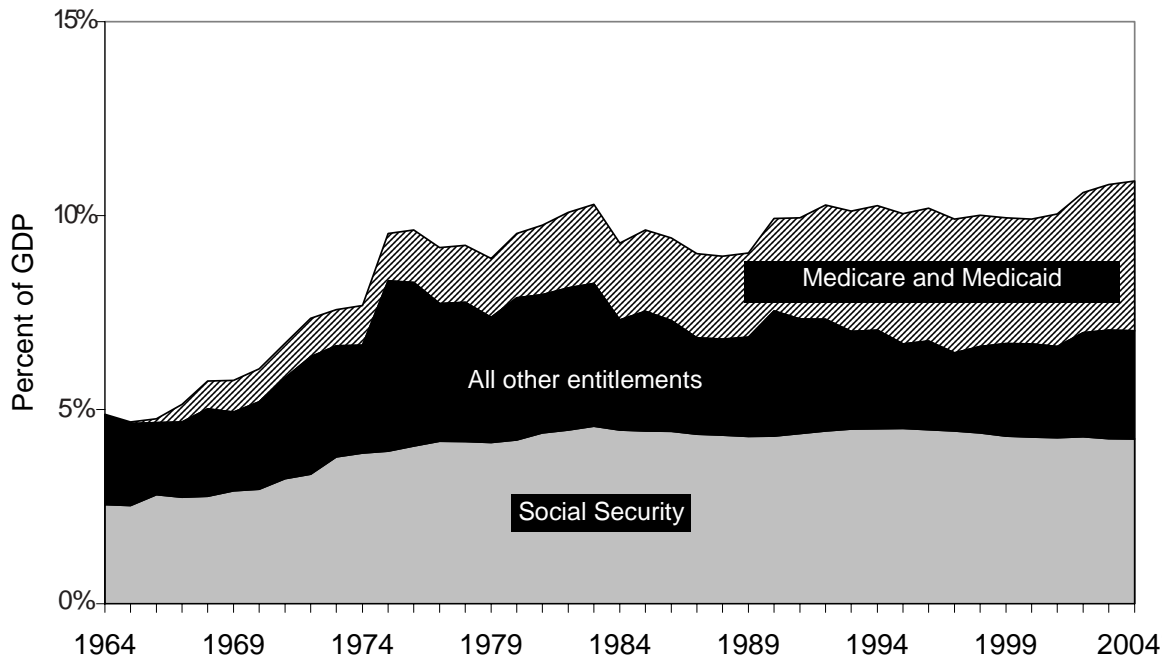
One possible source of savings is increased sharing of security burdens with other nations, especially wealthy, industrialized ones in the European Union and the Far East. The Bush Administration has already indicated an interest in moving in this direction, but the freed-up resources could be deployed to the Middle East and other U.S. commitments around the globe.

Experience with wars in the Persian Gulf and Afghanistan suggest that the cost of focused, military missions has decreased, thanks to unmatched U.S. technology. By contrast, the costs of subsequent pacification and "nation-building" efforts have been greater than other military missions in recent decades. An important budget question will be the determination of the United States to maintain or expand the scope of present and future military operations and nation-building. Expansion exacerbates budget pressures and raises the question of how financing can be achieved. Contraction consistent with the needs of national security provides opportunities to alleviate budget pressure.

Should entitlement spending be constrained?

A third source of potential budget savings for maintaining NSD spending is in the area of entitlements.⁵ Such spending is not subject to the annual appropriations process that governs discretionary spending. The largest entitlement programs include Social Security (4.3% of GDP); Medicare (2.6%); Medicaid (1.5%); federal retirement and disability (1.2%); unemployment compensation (0.4%); food and nutrition (0.4%); Supplement Security Income, or SSI (0.3%); veteran's income support (0.3%); and the Earned Income Tax Credit (0.3%) (CBO 2004c) (see **Figure 16**).

Federal spending on entitlements has risen from 4.6% of GDP in FY1966 to 10.8% this year. Over this period, Medicare, Medicaid, and SSI have taken effect and benefits have expanded for those three programs as well as for Social Security and food assistance. As a result, entitlement spending reached 10% of GDP by the early 1980s. Although both Medicare and Medicaid have doubled from their combined 1.9% of GDP since the early 1980s, most other entitlements (including Social Security) have fallen relative to GDP. The CBO projects that entitlements will remain under 12% of GDP for the next decade. After that, the combination of the retirement of the baby boom and the escalation of health care costs will cause entitlement spending to rise substantially

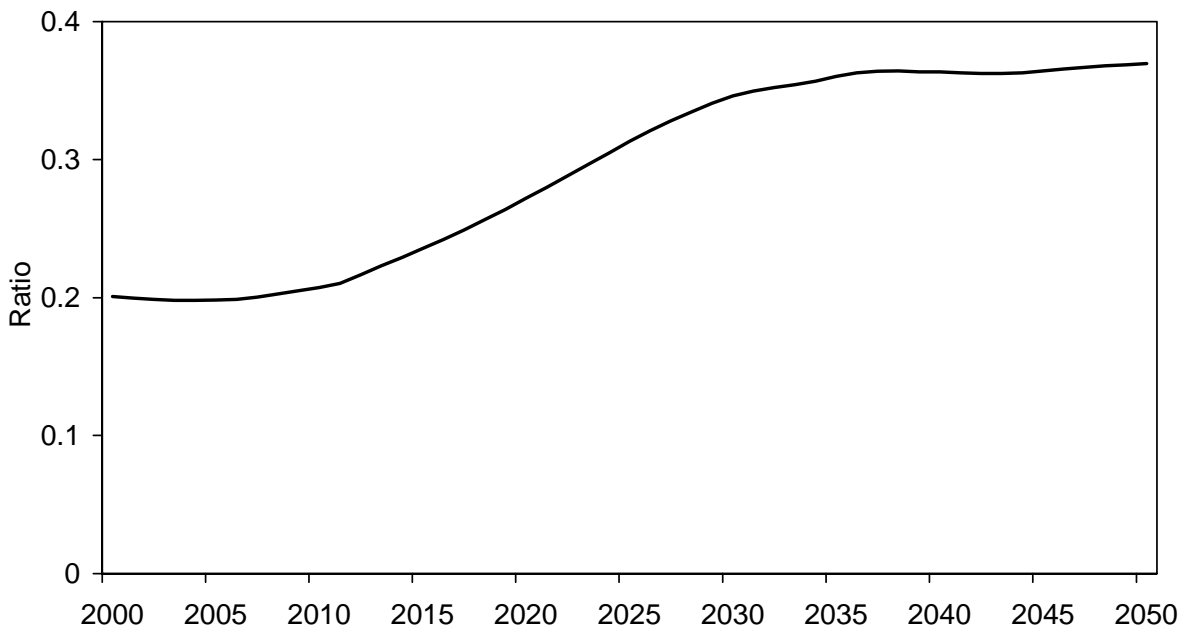
FIGURE 16**Entitlement spending as percent of GDP, 1964-2004**

Source: OMB (2004).

relative to GDP. Over the next 75 years, the projected expansion is between 10% and 15% of GDP (CBO 2003).

The long-term escalation of entitlement costs is driven to a limited extent by the cost of retirement benefits for the baby boom generation, but much more by projected increases in health care spending. It should be noted that the anticipated increase in spending, if fully accommodated, would make the U.S. public sector comparable to those in Europe. The question of tenability here is political, not economic. The problem is how political decision-makers will treat this possibility. Increased public spending is not an issue of national bankruptcy or economic breakdown, as often hinted at in popular discussions. If revenues expand to cover the expansion of health care spending, however large, no debt problem would arise. Projections sometimes assume that increased spending is not matched by revenues, giving rise to explosive, utterly unlikely debt expansion and interest costs.

Retirement of the baby boom accounts for the rising cost of Social Security relative to GDP and contributes to the costs of Medicare and Medicaid. Trends in the population currently 35 and older and trends in longevity point to rapid growth in the population age 65 and older over the next 30 years. The Census Bureau recently projected that the population age 65 and older will grow by 2.5% a year over the next 30 years.

FIGURE 17**Ratio of population age 65 and older to population age 18-64**

Source: U.S. Census Bureau.

The Census projection of 0.5% annual growth in the population between the ages of 18 and 64 over the next 30 years depends on assumptions about future births and immigration. Plausibly higher rates of births and immigration would not raise the growth rate in the 18-64 population enough to close much of the gap with the 65 and older population.

The Census projection implies that the 65 and older population will grow 2.0% faster than the 18-64 population and that the ratio of the former to the latter will go from 0.198 this year to 0.357 in 2034, as shown in **Figure 17**. The pattern of projected Social Security spending as a share of GDP resembles the curve in Figure 17: it remains just over 4% of GDP for the next decade, then rises steadily for the next two decades to just over 6%, before leveling off for the rest of the century (CBO 2003).

Retired people, like children and others who do not work, must depend on the fruits of others' labor, whether their income derives from transfers (by government, family, or charity) or from wealth. Most consumption derives from current production; one cannot put aside a loaf of bread or a doctor's visit for consumption 10 years later. Thus, the central challenge seemingly posed by demography is the shrinking share of the population that is of working age.

But the ominous comparison of the ratio of retirees to workers now and in the future is misleading in two basic ways. One is simply an arithmetic distortion. It is true that the elderly popula-

tion will increase more rapidly than the working-age population. But workers do not provide solely for the elderly. They provide for themselves and for the young as well. The more relevant comparison is that of the working population to the total population. As Robert Eisner pointed out in 1997:

In 1995, for every 1,000 people of working age there were 710 young and old potential dependents. In the year 2030, the intermediate projection puts the number at 788. This means that those 1,000 people of working age would have to support 1,788 people—themselves and their dependents—instead of 1,710, a 4.56% increase in their burden (Eisner 1997).

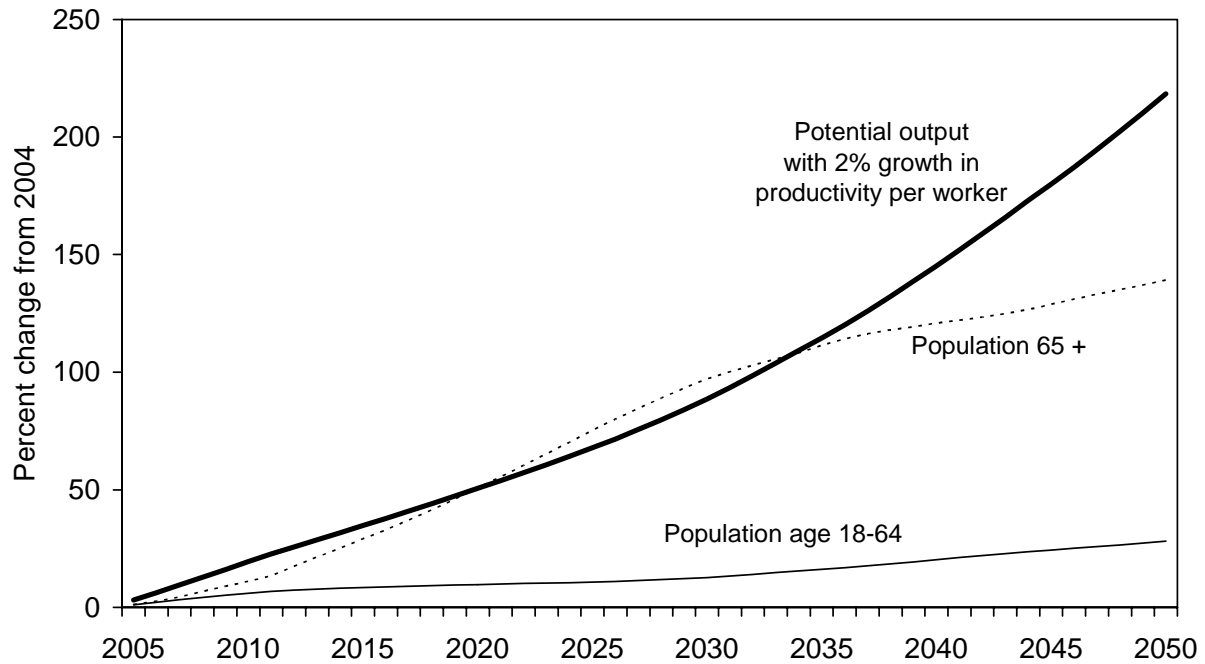
According to the most recent Census Bureau population projections, the ratio of total population to the working-age population rises by 9.0% over the next three decades. While somewhat faster than the numbers available at the time of Eisner's comments, that increase is entirely manageable over three decades.

The other missing factor in the retiree/worker simplification is productivity growth. At one time, the share of the U.S. workforce employed in agriculture was much greater than today, but population growth produced no Malthusian catastrophe. Investments in both human and physical capital today can raise productivity in the future to provide the services and consumption for a growing number of people, over and above growth in the workforce.

As noted elsewhere in this report, public investment complements private-sector production, in addition to being productive in and of itself. As well, critical to addressing the challenge of supporting the retirement of the baby boom generation is the adoption of policies that maximize the productivity of the future workforce. Investments that improve the skills and health of today's young people can raise their output in the future, thereby providing a constructive response to the demographic challenge. By the same token, cutbacks in education and training, such as those that took place in the early 1980s, will exacerbate the pressures implied by the baby boom's retirement.

Faster growth of productivity would alleviate some of the fiscal problems in the United States, even though it could also mean faster growth of Social Security benefits, insofar as earnings keep up with productivity. First, current retirees would not see an increase in benefits, so the effect on benefit costs would be lagged. Second, a faster growing economy would reduce the relative size of other government programs not linked to productivity. These differences are amply borne out in the contrast among scenarios plotted out by the actuaries of the Social Security Administration. In the benign scenarios for faster productivity growth, future shortfalls in the program under more pessimistic assumptions simply melt away (Board of Trustees 2004).

Productivity growth at recent and projected rates should allow society to share increased prosperity while maintaining current commitments on entitlements. The CBO projects that economy-wide labor productivity will grow at an average 2% rate for the next decade. If that productivity growth is maintained for the next 30 years and the ratio of hours worked to the working-age population remains stable, then the nation's output will grow by the same average rate as the nation's population age 65 and over (see **Figure 18**). In fact, if potential output chugs ahead at

FIGURE 18**Growth of population and potential output, 2005-50**

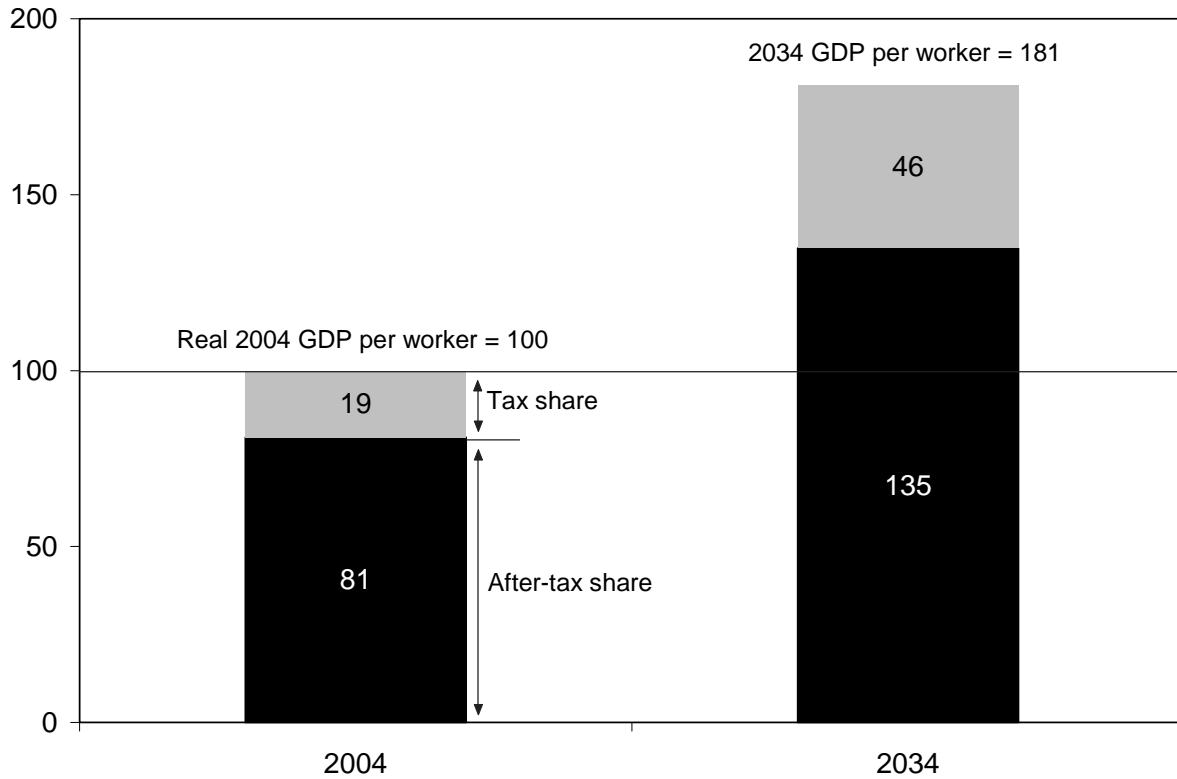
Source: U.S. Census Bureau; CBO (2003); authors' calculations.

a steady 2% per year, it will grow more than the 65 and older population until 2020 and it will permanently overtake the over-65 population in 2034.

With 2% productivity gains and gains in potential output of 81% over three decades, the working-age population could “sacrifice” relatively modest contributions to the elderly to meet the projected costs for retirement benefits and still enjoy rising after-tax incomes.

Among entitlements, health care costs pose the second major long-term challenge to the budget—and to the economy generally. Because health costs tend to increase faster than other costs, health care spending—both public and private—has risen steadily as a share of national output.

Although, as emphasized, both demography and health care costs pose major challenges with or without federal retirement programs, it is important to recognize that maintaining those programs need not threaten a prosperous future. Let us consider what will happen to after-tax GDP per capita if taxes are raised by the additional 6% of GDP required to fund the projected increases in Social Security and Medicare between 2004 and 2034. While the population age 65 and over is expected to grow by 108% over the next 30 years, the population between 18 and 64 is expected to grow only 16%, and the total population by 28%. Assuming that the national labor input grows to keep pace with the population age 18 to 64 and that this age group’s productivity rises by the

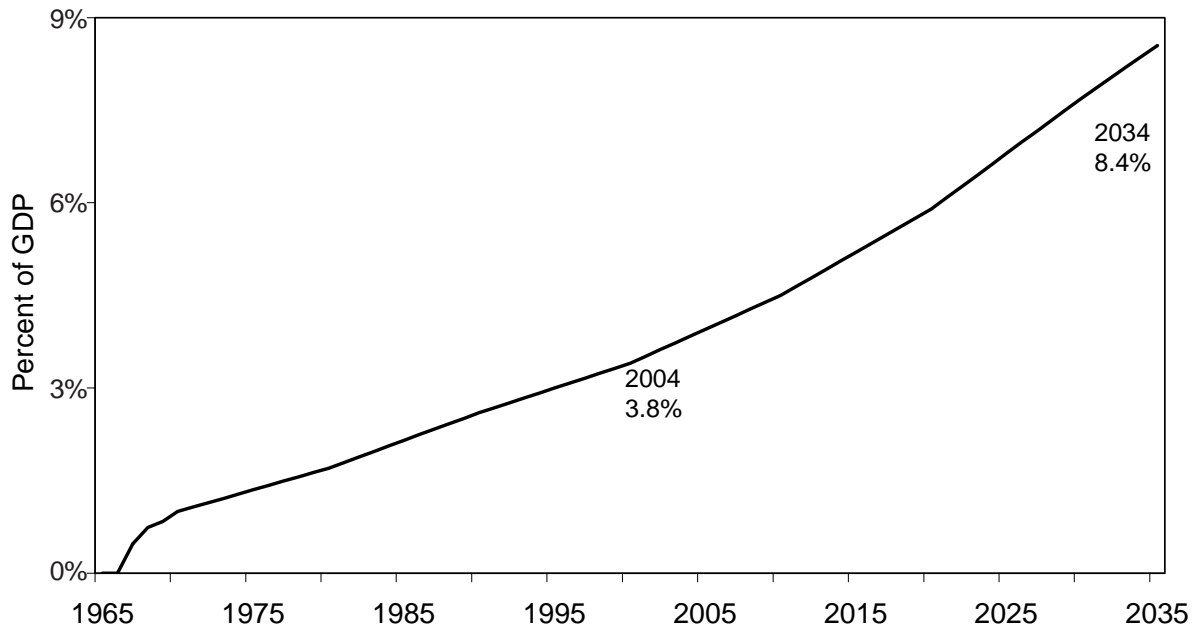
FIGURE 19**GDP per worker in 2004 and 2034, before and after tax**

Source: Authors' calculations.

2.0% rate that CBO projects for the next 10 years, GDP per capita would grow from \$39,170 today to \$64,000 in 2034, an increase of 63% (CBO 2004d) (see **Figure 19**).

What happens to after-tax incomes if the increases in Social Security, Medicare, and Medicaid occur as projected, from 8.2% of GDP today to 14.7%, 30 years from now? If it is assumed that taxes must rise by a like amount, while all other spending remains a fixed share of GDP, taxes would rise from the 19% level necessary to sustain spending today to 25.5% of GDP in 2034. If GDP per capita grows by 63%, GDP per capita after federal taxes still grows by 50% over the next 30 years. This enormous gain in after-tax income takes no account of the benefits to those families receiving Social Security, Medicare, and Medicaid. Thus, regardless of the outcome of intense debates over taxes and entitlement spending in the future, we can be confident that it will be possible to fulfill the entitlement commitments in current law. Non-beneficiaries can enjoy much higher standards of living in the future than they do today.

After-tax GDP per capita would grow faster with some restraint in health care cost increases. Two of the major drivers of rising health care costs appear to be technology and market

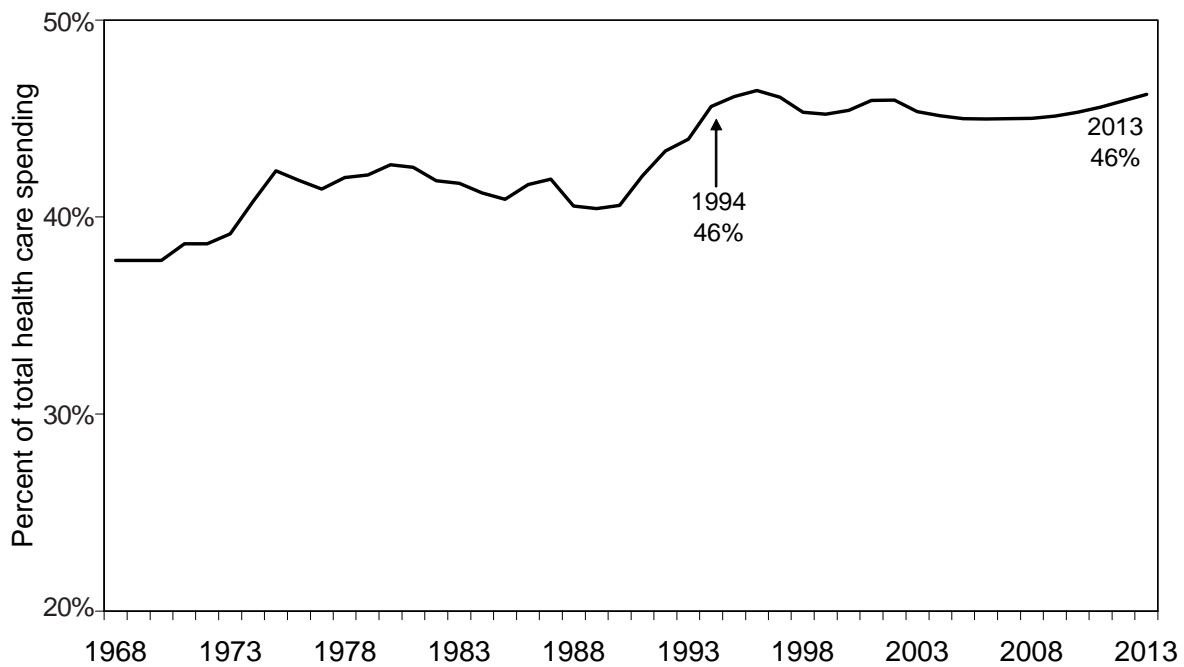
FIGURE 20**Medicare and Medicaid spending as percent of GDP, 1965-2035**

Source: CBO (2003).

structure. Escalating health care costs pose a critical problem not just for federal budgets (and those of the states) but for the economy at large. Medicare and Medicaid did not exist four decades ago, but these programs now cost 4.1% of GDP. The CBO projects that their combined costs will rise to 8.4% of GDP by 2034 (CBO 2003).

In light of the steep climb in federal health care spending shown in **Figure 20**, one might infer that Congress has been steadily expanding the benefits provided under these two programs. In fact, much of that climb results from rising health care costs—higher prices for existing services, as well as new and more expensive technology, treatment, specialization, and pharmaceuticals. The projected increases in spending assume no change in benefits, but flow from assumptions about costs and demography. **Figure 21** shows the share of all health care spending paid by governments at all levels. This share has been relatively stable for the past decade, and it is projected to remain so for the next 10 years, indicating that the problem of rising health care costs is comparable in both the private and public sectors. Reducing the government's role in providing health care services would not reduce health care costs, except insofar as people were priced out of the market and forced to forego care.

Discussions of escalating health care costs tend to treat the problem in abstract, fiscal terms, as opposed to a substantive policy issue. Budget policy can and should be encouraging the devel-

FIGURE 21**Government share of health care spending 1968-2013**

Source: Centers for Medicare and Medicaid Services.

opment of medical technologies that improve health while reducing the use of resources. Most of today's health care dollars pay for diagnostic and therapeutic techniques that did not exist 30 years ago. Technological change appears to be accelerating. Technologies yet to be devised will determine health care costs 20 and 30 years from now. Yet few incentives are provided for those on the forefront of developing new medical technologies to find ways to reduce resource use. Medical research sometimes finds less expensive techniques superior to the standard techniques, but that is the exception rather than the rule. And the United States has no systematic effort in place to favor research on resource-saving technology.

The federal government can significantly influence the development of medical technologies, if it chooses to wield its considerable leverage. Through its own employees and research grants, the National Institutes of Health (NIH) directly advances the frontiers of medical technology. Yet the current NIH guidelines give no indication that it has an interest in pursuing technologies that would require fewer resources than today's technologies (NIH 2003). The federal government also purchases medical instruments, tests, equipment, and medicines both directly (through military and veterans facilities) and indirectly through Medicare and Medicaid reimbursements. It could seek to use its leverage as a purchaser to influence technology development.

Should revenues be raised?

As a practical matter, it seems unlikely that deep and counterproductive cuts in NSD spending can be avoided with any plausible combination of modest deficits, reductions in security spending, and lower entitlement costs. Indeed, many believe that the current baseline underestimates likely security and entitlement costs. By the process of elimination, that leaves increased revenues as the only source of financing for ample NSD spending.

Revenues have fallen from an average of 20.0% of GDP for the five years between FY1997 and FY2001 to 16.2% of GDP this year, the lowest ratio since 1959. The CBO projects that a recovery of taxable incomes, continuation of the recent tax cuts, and no new tax initiatives would result in tax revenues of 17.6% of GDP by FY2014 (CBO 2004c).

Historical experience shows the implausibility of balancing the budget with revenues at only 17.6% of GDP. Total spending is now running at 19.8% of GDP and has exceeded 17.6% every year since 1965 (OMB 2004). Over the past two decades, the ratio of federal spending to GDP has averaged 20.7%. Under the unrealistic assumptions that discretionary spending would grow no faster than inflation and that interest rates would not rise beyond past norms despite ballooning federal deficits and debt, the CBO baseline has spending close to 20% of GDP for the next decade.

No serious student of budget politics believes that the president and Congress will agree to cut spending by more than 10% below that baseline. More likely, the coming decade could resemble the 1981-90 period, when revenues averaged 18.0% of GDP, spending averaged 22.2%, and the debt-to-GDP ratio almost doubled, from 26% to 49%.

Congress and presidents Reagan and George H.W. Bush reluctantly agreed to a number of substantial tax hikes after the deep tax cuts of 1981. Continuing concerns about deficits, debt, and debt service led to major tax hikes in 1982, 1983, 1984, 1990, and 1993. Perhaps most dramatic was the tax-raising package of 1990, signed by a president who had famously vowed “read my lips, no new taxes” in the 1988 presidential campaign.

Because tax hikes are never popular, the government has raised taxes only when the business community and the general public have linked excessive federal borrowing to higher interest rates. For the general public, higher interest rates mean that homes, cars, and other purchases financed by borrowing become less affordable. Many businesses are hurt by higher interest rates, either as borrowers or as vendors to households or other businesses who routinely borrow to purchase their product.

Because interest rates have remained low for the past three years, neither the general public nor the business community has become concerned about the recent plunge from large projected surpluses to large projected deficits. Two major interest-sensitive industries, housing and automobiles, have been strong, notwithstanding rising federal borrowing.

Interest rates have remained low despite federal borrowing because of three offsetting forces that will likely reverse in the next year or so. First, the Federal Reserve reduced short-term rates from 6.5% to 1.0%, the lowest level in four decades. Fed officials have recently raised rates to 1.5% and signaled their intentions to substantially raise rates in the coming year. Second, corpo-

rate borrowing has fallen sharply, initially because of much lower investment spending and more recently because growing cash flow has fully financed the modest recovery in investment. If the normal business cycle pattern emerges in this expansion, investment will once again exceed cash flow and corporations will again enter the credit markets. Third, the rising trade deficit is matched by rising foreign lending into our credit markets. The United States is now borrowing from abroad to the extent that it spends 5.7% more than its GDP. International financial institutions have warned that such borrowing cannot continue to grow and must be reversed (BIS 2003, IMF 2004).

The negative economic effect of heavy federal borrowing will again become clear as interest rates rise, spurred by the Fed raising its rates to a more normal range, corporate borrowers returning to the credit markets, and foreign lending retreating.

Taxes and economic performance

The belief that recent tax reductions will lead to faster economic growth derives more from faith and theory than from empirical evidence. The economic boom of the 1990s followed substantial increases in tax rates faced by the highest-income taxpayers in 1990 and 1993. Tax rates matter, but so do deficits. There is little evidence that many people know or respond to changes in their marginal tax rates, at least within the ranges of recent tax law.

The United States has one of the lowest ratios of revenues to GDP among major industrial countries. Yet, U.S. productivity performance from 1995 to 2002 did not exceed that of many countries with much higher ratios of revenues to GDP. As shown in **Figure 22**, the U.S. revenue-to-GDP ratio was 29.6% in 2000, ahead of only Japan, Korea, and Mexico. But the growth of real GDP per hour worked rose at an annual rate of 2.0% from 1995 to 2002, a rate equaled or exceeded by 13 other industrial countries with higher ratios of taxes to GDP than the United States.

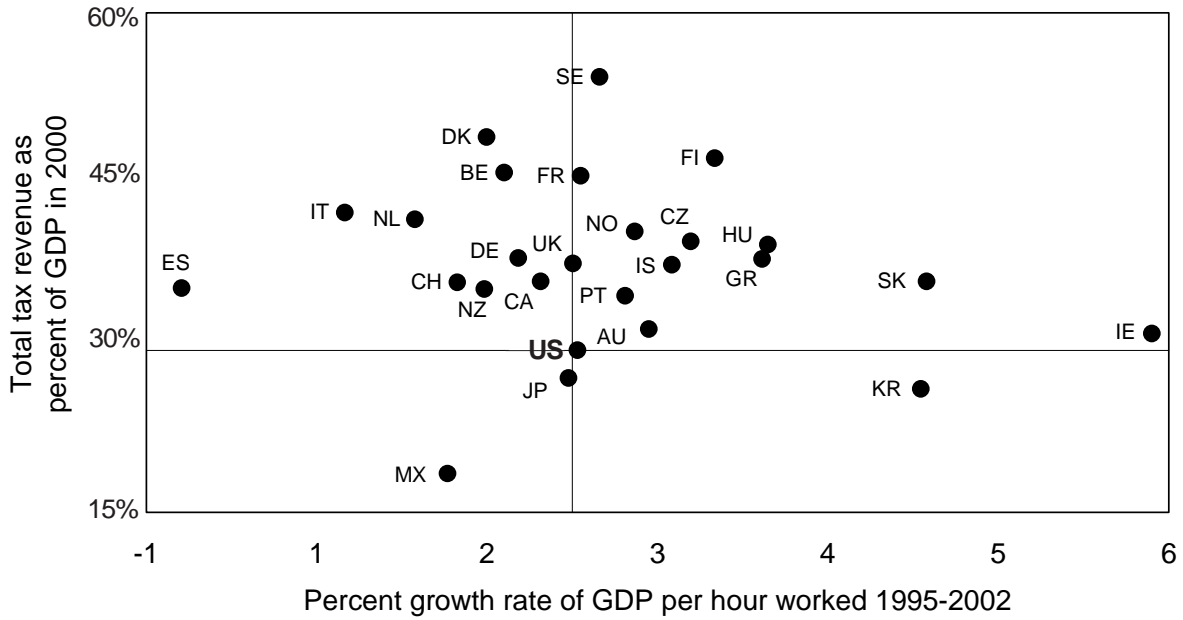
Over the past 40 years, total revenues at the federal, state, and local levels have risen from 25% of GDP to 32% of GDP (see **Figure 23**). Despite this one-third increase in the ratio of revenues to GDP, one would be hard-pressed to show that U.S. economic performance has suffered. The economy grew well through the early 1970s, and the subsequent drop in productivity growth after 1973 is not usually attributed to taxes. Federal tax cuts in 1981 did not have a demonstrable, positive “supply-side” impact on growth. Federal tax increases in 1993 did not have a noticeable negative impact.

A commonly neglected factor in the relation between revenues and economic performance is the complexity of the tax system, including the ambiguity of arcane regulations affecting business firms and wealthy persons, as well as the uncertainty of IRS enforcement measures. A simpler, more consistently and firmly enforced tax code would reduce the compliance costs of taxpayers and increase receipts, making possible some combination of lower deficits, higher spending, and lower tax rates.

Research by the Internal Revenue Service and outside experts indicates the potential for a substantial increase in revenues under current tax law, with better enforcement and tighter interpretation of existing laws and regulations. The total gap between taxes owed and taxes paid is esti-

FIGURE 22

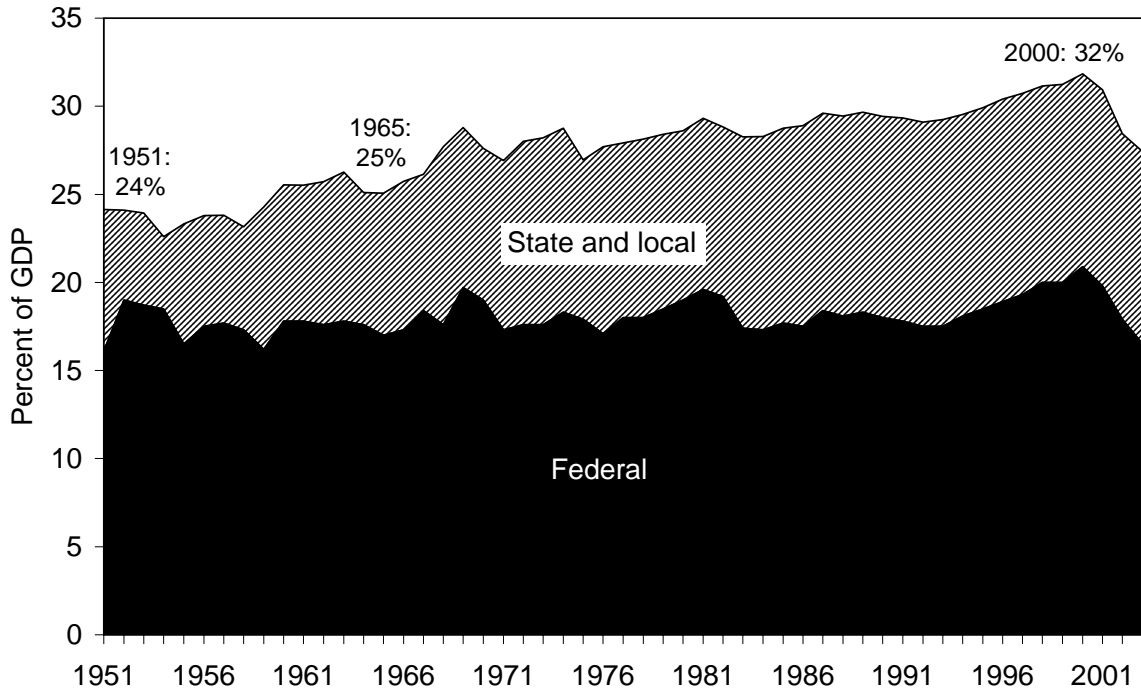
Taxes as percent of GDP and productivity growth, 2000



Note: Country abbreviations defined in Appendix A on page 30.
 Source: OECD (2003).

FIGURE 23

Government revenues, 1951-2001



Source: Bureau of Economic Analysis.

mated at between \$250 and \$300 billion a year. The most obvious means to enhancing tax enforcement is to provide more resources to the IRS for examination of returns and action where shortfalls are uncovered. Research suggests that the investment of greater resources would have very high payoff rates. For instance, the IRS knows of \$30 billion in taxes owed but not paid, which it estimates would cost \$2.2 billion to collect from the identified parties (Burman 2003). IRS litigation against abusive tax shelters has funding constraints that compel the agency to negotiate and make concessions to wealthy individuals and corporate taxpayers who knowingly bend regulations.

Conclusion

Congress and the president must work together to address major budget challenges in both the medium and the long term. Over the next 10 years, current policies create an excessive gap between a flat trend in spending and revenues slowly recovering from record lows. The resulting deficits would raise U.S. debt faster than its ability to pay (as indicated by a rising debt-to-GDP ratio and spiraling debt service). Although a balanced budget is not necessary, debt service must be kept in check. In making the hard decisions to reduce the deficit, however, needed investments in human and physical capital should not be sacrificed.

Instead, 10-year budgets that sustain non-security discretionary spending in real per capita terms should be adopted. Doing so requires finding fiscal space by changing the trajectory in other parts of the budget, specifically: 1) departing from the goal of a balanced budget to the goal of a deficit consistent with a stable GDP—a goal considerably tighter than current policy; 2) striving for policies that will make possible a new “peace dividend”; 3) restraining cost increases in health care; and 4) increasing revenues, from better tax enforcement and rescinding of some of the tax cuts in recent years.

Over the longer term, the key budget challenges on the spending side come from the combined effect on entitlement spending of the baby boom’s retirement and fast-rising health care costs. Although reflected in the budget numbers, both the demographic and health cost challenges pertain to the economy as a whole, not just the public sector. Even the drastic step of abolishing Social Security, Medicare, and Medicaid would not seriously address the essential economic challenges posed by aging and health care consumption.

The pressures from demography will become acute in a decade and will continue for the following two decades. As a society, we should meet the demographic challenge—for the budget and for the economy more broadly—with decisions that maximize the output of tomorrow’s workforce. That means investment in the education, training, and health of today’s young people.

The pressures from health costs in particular have become increasingly intense. Health care costs have been rising rapidly in the private sector and public sectors. The growing burden of health costs exerts a negative effect on jobs and wages, particularly in industries with a tradition of better health insurance. Despite important policy debates over the structure of health care finances, providing coverage to more people or more types of benefits, and expansion of medical research,

scant attention has been paid to the creation of new medical technologies. Technologies not yet created will determine the cost of health care in coming decades, with profound effects on both public and private budgets. Federal government research budgets and leverage from massive purchases of health care should favor development of low-cost technologies.

The very prosperous U.S. economy has the potential to grow strongly in the years ahead. As a society, we can afford the spending necessary for an efficient and compassionate government. We should not sacrifice wise and humane spending for exaggerated benefits from cutting taxes or cutting deficits to bring down the debt.

Appendix A

Australia	AU
Austria	AT
Belgium	BE
Canada	CA
Czech Republic	CZ
Denmark	DK
Finland	FI
France	FR
Germany	DE
Greece	GR
Hungary	HU
Iceland	IS
Ireland	IE
Italy	IT
Japan	JP
Korea	KR
Luxembourg	LU
Mexico	MX
Netherlands	NL
New Zealand	NZ
Norway	NO
Poland	PL
Portugal	PT
Slovakia	SK
Spain	ES
Sweden	SE
Switzerland	CH
Turkey	TR
United Kingdom	UK
United States	US

Endnotes

1. A sharp fall in interest rates has cushioned the decline. Net interest expense has narrowed from 2.1% of GDP three years ago to just 1.3% this year.
2. Private communication from Susan Nelson, Senate Budget Committee Staff.
3. Security spending includes outlays for defense, as well as international and homeland security.
4. Even proposals to partially privatize entitlements would increase rather than decrease the deficit for the next two decades and thereby increase pressure on NSD spending.
5. As a technical matter, in accounting for all potential budget facets that could contribute to NSD spending, the more inclusive term of “mandatory” spending should be used. For policy purposes, however, all the interesting aspects of mandatory spending are entitlements.

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About the Authors

Lee Price is the Research Director of the Economic Policy Institute. He came to EPI after 18 years in government and eight years at the International Union, UAW. During six years at the Commerce Department, he served as Chief Economist and Deputy Under Secretary for Economic Affairs. He also spent 12 years on the staff of four Congressional committees: Joint Economic, Senate Budget, Senate Democratic Policy, and House Banking. At the UAW he primarily handled international economic issues. His areas of expertise include fiscal and monetary policy, labor markets, income distribution, international trade and finance, and economic statistics.

Max B. Sawicky is an economist at the Economic Policy Institute, where his areas of research include the federal budget, federal tax policy, state and local tax and spending issues, public finance, and privatization. He has worked in the Office of State and Local Finance of the U.S. Treasury Department and the U.S. Advisory Commission on Intergovernmental Relations. He also serves on the at-large national board of the Americans for Democratic Action.