
Alan J. Auerbach

FORMATION OF FISCAL POLICY: THE EXPERIENCE OF THE PAST TWENTY-FIVE YEARS

INTRODUCTION

The Congressional Budget Act, passed in 1974, established new procedures for the budget process itself, and created the Congressional Budget Office (CBO) to provide information needed by Congress to carry out this process. The quarter century since then has witnessed repeated changes in the rules governing the budget process, in response to economic changes as well as to the perceived performance of the budget process itself.

With fiscal affairs apparently in order—at least in the short run—and with some perspective on the past twenty-five years' economic performance, we are in a position to ask how well the budget process has worked to produce a coherent and responsive fiscal policy, particularly given the important changes in the U.S. economy over the period.

It is with these economic changes that I begin in the next section, discussing the consequences for tax and expenditure policies. I then turn to a more complete discussion of how the state of the federal budget has changed over the past twenty-five years. Next, I discuss how these changes in the budget have led to changes in budget procedures, and what impact these changes in the budget process have had. Finally, I review where we are, and how well the short-term budget surplus reflects the longer run state of U.S. fiscal policy.

THE ECONOMY, THEN AND NOW

Since the mid-1970s, several changes in the economy have altered the landscape of fiscal policy.

The Rise and Fall of Inflation

Just a few years after President Nixon's ultimately unsuccessful attempt to moderate inflation through the imposition of price controls, the first OPEC oil shock drove the inflation rate up to around 9 percent during the 1974-75 period, as measured by the GDP deflator. Although it fell somewhat during the years immediately following, the inflation rate was already on the rise when the second oil shock hit in 1979 and it rose to about 9 percent again in 1980 and 1981. Based on the consumer price index, inflation was several percentage points higher.

The rapid inflation of the 1970s and early 1980s had significant impacts on the federal budget and, ultimately, tax and expenditure policies. First, it led to a surge in federal income tax revenues, as "bracket creep" drove individuals into higher tax brackets, and the real values of the personal exemption and standard deduction fell. Based on simulations using annual tax return files, Auerbach and Feenberg (1999) calculate that the average marginal individual tax rate rose from .21 in 1975 to .27 in 1981, just before the Reagan tax cut was introduced—a

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period over which there was no significant legislation increasing marginal tax rates. Indeed, the average marginal tax rate was higher in 1981 than in any other year for which calculations were made, spanning the 1962-95 period, from before the Kennedy-Johnson tax rate reductions of 1964 to after the Clinton tax rate increases of 1993. The Economic Recovery Tax Act (ERTA) of 1981, which substantially reduced marginal tax rates and then provided for bracket indexing beginning in 1985, may thus be traced to the inflation of the preceding years. In a sense, then, the deficits of the 1980s may be attributed in part to the inflation of the 1970s.¹

A second major impact of inflation occurred within the Social Security System, via the calculation of benefits. Prior to the 1970s, benefits were not explicitly indexed, but were increased regularly to account for rises in the cost of living. This changed in 1972, but the initial indexing method was flawed and resulted in *real* benefit increases. By the time this mistake was corrected in 1977, retirees had seen a substantial increase in their real benefits, and those in the succeeding cohort—whose benefits were gradually phased back to intended levels—became the infamous “notch babies,” deprived of the full windfall given earlier generations. This unintended expansion of Social Security benefits helped contribute to the funding crisis of the early 1980s, and led to the 1983 Greenspan Commission. The commission’s recommendations resulted in increases in the payroll tax rate and base that have brought us the massive “off-budget” cash-flow Social Security surpluses of the 1990s (Chart 1).

This curious notion of budget items that are off-budget highlights the issue of proper budget measurement, for which the inflation of the 1970s was also relevant. With the federal budget being measured in nominal terms, the inflation-

induced erosion of the national debt during the late 1970s was excluded from deficit calculations. Had such erosion been counted, the “massive” deficits of the late 1970s would have been much smaller. Indeed, how to measure the budget deficit, and the deficit’s usefulness as a measure of fiscal policy sustainability, has become central in the recent confusion over the appropriate response to short-term surpluses.

The “Demise” of the Business Cycle

The United States was in the midst of a serious recession in 1974. Two more recessions followed within the next decade. However, over the seventeen-year period since the end of 1982, the U.S. economy has spent just eight months in recession, during the relatively mild one of 1990-91. The sustained growth over this period, particularly the expansion in the 1990s, has contributed to the decline in budget deficits experienced.

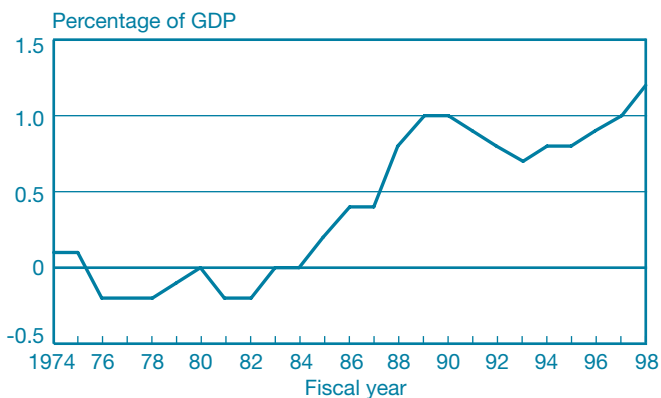
Shifts in the Distribution of Income

Since the late 1970s, the distribution of income in the United States has become less equal. A substantial literature has arisen to explain the sources of this trend, and the exact magnitude of the trend itself depends on the years chosen for comparison and the measure of income used. But there is no doubt that the change has occurred and that it is large.

Table 1 presents recent Congressional Budget Office estimates of the changes in average real pretax family income by quintile over the 1977-99 period. The table also provides measures for subgroups of the top quintile. Over the full twenty-two-year period, real incomes *fell* in the bottom three quintiles, rose slightly in the fourth quintile, and jumped in the top quintile, rising faster still for higher income groups within the top quintile.

The rise in the share of income going to those facing higher marginal tax rates has driven individual income tax collections to unprecedented levels. As a share of GDP, federal tax collections have risen sharply in recent years, to 20.5 percent in fiscal year 1998 and an estimated 20.6 percent in fiscal year 1999—the highest share since 1944 and the highest peacetime share ever. While trends since the 1970s are complex, essentially all of the *recent* rise in this fraction is attributable to the individual income tax. From 1994 to 1999—a period during which the only important tax legislation was the tax cut included in the 1997 Taxpayer Relief Act—federal taxes as a share of GDP rose from 18.4 percent to 20.6 percent, while individual income taxes rose from 7.9 percent to 10.0 percent.

CHART 1
Social Security Surplus



Source: U.S. Congressional Budget Office (1999a).

TABLE 1

Average Real Pretax Family Income

Category	1977	1993	1999	Percentage Change	
				1977-99	1993-99
Lowest quintile	\$10,000	\$ 7,800	\$ 8,400	-16.0	7.7
Second quintile	23,700	19,600	21,200	-10.5	8.2
Middle quintile	36,400	32,300	35,400	-2.7	9.6
Fourth quintile	49,300	49,000	53,000	7.5	8.2
Highest quintile	94,300	114,000	132,000	40.0	15.8
All families	42,900	44,100	49,500	15.4	12.2
Top 10 percent	125,000	158,000	188,000	50.4	19.0
Top 5 percent	166,000	225,000	276,000	66.3	22.7
Top 1 percent	356,000	584,000	719,000	102.0	23.1

Source: U.S. Congressional Budget Office (1999c, Table 1).

Note: Dollar figures are in 1995 dollars.

Some of this rising tax share is attributable simply to the progressivity of the individual income tax, as real incomes in all quintiles rose during the mid- and late 1990s. Even with indexing for inflation, taxes as a share of income should rise as taxpayers' incomes face higher marginal tax rates—a consequence traditionally referred to as the “fiscal dividend.” In Auerbach and Feenberg (1999), we calculate that the elasticity of individual income taxes with respect to real income is approximately 1.67, an historically high value for the United States. With average real pretax family income rising by 12.2 percent between 1993 and 1999 (Table 1), this elasticity predicts that individual income tax revenues should have grown by $12.2 \times 1.67 = 20.4$ percent, or from 7.9 percent of GDP to 8.5 percent of GDP. This is less than one-third the actual rise. The rest of the increase is attributable to the rising share of income going to high-income individuals, and to the increase in capital gains realizations (which are not included in GDP) fueled by the recent stock market boom.

The shifting income distribution has contributed to the improved health of the federal budget. But it has also influenced the character of tax legislation, which has made distributional consequences a more central concern. The Economic Recovery Tax Act of 1981 reduced marginal tax rates across the board, and hence provided the greatest absolute and relative benefits to those in higher tax brackets. By contrast, the Omnibus Budget Reconciliation Act of 1993 raised marginal tax rates only on a very small group within the top few percent of the income distribution by introducing two new marginal tax brackets.

The Tax Reform Act of 1986 represented something of a midpoint in this evolution. It sought to maintain rough balance in the relative individual tax burdens across income classes, raising taxes on capital income—the type of income most concentrated at the top—to offset the substantial reduction in top marginal tax rates. In doing so, it made use of an unfortunate tax policy innovation—the “phase-out”—that has come to plague our tax system in the years since. In that particular instance, the most significant phase-out (with respect to adjusted gross income) applied to eligibility for deductible contributions to individual retirement accounts.² But subsequent legislation has caused these phase-outs to proliferate, applying them to itemized deductions and personal exemptions in 1990 and adding such items as the child credit, HOPE scholarships, and the Roth IRAs in 1997. Thus, unlike those in 1993, the tax increases in 1997 on high-income taxpayers occurred not through explicit rate increases, but through a denial of tax benefits through the use of phase-outs. While phase-outs were with us before 1986 (applied, for example, to the Earned Income Tax Credit), they have now become so prominent that, as of 1998, fully 25 percent of individual taxpayers were in effective marginal income tax brackets other than their official ones (U.S. Joint Committee on Taxation 1998, Table 3).

It is not entirely clear why the process of raising taxes on higher income groups has taken the form of phase-outs, although its lack of transparency appears to provide some political benefit (and hence some comfort to those opposed to “new” taxes). But this political advantage has come at the cost of considerable complication of the tax system, with its welter of phase-out ranges producing a marginal rate schedule that some have compared with the New York City skyline (Furchtgott-Roth and Hassett 1997). How to achieve “urban renewal” is as daunting a task in this context as in the original.

The Aging Baby-Boomers

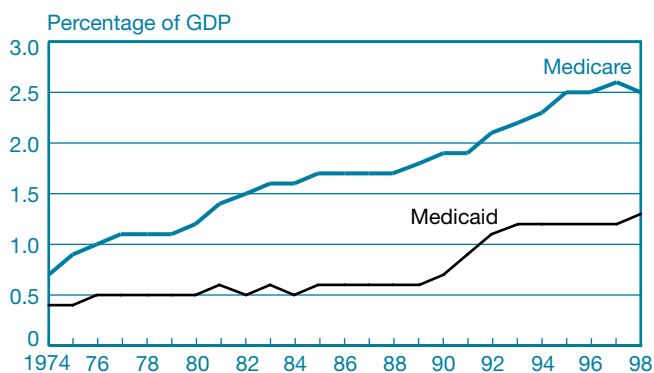
The baby-boom generation, born between the mid-1940s and the mid-1960s, is still in its preretirement period, but its coming retirement has loomed more and more prominently in fiscal policy decisions made over the past quarter century. Most evident among the fiscal policy actions taken was the initiation in the 1980s of the pattern of trust fund accumulations depicted in Chart 1. In 1998, the accumulations accounted for 1.2 percent of GDP; the CBO projects them to grow to 1.8 percent of GDP by 2009 (U.S. Congressional Budget Office 1999c). Over the coming years, the Social Security System projects the ratio of covered workers per beneficiary to drop

from its current value of 3.4 to 2.5 by 2020 and to 2.0 by 2035 (Board of Trustees, Federal Old-Age, Survivors, and Disability Insurance Trust Funds 1999, Table II.F19). These accumulations have been viewed as necessary to help cushion the impact of the coming adverse demographic change. However, the most recent Social Security Trustees Report projects that the Old-Age, Survivors, and Disability Insurance Trust Fund will vanish in 2034, at a time when the system's benefit payments will greatly exceed its income.

The Growth in Spending on Medical Care

The anticipated rapid increase in Social Security benefits poses a future problem with implications for current budget policy. By contrast, government medical spending—the other major component of federal entitlements—is very much a “current” problem, not having waited for the baby-boom generation to retire. Along with aggregate U.S. public and private spending on medical care, which now accounts for about 14 percent of GDP, Medicare and Medicaid have grown very rapidly since their introduction in the mid-1960s. As Chart 2 illustrates, these programs together grew from 1.1 percent of GDP in fiscal year 1974 to 3.8 percent in fiscal year 1998. At present, the three largest entitlement programs—Medicare, Medicaid, and Social Security—account for more than three-quarters of all entitlement spending and nearly half of the federal budget, excluding interest.

CHART 2
Federal Medicare and Medicaid Spending



Source: U.S. Congressional Budget Office (1999a).

Summary

The U.S. economy has made the transition from high inflation, but not before prompting the indexation of its individual income tax and public retirement systems and a major income tax reduction. The economy's favorable performance has helped improve the budget situation, but so have the tax revenues generated by the widening income distribution, which has also contributed to a shift in the character of tax legislation. Tax cuts for high-income taxpayers have given way to tax increases, but the increases have often taken an indirect form. An aging population presents a challenge for the years to come, and measures taken by the Social Security System to provide for this have been a major component of the recent shift toward budget surpluses. Medicare and Medicaid spending already has increased sharply, in advance of the further increases that will come with an aging population.

CHANGES IN THE BUDGET AND ITS COMPONENTS

The federal budget situation has also changed markedly over the past twenty-five years. The rise and fall in deficits alone, though remarkable, masks important transitions that have occurred on the tax and expenditure sides of the budget.

From Deficits to Big Deficits to Surpluses

Chart 3 shows the federal budget surplus, as a percentage of GDP, since 1974. Superimposed on the chart for comparison is the full-employment, or “standardized,” surplus, as calculated by the CBO. Based on the examination of these two series, it is useful to distinguish three periods. During the first, through fiscal year 1981, the full-employment deficit stayed relatively stable, at between 2 and 3 percent of GDP. The second period was one of deficit expansion, beginning with the recession of 1982 and compounded in the years that followed by the trend in the underlying full-employment surplus itself. Since 1986, the full-employment and actual deficits have shrunk steadily, except during the recession of 1990-91 and the slow initial stages of recovery that followed.

CHART 3
U.S. Federal Budget Surplus, 1974-99

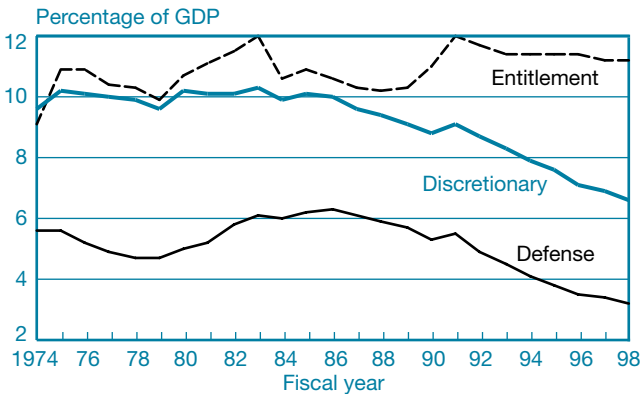


Source: U.S. Congressional Budget Office (1999a).

The Shift in Spending

As noted, Chart 2 illustrates the shift to spending on health care that has occurred since 1974. Chart 4 shows the growth in overall entitlement spending, which was more modest over the period, as a result of a fall in spending on entitlement programs *other than* Social Security, Medicare, and Medicaid. Indeed, spending on these three programs has risen from just over half of all entitlement spending in 1974 to nearly three-fourths of all entitlement spending at present. Still, 1974 was the last year in which discretionary spending exceeded aggregate entitlement spending. Since then, discretionary spending as a share of GDP

CHART 4
Composition of Federal Spending, 1974-98



Source: U.S. Congressional Budget Office (1999a).

has fallen, from around 10 percent until the mid-1980s to about two-thirds of that fraction today. The cuts in nondefense discretionary spending that helped finance the defense build-up in the 1980s were sustained in the 1990s even as defense spending fell sharply.

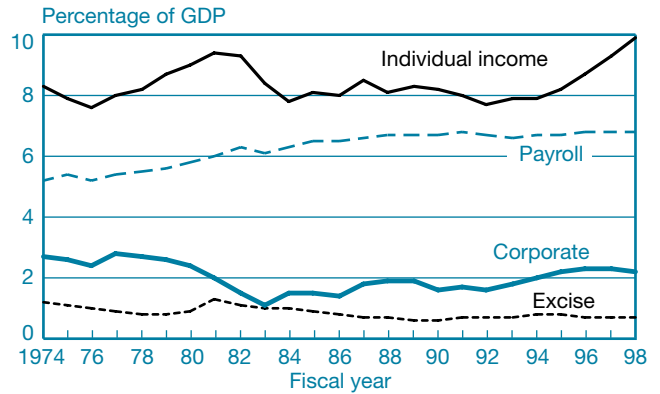
The Rise in Individual Income and Payroll Taxes

Since 1974, the individual income tax and the payroll tax have grown to account for more than 80 percent of all federal revenue (Chart 5). The payroll tax has grown steadily with the size of the Social Security System. The individual income tax has experienced two periods of sustained growth, both associated with the economic changes discussed above. The first was the bracket creep of the late 1970s and early 1980s, before the tax system was indexed. The second, the recent growth spurt, is primarily the result of a shift in the distribution of income during the 1990s. In between, the tax cuts of the early Reagan years are quite apparent. These tax cuts also affected corporate tax collections.

Summary

Since 1974, the federal budget deficit has risen and fallen while revenues have come more from income and payroll taxes, and expenditures have shifted away from discretionary spending and toward entitlements. Within entitlements, expenditures have shifted toward Social Security, Medicare, and Medicaid

CHART 5
Composition of Federal Revenue, 1974-98



Source: U.S. Congressional Budget Office (1999a).

and away from other programs. Much of these changes are attributable to the economic forces discussed above. But there have also been significant policy initiatives during the past quarter century, with respect both to the levels of spending and revenues and to the manner in which these levels are determined. The next section offers a closer look at policy during the period.

MAJOR ELEMENTS OF FISCAL POLICY, 1974-99

Since 1974, there have been several major pieces of tax legislation and several changes in regime with respect to the determination of expenditures and the reconciliation of revenue and expenditure totals. Charts 6 and 7 present estimates of the effects of these policy changes—based on contemporaneous Congressional Budget Office projections—covering most of the period, from just before fiscal year 1982 to the present. Before considering the charts, some discussion of the underlying data will be helpful.

For many years, the CBO has provided frequent updates of its baseline revenue and expenditure forecasts for the federal budget, covering the current fiscal year and several—until recently, five—future fiscal years. With each update, the CBO allocates changes in forecast revenues and expenditures to legislative or policy actions on the one hand, and economic factors on the other hand (which it breaks down further into “economic”—macroeconomic—and “technical” sources).³ The series graphed in Charts 6 and 7 are these projected policy changes, scaled by the appropriate year’s GDP and organized by the fiscal year in which the changes were recorded. For each date in the charts, the projected changes for the current fiscal year and five subsequent fiscal years are presented. For example, changes recorded by CBO documents during fiscal year 1999 would be grouped together, presenting estimated changes to the current fiscal year’s budget and those of the next five fiscal years.

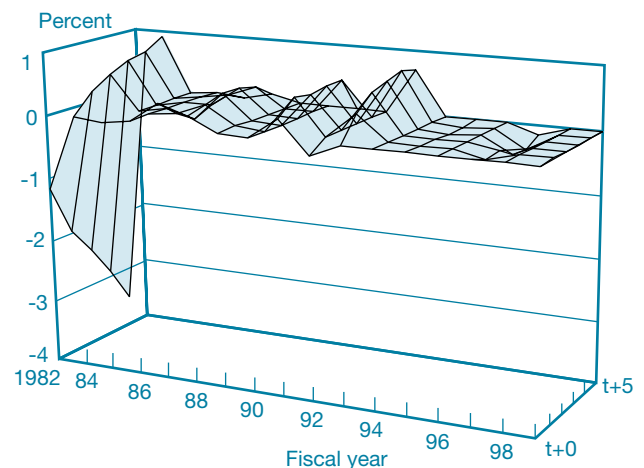
As the CBO typically publishes an update of its *Economic and Budget Outlook* during the summer, near the end of each fiscal year, the changes in the charts will correspond roughly to the policy changes adopted during that fiscal year. An important exception to this timing convention occurs during the 1981-84 period, when the CBO’s updates were less frequent. In particular, there were no updates providing breakdowns of budget changes in the summer of 1982 or in the summer of 1983. Hence, the changes listed for 1982 in the charts correspond to all those occurring between July 1981 and

February 1983, or roughly all of fiscal year 1982 and half of fiscal year 1983. The changes listed for 1984 correspond to all those occurring between February 1983 and August 1984, or roughly half of fiscal year 1983 and all of fiscal year 1984. With their layout established, we turn now to the charts.

Tax Policy

Even a quick look at Chart 6 indicates that something very important and atypical for the period occurred in fiscal year 1982. Just before that fiscal year (and just after the previous CBO forecast), Congress enacted and President Reagan signed the Economic Recovery Tax Act, which included among its most important provisions a phased reduction in marginal tax rates and substantial accelerated depreciation incentives for businesses. What is all the more remarkable is that the changes shown in Chart 6 for fiscal year 1982 are *net* of the offsetting effects of that year’s Tax Equity and Fiscal Responsibility Act (TEFRA), which raised taxes substantially. At the time, the CBO estimated that ERTA had reduced fiscal year 1986 revenues by \$205 billion—27 percent of that year’s baseline revenues in February 1983, 4.7 percent of that fiscal year’s GDP, and an amount nearly as large as that fiscal year’s budget deficit of \$221 billion. While other factors contributed to the deficit, it is clear that the 1981 tax cut played a big role. It is also clear from Chart 6 that no changes since then have reached a similar magnitude, and that nearly all have been in the opposite direction. Other than TEFRA, the largest of the tax increases (in descending order of magnitude relative to GDP) occurred

CHART 6
Tax Policy Revisions as a Share of GDP



with the Deficit Reduction Act of 1984; the Omnibus Budget Reconciliation Act of 1993 (OBRA93), which raised marginal tax rates and uncapped the Medicare payroll tax; and OBRA90, which introduced luxury excise taxes and the phase-out of itemized deductions and personal exemptions.

The period since 1993 is notable both for its quietude—the tax cuts contained in the Taxpayer Relief Act of 1997 were insignificant relative to GDP, when compared with the previous tax changes—and its drift toward lower taxes. Most other changes during the period were also tax reductions, albeit very small ones.

The remaining important piece of tax legislation during the period, the Tax Reform Act of 1986, does not stand out in Chart 6 because that legislation by design was aimed at maintaining revenues at their previous level by raising the tax base and lowering marginal tax rates simultaneously.

In summary, it seems evident that tax policy—*after* the tax cuts made in 1981—was driven at least in part by the contemporaneous movement in the federal budget deficit over the period. A simple regression confirms what appears to the naked eye. The equation considered is given in the first column of Table 2. It is estimated over the period 1984-99 and has as its dependent variable the sum (over the current and subsequent five fiscal years) of that year’s legislated tax changes relative to GDP. I use this variable rather than the changes for the current or some other specific fiscal year because the time pattern of changes differs somewhat over time. The equation’s

independent variable is the previous year’s budget deficit, also relative to GDP. The estimated coefficient is 0.33, with a *t*-statistic of 2.11. That is, the cumulative impact of each year’s legislated changes over a six-year budget window equals 33 percent of the previous fiscal year’s deficit.

An alternative specification, given in the table’s second column, substitutes the lagged *change* in the deficit-to-GDP ratio. This specification, which fits slightly better, indicates that policy acts to offset 70 percent of any deficit increases with revenue changes. To gauge this magnitude, remember that the policy changes include those over six years, although they often do not begin until the subsequent fiscal year. Thus, the permanent reduction in revenues would be around one-fifth or one-sixth as large as the cumulative change used as dependent variable. This implies that perhaps 12 to 15 percent of a rise in the deficit is immediately undone by revenue policy changes.

The third column of Table 2 adds to the list of independent variables the cyclical GDP gap, equal to the percent deviation of actual GDP from the CBO’s estimate of potential GDP. This variable, which is positive when the economy is operating below capacity, has a coefficient with the “wrong” sign, in that it suggests that a rise in the output gap leads to tax increases. While it is doubtful that the government has actually chosen to follow a *pro*-cyclical tax policy, this coefficient reflects the fact that the largest tax increases occurred in fiscal years in which the economy was either in recession (1990) or was not fully recovered from a recent recession (1984, 1993). During the

TABLE 2
Response to Deficits and the State of the Economy, 1984-99

	Dependent Variables								
	Revenues			Expenditures			Expenditures Less Revenues		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Independent variables									
Constant	-0.47 (0.80)	0.85 (2.97)	0.63 (1.88)	0.35 (0.27)	-1.78 (2.87)	-1.88 (2.45)	0.83 (0.53)	-2.63 (3.55)	-2.52 (2.74)
Deficit-GDP ratio, lagged	0.33 (2.11)	— —	— —	-0.53 (1.58)	— —	— —	-0.87 (2.10)	— —	— —
Change in deficit-GDP ratio, lagged	— —	0.70 (2.49)	0.49 (1.46)	— —	-1.15 (1.87)	-1.25 (1.64)	— —	-1.85 (2.53)	-1.74 (1.91)
Cyclical GDP gap	— —	— —	0.18 (1.15)	— —	— —	0.09 (0.24)	— —	— —	-0.10 (0.22)
Adjusted R ²	.19	.26	.27	.09	.14	.08	.19	.26	.21

Notes: The dependent variable is the sum of a fiscal year’s legislated changes, relative to GDP. *t*-statistics are in parentheses.

recent period of strong economic performance, however, tax legislation has tended toward reduced revenues.

In all, revenue as a share of GDP has actually risen since 1974, from 18.3 percent of GDP to 20.5 percent in 1998. However, as of 1994, *after* the most recent legislative tax increase, the share stood at 18.4 percent, virtually the same as that of 1974. Hence, the recent increase is not directly attributable to changes in tax policy. The succession of tax cuts and tax increases has left the federal income tax with a less progressive rate structure, with the top marginal rate declining from 70 percent prior to the 1981 tax cut to a statutory maximum of 39.6 percent at present.

Expenditure Policy

It is much more difficult to summarize the evolution of expenditure policy over the past quarter century. First of all, the expenditure side of the budget is much more heterogeneous than the tax side. As discussed, the composition of expenditures changed markedly over the period, with a shift to Medicare, Medicaid, and Social Security from all other parts of the budget. Indeed, the rapid growth in these areas had little to do with actual policy changes. Second, changes in expenditure policy typically have involved not simply changes in program rules, but rather changes in future spending targets, with the ultimate details left to be worked out later and the feasibility of eventually meeting the targets uncertain. As a result, the timing of the actual policy changes is ambiguous. Should we count the changes when the determination was made—as we actually do—or when (and if) the changes were successfully implemented?

With this cautionary preamble, we may now turn to consider the history of expenditure policy changes since 1982, shown in Chart 7. The chart follows the same approach as Chart 6 did with revenue changes. Whereas the major post-1981 revenue changes all represented tax increases, most of the changes in expenditure policy during this period have been toward decreasing expenditures. The one important exception was in fiscal year 1982, when out-year expenditures were projected to rise as a result of the combined impact of the defense build-up and the increased debt service due to that year's large tax cut, despite large cuts in nondefense programs.

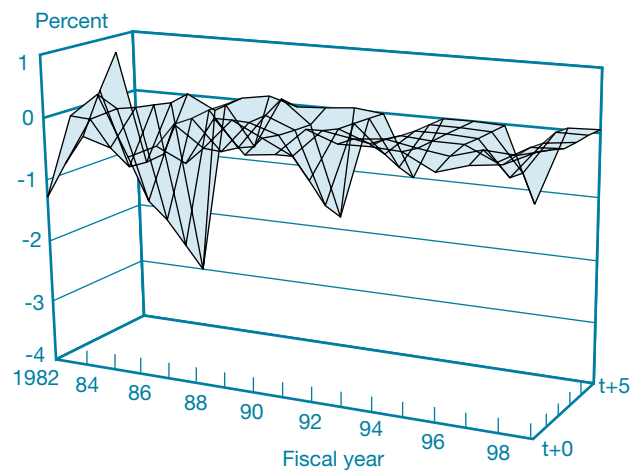
The four largest policy reductions in expenditures, relative to GDP, occurred in fiscal years 1986, 1991, 1997, and 1993, in decreasing order of importance. The first represents the establishment of deficit targets—and automatic spending cuts, should those targets be missed—by the Balanced Budget and Emergency Deficit Control Act, the initial Gramm-Rudman-

Hollings (GRH) bill, passed in late 1985. The second reduction corresponds to the late-1990 passage of the Budget Enforcement Act. This act jettisoned the GRH approach and replaced it with limits, or “caps,” on discretionary spending, along with the requirement that any new measures to increase entitlement spending or reduce taxes had to be offset, during the five-year “budget window,” by offsetting entitlement cuts or tax increases. The remaining two reductions came with the 1993 and 1997 extensions of the Budget Enforcement Act, with the establishment of new discretionary spending caps. Thus, all of the period's major legislative reductions in spending have coincided with the adoption or amendment of budget procedures.

Like revenue changes, expenditure changes have occurred in times of large deficits. The middle three columns of Table 2 repeat the exercise just considered for revenues, relating cumulative changes in spending to the lagged deficit, lagged change in deficit, and lagged GDP gap. These results suggest that the spending response to deficits has been larger than the revenue response, although this response is estimated less precisely. Unlike revenue policy, expenditure policy has been countercyclical, but the estimated effect is very weak. The final three columns of Table 2 repeat the previous regressions, with expenditures less revenues as the dependent variable. Again adjusting the coefficient to account for the fact that the cumulative changes in revenues and expenditures include those of five or six years, this implies a total policy response that offsets 30 to 40 percent of deficit changes.

In summary, U.S. fiscal policy on both the revenue and spending sides of the budget has been responsive to the fluctuations in the deficit in recent years, after the period's largest single policy change: the enormous tax cut of 1981.⁴

CHART 7
Expenditure Policy Revisions as a Share of GDP



HAVE BUDGET RULES WORKED?

The unified budget deficit that stood at nearly 6 percent of GDP in the early 1980s has disappeared, at least for the moment. What role did the various budget restrictions introduced during the period play in effecting this change?

One might count the measures as successful, based on the reductions in the deficit that followed the GRH legislation in 1985 and the Budget Enforcement Act in 1990. But how can we distinguish this hypothesis from the alternative one that Congress intended to change its behavior, and that the succession of budget rules simply coincided with these changes, exerting no additional impact? Or, perhaps these two episodes were simply fortuitous coincidence. Research conducted at the state level—considering the impact of alternative, longstanding budget restrictions on fiscal policy (for example, Poterba [1997])—has generally found that such restrictions do have an impact. But unlike the situation at the state level, we have only one federal government; we cannot compare policy rules across different regimes at a given time. Over time, we can make no claim that the budget rule changes have been “exogenous,” and so we cannot necessarily attribute subsequent changes in taxes and spending to the changes in regime. For example, discretionary spending has, indeed, declined very rapidly as a share of GDP since 1991, following the introduction of discretionary spending targets (Chart 4). But this coincided with the decline in defense spending after the collapse of the Soviet Union.

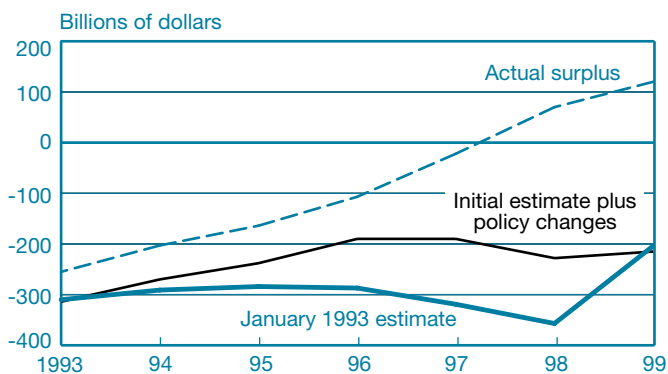
Perhaps the best evidence that the budget rules have worked lies in the instances in which they have failed, when legislators have sought ways around them. Had the restrictions simply ratified planned policy actions, then no such “end runs” would have been needed. During the GRH period, when *annual* deficit targets were set, there appears to have been a significant reliance on “one-time” savings such as asset sales (Reischauer 1990), and the timing of deficit-reduction policies appeared to be skewed more heavily toward first-year changes (Auerbach 1994). More recently, during the Budget Enforcement Act period, discretionary spending caps have been associated with an expansion of “emergency” spending not subject to the caps. In fiscal year 1999, authorized emergency spending reached \$34.4 billion (U.S. Congressional Budget Office 1999b). At least some of this spending—for such items as farm price support, Y2K computer conversion, and drug interdiction activity—is not consistent with the uninitiated observer’s conception of emergencies. Other initiatives that might have been introduced as discretionary spending programs, such as the HOPE scholarships contained in the 1997 tax bill, have appeared as tax expenditures instead.

But if these responses indicate that budget rules have had an impact, they also are likely to have introduced economic distortions. Using the tax code as an alternative to proscribed increases in discretionary spending appears to have greatly complicated the tax system, particularly in combination with the various income phase-outs used to limit the access to new tax expenditures by higher income households.

Ultimately, budget rules that are too much at odds with underlying legislative preferences do not last, as evidenced by the repeal of GRH in 1990, when it was clear that upcoming deficit targets would be missed and, perhaps, at present, when the looming discretionary spending caps appear unreasonable to many.

It is also important to recognize that policy changes are responsible for only a portion of the recent improvement in the deficit. The impact of legislation during the 1993–99 period is shown in Chart 8, which starts with the January 1993 surplus forecasts and adds to them the cumulative estimated effects of policy changes that have occurred since then. As late as 1996, these changes explain a significant part of the improvement over the original forecast. However, since 1997, a growing part of the improvement must be attributed to other factors. Indeed, by 1999, *more than all* of the improvement from the original forecast must be explained by factors other than policy changes, because the policy changes since January 1994 (when the initial forecast for fiscal year 1999 was reported) have been estimated to *reduce* the budget surplus. This gap is much larger than would be associated with normal cyclical variation. For example, in 1998, the cyclical boom then under way was

CHART 8
Changes in the Budget Surplus
since January 1993



Note: The initial estimate is for fiscal year 1999 from January 1994.

estimated by the CBO to have pushed the surplus \$71 billion above its standardized, or “full-employment,” deficit of \$1 billion. Yet the surplus was \$298 billion higher than what was forecast in January 1993, even after account had been taken of the \$129 billion attributable to deficit-reduction policy.

What other factors might be at work? First, the view of what constitutes full employment has shifted, as unemployment rates substantially below 5 percent have now been sustained for a long period without any significant rise in the inflation rate. Thus, even though the economy is still deemed to be “above” its full-employment level of output, that level itself has risen; that is, a larger share of the current surplus would be attributed to cyclical factors using the 1993 view of full employment. However, the CBO estimate of the natural rate of unemployment embodied in its estimate of the standardized employment surplus actually has not fallen much since 1993, only from 5.8 percent in 1993 to 5.6 percent in 1998 (U.S. Congressional Budget Office 1999a).

If one applies an Okun’s Law coefficient of 2 to translate this into 0.4 percent higher implied real GDP and assumes that revenues increase roughly in the same proportion, this implies that revenues are now about 0.4 percent higher—and the standardized employment deficit is smaller by the same amount—because of the estimated drop in the natural rate of unemployment. But with revenues of about \$1.8 trillion, this is barely \$7 billion a year—quite small an amount relative to the recent improvement in revenues.

The remaining share of the increased surplus has come in large part from the surge in federal tax revenue and its components, already discussed above.

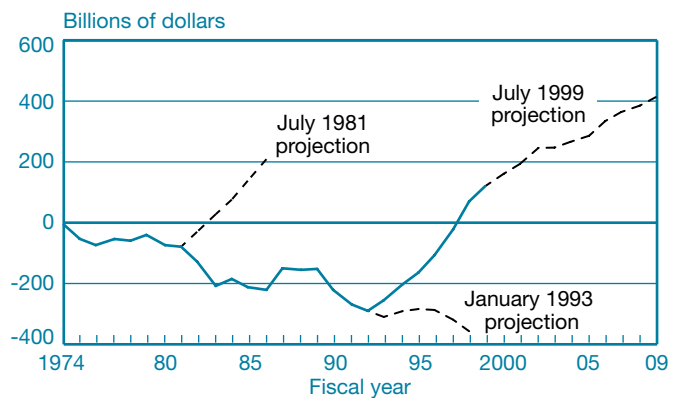
WHERE DO WE STAND TODAY?

As we consider the current state of fiscal policy, reflecting on the success of budget rules and other factors in reducing the deficits of the past two and a half decades, we may ask what the current state of fiscal policy is. Do the rising surpluses and high ratio of revenues to GDP represent sufficient grounds for fiscal leniency? Unfortunately, these trends are misleading, for a number of reasons.

Forecast Uncertainty

Chart 9 presents the federal budget surplus since fiscal year 1974, along with the most recently published (July 1999) CBO

CHART 9
Federal Budget Surplus, 1974-2009



projections for the fiscal years through 2009, indicating that increases in the surplus are projected to continue. But the chart also presents two earlier sets of CBO projections of future deficits, one from July 1981 and the other from January 1993. As discussed, the 1993 projection turned out to be too pessimistic, even controlling for policy changes that occurred thereafter. Very much the opposite was true in 1981, when the subsequent tax cuts were compounded by much lower levels of GDP and tax revenue than had been predicted. Over this entire period, budget forecasting has proved very challenging, and errors have been quite large in absolute value relative to the totals being projected (Auerbach 1999). Thus, the very uncertain nature of the forecasting process means that we cannot be confident that surpluses in the range of current projections will be realized.

Optimistic Policy Assumptions

The surplus projections for the next decade reflect current policy. But current policy incorporates the discretionary budget caps, updated most recently in 1997. By fiscal year 2009, this would leave discretionary spending at just 5.0 percent of GDP. These assumptions may be unrealistic, a point brought home by the recent surge in “emergency” discretionary spending.

From an historical perspective, the levels of discretionary spending projected are nearly unprecedented. For example, suppose that international spending (currently 0.2 percent of GDP) was eliminated entirely and that the remaining components of discretionary spending—defense and domestic nondefense spending—were each allocated 2.5 percent of GDP in 2009. For domestic spending, this would be the lowest

percentage since 1962. For defense, it would be the lowest percentage since before World War II.

Yet changing the discretionary spending trajectory to one reflecting perhaps more realistic spending levels would have huge effects on future budget outcomes. Table 3, taken from Auerbach and Gale (1999), reports the results of making alternative assumptions about changes in discretionary spending over the next decade, accounting not only for the direct effect of the change in discretionary outlays but also for the associated change in debt service.⁵ Holding discretionary spending at its current level of GDP—that is, sustaining the reductions of the past two decades but going no further—would cost more than \$1.3 trillion over the next ten years. Just holding discretionary spending constant in real terms from 1999 to 2009 would cost \$556 billion relative to baseline.

The Limited Meaning of the Unified Budget

Chart 10 repeats the surplus projections for the decade 1999-2009 from Chart 9, along with two modified versions of the surplus. The first alternative is the “on-budget” surplus that excludes accumulations of the Social Security trust fund.⁶ These trust fund accumulations are currently running at about 1.2 percent of GDP and are projected to rise to 1.8 percent of GDP by 2009. While much has been made of the appropriate treatment of the Social Security surplus, far less attention has

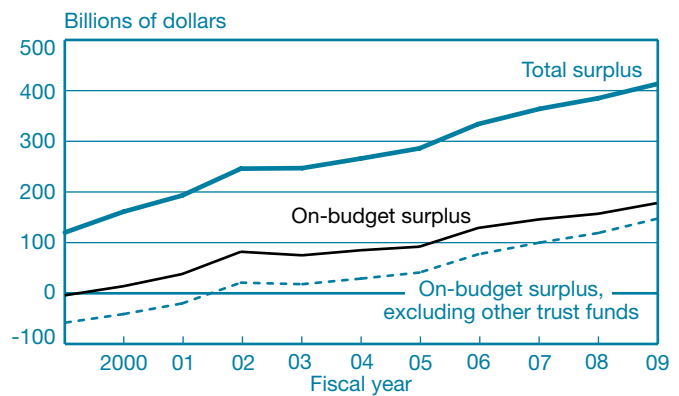
TABLE 3
Ten-Year Costs of Changes in Discretionary Spending (DS)

Policy		Discretionary Spending in 2009 (Percentage of GDP)	Cost Relative to Baseline ^a (Billions of Dollars)
1999-2002	2002-09		
Nominal DS declines	Real DS constant	4.99	—
Nominal DS constant	Real DS constant	5.04	43
Real DS constant	Real DS constant	5.43	566
Maintain percentage of GDP	Maintain percentage of GDP	6.49	1,343

Source: Auerbach and Gale (1999).

^aIncludes added debt service costs to higher outstanding public debt.

CHART 10
Projected Surplus, 1999-2009



been paid to the fact that the on-budget surplus still contains the accumulations of other trust funds—those of Medicare Part A (HI), and the civilian and military retirement systems. Any argument for excluding the Social Security surplus applies to these trust fund accumulations as well, and excluding them from the on-budget surplus yields the final series in Chart 10. This “modified” on-budget surplus actually becomes positive only in fiscal year 2002.

Many argue that it is misleading to include the Social Security surplus in the overall budget surplus calculation, because this surplus is being intentionally accumulated for the purpose of paying future Social Security benefits, an associated implicit liability that is not included in the overall budget. However, following this logic, one should not exclude Social Security trust funds from the accounting, but rather should *include* the associated liabilities that are accruing—liabilities that exceed trust fund accumulations. It is only through such a comprehensive approach that one can make sense of the coexistence of a budget “surplus” and a Social Security “crisis” at the same time. This issue is even more relevant for Medicare, expenditures on which are projected to grow much more rapidly over time than those on Social Security because of the continued rise in medical expenditures per capita.

If one looks at the long-run budget picture, rather than that of the current year or the near term, even taking the current projections as given, then there is no surplus.

Using long-run CBO projections through 2070, and the assumption that tax and spending aggregates maintain their 2070 ratios to GDP thereafter, Auerbach and Gale (1999) update the calculations presented in Auerbach (1994) to solve for the permanent “fiscal gap.” This gap is defined as the size of the permanent increase in taxes or reductions in noninterest expenditures (as a constant share of GDP) that would be

required to satisfy the constraint that the current national debt equals the present value of future primary surpluses. The hypothetical change, denoted Δ , satisfies the equation:

$$B_{1999} = \sum_{s=1999}^{\infty} (1+r)^{-(s+1-1999)} (S_s^p + \Delta \cdot GDP_s),$$

where B_{1999} is the current value of the national debt, r is the government's nominal discount rate, GDP_s is the level of nominal GDP in year s , and S_s^p is the primary surplus in year s absent the change in policy. The government constraint in the equation is implied by the assumption that the debt-to-GDP ratio cannot grow forever without bound. It would also follow from the assumption that the debt-to-GDP ratio eventually (that is, as time s approaches infinity) converges to its current value.^{7,8}

Table 4, taken from Auerbach and Gale (1999), reports estimates of long-run fiscal gaps under different scenarios. The first row reports the gap under baseline assumptions, with no change in policy. The 1.30 percent figure in this row means that a permanent and immediate tax increase or spending cut of 1.3 percent of GDP would be required to maintain long-term fiscal balance—roughly \$120 billion at current GDP levels. That estimate, however, depends crucially on the assumption that real discretionary spending is reduced as projected in the budget forecast. If discretionary spending was held constant at its 1999 level relative to GDP, the long-term fiscal gap would rise to more than 3 percent, as noted in the table's second row. In a sense, the true gap is this latter figure, with discretionary spending cuts presently projected to account for just under 60 percent of the necessary adjustment.

TABLE 4
Estimates of the Long-Term Fiscal Imbalance

Details	Fiscal Gap (Percentage of GDP)
Baseline	1.30
Discretionary spending constant at 1999 share of GDP	3.17
Congressional Conference Agreement	2.47
Congressional Conference Agreement delays adjustment until 2010	2.98
Clinton plan	1.83
Clinton plan delays adjustment until 2010	2.21

Source: Auerbach and Gale (1999).

The remaining four rows in the table list the values of the long-run gap under four alternative policy scenarios. The first of these, in the third row, assumes enactment of the tax cut agreed to in conference by the House and Senate in the summer of 1999, and ultimately vetoed by President Clinton.⁹ Had the changes included in this legislation been adopted, the long-run gap would have nearly doubled. Indeed, given that the tax cut was specified through 2009, it might make sense to express the long-run gap under the assumption that no further action would be taken until fiscal year 2010. This delay, of course, would make the eventual adjustment larger on an annual basis, as the next row of the table shows.

The final two rows of the table present the results of a similar set of exercises for the proposals put forward in President Clinton's fiscal year 2000 budget, presented to Congress in early 1999. This budget proposed a series of tax changes—including some tax increases but, overall, a net tax decrease—coupled with a range of increased spending. As the table shows, this plan, too, would have worsened the long-run gap, although by less than the Congressional plan.

The results of these calculations are sobering, given how much improved the current fiscal picture is relative to its condition just a few years ago. The long-run forecast, even assuming continued strength in federal tax revenues and a continuing decline in discretionary spending—each of which is subject to considerable debate—still embodies a large imbalance. To eliminate this imbalance would require significant further cuts in government spending or increases in tax revenues—budget tightening totally at odds with the proposals put forward this year by both parties and both branches of government.

CONCLUSIONS

Since 1974, the setting of U.S. fiscal policy has passed through several budget regimes, reflecting a series of attempts to control the large budget deficits that began in 1981. The composition and levels of federal taxes and expenditures have changed as a result of numerous policy changes, but also because of changes in the economy and even the international environment, which permitted the decline in defense spending that occurred. Now, and even more in the years to come, the federal budget will consist of transfer payments. By 2009—before the retirement of the baby-boom generation commences—Social Security, Medicare, and Medicaid are projected to account for 60 percent of the federal budget, excluding interest.

This shift from discretionary spending to age-based entitlement spending has important implications. First, it means that short-term deficits have become less and less useful as indicators of the longer term fiscal situation, because of the current budgetary approach of ignoring implicit federal commitments. Second, it suggests that the recent reliance on discretionary spending cuts to “make room” for ongoing entitlement growth may have reached the end of its effectiveness, as discretionary spending is approaching an

historically low share of GDP. Third, as entitlement growth is driven by demographic and economic factors rather than by explicit legislation, it will require active program *reductions*, rather than simply legislative forbearance, to improve the current fiscal situation. With the increasing complexity of the tax system that has arisen under the regime of discretionary spending caps, one may hope that—under whatever the next budget process is—the distortions of the past approaches, as well as their successes, will be remembered.

ENDNOTES

1. This issue is discussed at greater length in Steuerle (1992).
2. There was also an income-based phase-out of the ability of taxpayers to deduct real estate losses.
3. Although the distinction is not always clear, these changes are meant to be those resulting from policy actions rather than from autonomous growth, an important distinction when considering the rapid growth of entitlement programs such as Medicare. Thus, a policy of continuous program cuts need not actually lead to declines in spending over time if there is an underlying trend in the opposite direction, as has been the case in health care spending.
4. This finding is consistent with previous results, which typically have not distinguished between policy changes and other, autonomous changes in the budget. For example, Bohn (1998) finds that primary surpluses have responded to increases in debt-GDP ratios.
5. To account for the added net interest costs of reductions in the surplus relative to baseline, we use the three-month Treasury bill rate (U.S. Congressional Budget Office 1999b, p. 18).
6. This measure also excludes the U.S. Postal Service budget surplus, which is negligible by comparison.
7. The CBO undertakes a similar calculation by measuring the size of the immediate and permanent revenue increase or spending cut that would be necessary to result in a debt-to-GDP ratio in 2070 equal to today's ratio. The cutoff at 2070 is arbitrary, however, and understates the magnitude of the long-term problem. This is because the primary deficits in the years after 2070 are projected to be larger than those of the typical year between now and 2070. Thus, including such years, which provides a more accurate and complete picture of the situation, also makes the situation appear worse.
8. The calculation based on the equation also requires a long-term discount factor (r) and a long-term GDP growth rate. For these, I use the ones constructed for a similar purpose by the Social Security Board of Trustees, taken from their 1999 annual report (Board of Trustees, Federal Old-Age, Survivors, and Disability Insurance Trust Funds 1999, Table III.B.1).
9. Because the legislation did not specify any changes after fiscal year 2009, the simulation takes the changes for the last full fiscal year specified and assumes them to be constant, relative to GDP, in the fiscal years after 2009.

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