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**Entitlement Spending and the Economy:
Past Trends and Future Projections**

by
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Executive Summary

Introduction

In federal budget parlance, entitlements are spending programs that provide direct benefits automatically to persons or governments without need of annual appropriations when those persons meet certain requirements established in law. Federal entitlement spending has often been described as out of control, unsustainable, excessively skewed toward the affluent and the old, and detrimental to the long-term health of the economy. Numerous studies that have forecast gloomy economic scenarios for the nation when boomers retire in a few years cite spending entitlements (particularly Social Security, Medicare, and Medicaid), along with the demographic aging of the population, as the chief sources of the nation's anticipated long-term fiscal problems.

Purpose

This paper takes a fresh look at some of the old assertions about federal budget entitlements from a number of perspectives:

- (1) The size and growth of spending entitlements relative to the economy over the past 40 years and projected for the next 10 years;
- (2) The distribution of spending entitlements in comparison with tax entitlements by income groups;
- (3) The effect of viewing entitlements in the context of the life cycle as well as multiple levels of government;
- (4) The factors influencing the long-term effect of entitlements on the economy; and
- (5) The impacts of various economic and policy scenarios on the long-run projections of entitlement spending, deficits and government debt.

Data and Methodology

The description of entitlement spending growth and distribution relies on historical and projected budget data from the nonpartisan Congressional Budget Office (CBO) and from the Joint Committee on Taxation of the U.S. Congress. The distributional analysis of spending and tax entitlements by income group uses the AARP-Barents Group Individual Income Tax and Transfer Model, which merges the IRS Statistics of Income with the income and demographic data from the Census Bureau's Annual March Supplement to the Current Population Survey, along with data on federal benefit programs by income. The macroeconomic analysis in Section 7 employs the Washington University Macro Model of Macroeconomic Advisers LLC, a long-term general equilibrium forecasting model that allows us to project policies out to 2029 in an internally consistent manner.

Main Findings

Federal spending entitlements have increased faster than gross domestic product (GDP) over the past 40 years. However, they have grown only at the same rate as GDP over the past quarter-century and only two-thirds as fast as income tax revenue. During that 25-year span, entitlement spending has been countercyclical, with entitlement outlays increasing as GDP declined, and declining as GDP increased. Although entitlement spending overall has remained steady as a percent of GDP in the past quarter century, health entitlements have increased while other entitlements have decreased as a share of the economy in the past 25 years. Despite criticisms that Social Security and Medicare disproportionately benefit the middle class, the majority of their dollars are received by people with incomes below \$30,000. By contrast, tax entitlements, the tax benefits conferred under the Internal Revenue Code, are skewed toward the well-to-do. Nearly half of tax entitlement benefits go to those with incomes of more than \$100,000, and nearly three-fourths go to those with incomes above \$50,000.

Four alternative economic and policy scenarios were modeled incorporating several factors that might mitigate the long-term consequences of demographic aging, including higher economic growth, greater labor force participation by the older population, slower growth in health care costs, and higher individual and national saving. The higher growth scenario had the greatest impact on entitlement outlays. With growth in GDP averaging 3.2 percent per year rather than 2.0 percent, Social Security, Medicare, and Medicaid would consume only 9.2 percent rather than 13.6 percent of GDP by 2029. Moreover, rather than a deficit of 5.8 percent of GDP, we would have a surplus of 5.2 percent of GDP, and federal debt would be eliminated by 2029.

Conclusion

Long-term economic forecasts project exploding government debt resulting from the boomer generation's retirement, demographic aging, and entitlement spending growth. While sobering, these forecasts are also subject to large margins of error. Between 1996 and 1999, CBO's projections of the long-term fiscal deficit declined by 91 percent, and by 60 percent between 1997 and 1998 alone. The CBO's 5-year deficit forecasts have been in error by an average of plus or minus three percent of GDP. Needless to say, forecasts of 30 or more years into the future are fraught with the potential for much larger error, and are highly sensitive to baseline assumptions, budget volatility, and extrapolation methods. Analysts who have done long-term projections of entitlement spending assume rising ratios of entitlement spending to GDP but flat ratios of revenue to GDP. However, the past 40 years have seen rising revenues as a percent of GDP and (since 1982) falling entitlement spending relative to GDP.

Nevertheless, the demographic outlook represents an undeniable fiscal challenge to the nation. Policies to promote and sustain robust economic growth are critical to

managing the growth of entitlement spending in the future. If future economic growth rates were consistent with that of the past four decades, the share of GDP spent on the largest three entitlements would increase by only 1.5 percent of GDP, and would be more than four percent of GDP smaller than that projected by current long-term forecasts.

Despite the stern fiscal challenge posed by an aging society, our economic future, although influenced by demographics, can be molded by choices made by individuals and by society. Boomers can adapt to their demographic situation as they have in the past by making different personal choices, particularly to save more (consume less) and to work longer. Government can support these individual efforts by promoting higher personal saving for retirement, improving work opportunities for older workers, extending and enhancing health insurance coverage, and controlling health and long-term care costs.

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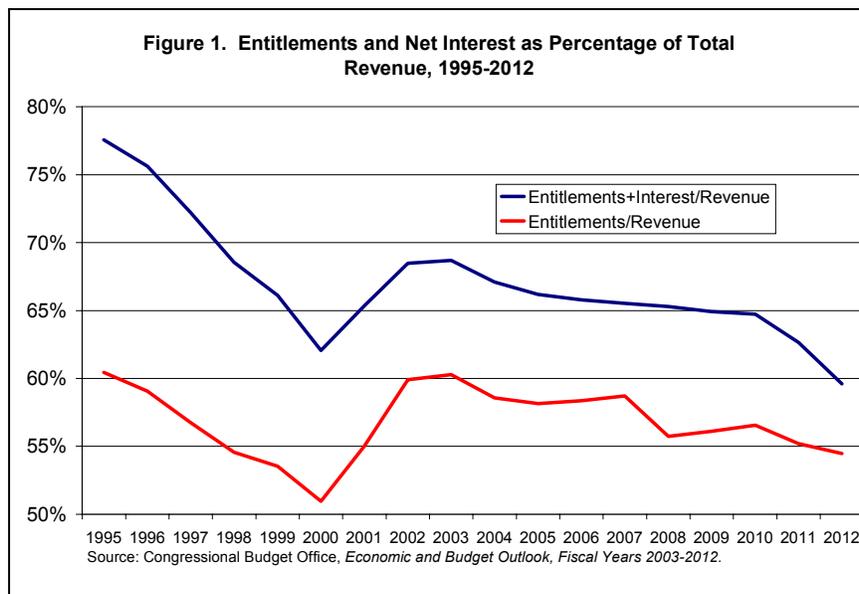
The Federal Budget, the Economy, and the Future of Entitlements

1. Introduction

In its final report to the President in January 1995, the Kerrey-Danforth Bipartisan Commission on Entitlement and Tax Reform stated that

Absent policy changes, entitlement spending and interest on the national debt will consume almost all federal revenues in 2010.

That rather dramatic prediction will be off the mark by 35 percentage points, according to the January, 2002 projections of the Congressional Budget Office (CBO). In its January, 2002 *Economic and Budget Outlook*, the CBO projected that mandatory spending (mostly entitlements) and interest on the debt will consume only 65 percent of total revenues in fiscal year (FY) 2010 (CBO, 2002), which is *down* from about 78 percent in FY1995.¹ Moreover, the trend is downward—CBO projects further declines beyond 2010, to 60 percent by 2012 (Figure 1).



What accounted for the turnaround? Although policy changes since 1995 have altered the course of entitlement spending, especially for Medicare, they cannot alone

¹ The Kerrey-Danforth Commission further projected that in 2010, the budget would be in deficit by more than six percent of GDP, about \$1 trillion in 2010 nominal dollars. (This is not so astonishing, since the budget had already experienced deficits of this magnitude in 1983 and nearly so again in 1992). CBO projections prior to the enactment of the massive Bush tax cut were for an \$800 billion *surplus* in 2010 (also in nominal dollars). In other words, in January 2001, CBO projected a net reversal for 2010 of roughly 11 percent of GDP from the Kerrey-Danforth Commission projection for 2010 made only six years earlier.

account for an error of this magnitude. Kerrey-Danforth's dramatically pessimistic scenario was reversed largely on the strength of robust economic growth coupled with earlier legislation that raised marginal tax rates on the affluent.

The Kerrey-Danforth Commission neither originated nor popularized the argument that entitlements' claims on the budget would paralyze the federal government. Policy analysts and pundits have expressed concerns for years about our ability to afford the growth in federal entitlement programs. That viewpoint still prevails among many in the policy and media worlds, despite favorable budget trends in the late 1990s and ample evidence in recent months of the resiliency of the U.S. economy in the face of unanticipated budgetary shocks.

Expert analyses of the economic impact of entitlement growth have reached conclusions ranging all the way from deeply to cautiously pessimistic about the impact of entitlement spending on the economy in the long run (CBO, 1997, 1998, 2000; GAO, 2001; Rogers et al., 2000; Lee and Skinner, 1998; Peterson, 1996). Testimony just a year ago by Comptroller General David Walker before the Senate Budget Committee provided a recent illustration: "Without a change in entitlement programs, demographics will overwhelm the surplus and drive us back into escalating deficits and debt." (Walker, 2001).

Based on the experience of 2001, we did not have to wait for demographics to overwhelm the surplus and drive us back to deficits and debt. A huge tax cut, a mild recession, the 9/11 attacks, and a war on terrorism have done that already. In a way, these events have put the entitlements "threat" into perspective by demonstrating our ability as a nation to address an unanticipated crisis entailing urgent spending demands during unfavorable economic conditions. Consider that the 2001 tax cut would (if made permanent) cost the Treasury more than twice as much as restoring actuarial balance to the Social Security system, and that the President's FY2003 budget requests for defense and homeland security would (if made permanent) equal the cost of making Social Security solvent. Within a year, in short, we took fiscal actions amounting to *three times* the cost of making Social Security solvent for 75 years, with no public outcry. Relative to the revenue and budget actions undertaken both before and after the 9/11 attacks, the issues raised by demographic changes and entitlement growth should be relatively easy to manage.

Is the entitlement picture as grim as some have portrayed it?² To understand the outlook for entitlements and the economy, we need to understand where we have been and where we are today. In Section 2 of this report, we reexamine the entitlement concept and its meaning. Section 3 explores the history of entitlement growth to understand its dynamics. Section 4 analyzes entitlement distribution and contrasts entitlement spending with other government benefits. Section 5 examines entitlements in a life-cycle context. Section 6 discusses some mitigating factors that might lessen the

² If the frequent characterization of entitlement spending as "unsustainable" is correct, then should we not take comfort in the immortal words of economist Herb Stein (paraphrasing) that "anything that is unsustainable must stop"?

impact of entitlement growth on the budget and the economy. Section 7 examines some alternative economic and policy scenarios in order to evaluate the challenge entitlements pose to our economic future. Section 8 discusses the conclusions to be drawn.

2. The Entitlement Concept

Rhetorical characterizations of entitlement spending as “unsustainable,” “middle-class,” and “out of control” have permeated the policy discourse for years. The original budget concept of “entitlement authority” was, and still is, useful in distinguishing ordinary programs with annual funding cycles from those that have unique or long-term commitments requiring greater funding certainty. The term “entitlement authority” was defined in Section 401(c)2(C) of the Congressional Budget and Impoundment Control Act of 1974 as authority

...to make payments (including loans and grants), the budget authority for which is not provided for in advance by appropriations Acts, to any person or government if, under the provisions of the law containing such authority, the United States is obligated to make such payments to persons or governments who meet the requirements established by such law. (P.L. 93-344, 88 Stat. 297, July 12, 1974).

The key distinction is between programs that receive budget authority via appropriations acts and those that don’t require such acts. Some authors have broadened this concept of entitlement to include virtually *any* federal spending program that confers benefits on individuals, blurring an important distinction between programs that are automatically funded on a permanent basis and those with annual funding cycles that remain fully discretionary (Howe and Jackson, 1998; Peterson, 1996).³

The definition of entitlement can be broadened to include special tax provisions (e.g., deductions and credits) that confer benefits on individuals via the tax code. Like spending entitlements, the benefits of such tax provisions flow automatically under basic law and without any advance appropriation to those who meet the legal requirements. Such “tax entitlements” will be examined in greater detail below.

In brief, entitlement authority recognizes an ongoing obligation the government has assumed under law to provide benefits to certain individuals or governments without need of annual appropriations. Used in this sense, the concept is purely a budgetary accounting concept. Entitlement authority is generally reserved for situations that cannot practicably be subject to the vagaries of annual appropriations. For example, civil and military pensions are earned pensions, just like pensions earned in the private sector. It would not be practicable or fair for these pensions to be regarded as monies the

³ The National Taxpayers Union Foundation has defined entitlements as consisting “of federal cash or in-kind payments to individuals which are not contractually linked to any service or payment received by the government in return” (Howe and Jackson, 1998). This would appear to include grants to states and localities for appropriated programs.

government can give or take away on an annual basis. Since the federal government budgets on a cash basis, the surest way to guarantee these pensions is to set them aside in trust funds that require no annual appropriations.

Similarly, unemployment compensation cannot be subject to the annual appropriations cycle—those who lose their jobs and have themselves and families to support need to be assured that there is some safety net available to them, one that cannot be withdrawn by short-term budgetary pressures. The same is true for other cash and in-kind programs. Imagine if Social Security’s funding were in doubt every year, or if a retiree were to visit the doctor and not know whether Medicare would pay its normal share of the bill. Entitlement authority has been granted generally to reduce the uncertainty of the annual funding cycle through which programs traditionally pass. Although a large number of federal programs are budgeted in this manner, a small number of them make up the bulk of spending entitlements. The top ten spending entitlements constitute well over 90 percent of all mandatory spending (see Table 1).

Entitlement Program	Amount of federal outlays in FY 2001 (\$Billions)	Percent of federal outlays in FY 2001	Percentage of total mandatory spending	Cumulative percentage of total mandatory spending
Social Security	\$429	23.0%	39.2%	39.2%
Medicare	238	12.8	21.7	60.9
Medicaid	130	7.0	11.9	72.8
Civilian retirement	53	2.8	4.8	77.6
Military retirement	34	1.8	3.1	80.7
Unemployment compensation	28	1.5	2.6	83.3
Supplemental Security Income	27	1.4	2.5	85.8
Earned income, child tax credits	27	1.4	2.5	88.3
Family support	25	1.3	2.3	90.6
Veterans benefits	24	1.3	2.2	92.8

Source: See Figure 1.

3. Is Growth in Entitlement Spending “Unsustainable”?

A frequent characterization of entitlement programs is that they are “unsustainable.” Although seldom is a definition offered for this term, the closest thing may be CBO’s succinct benchmark for sustainability: “[F]or any path of spending and revenues to be sustainable, the resulting debt must eventually grow no faster than the economy”—i.e., debt represents a constant or declining ratio to GDP (CBO, 1997).” According to CBO, increases in entitlements lead to increases in government borrowing and debt, which increase interest costs, consuming an ever larger share of the budget. If allowed to continue, debt would reach levels that would displace private capital, lower investment, and cause output to decline.

3.1. Rates of Growth

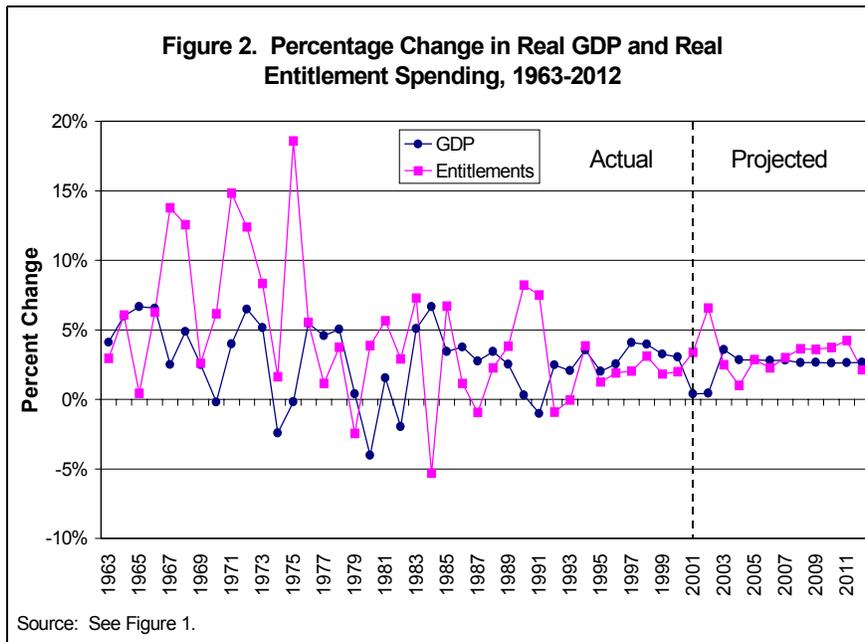
Given this definition, it could hardly be said that entitlement growth has been unsustainable. True, entitlements have grown faster than GDP over the past 40 years. From FY1962 to FY2000, GDP (adjusted for inflation) grew at a 2.89 percent per year pace, compared with 4.44 percent for entitlements (see Table 2). However, most of the difference in those rates is accounted for by the 1962-75 period, when entitlement programs expanded (Social Security) or new programs were launched (Medicare and Medicaid). It might surprise many to know that, for the past quarter century, entitlements have grown at virtually the same rate as the economy. From 1975 until 2000, GDP (adjusted for inflation) grew at 2.57 percent per year, compared with 2.60 for entitlements. Furthermore, income tax revenues grew by 3.84 percent per year in the same period, almost 50 percent faster than entitlement spending, explaining why the budgetary pressure of entitlement spending has actually diminished in the past quarter century.

Table 2. Real Growth Rates in Selected Budget Categories, by Selected Periods (in 2000\$)							
	1962- 2000	1962- 2010	1962- 1975	1975- 2000	1975- 1991	1991- 2000	2000- 2010
GDP	2.89%	2.78%	3.51%	2.57%	2.33%	3.00%	2.35%
Outlays	2.88	2.64	4.38	2.10	2.88	0.74	0.75
Entitlements	4.44	4.19	9.59	2.60	3.13	1.66	3.25
Means-tested	6.14	5.69	9.66	4.35	4.09	4.81	3.99
Medicaid*	15.06	13.14	29.51	6.99	7.22	6.59	6.10
Non-means-tested	4.09	3.86	7.81	2.20	2.95	0.88	3.02
Social Security	4.37	4.04	7.47	2.80	3.21	2.08	2.79
Medicare*	8.11	7.30	13.40	6.46	7.54	4.58	4.67
Total entitlements, less health	3.37	3.12	7.00	1.54	2.24	0.30	2.18
Net interest	4.67	2.13	5.01	4.50	7.77	-1.07	-6.99
Income tax revenue	3.62	3.16	3.20	3.84	6.06	6.06	1.43

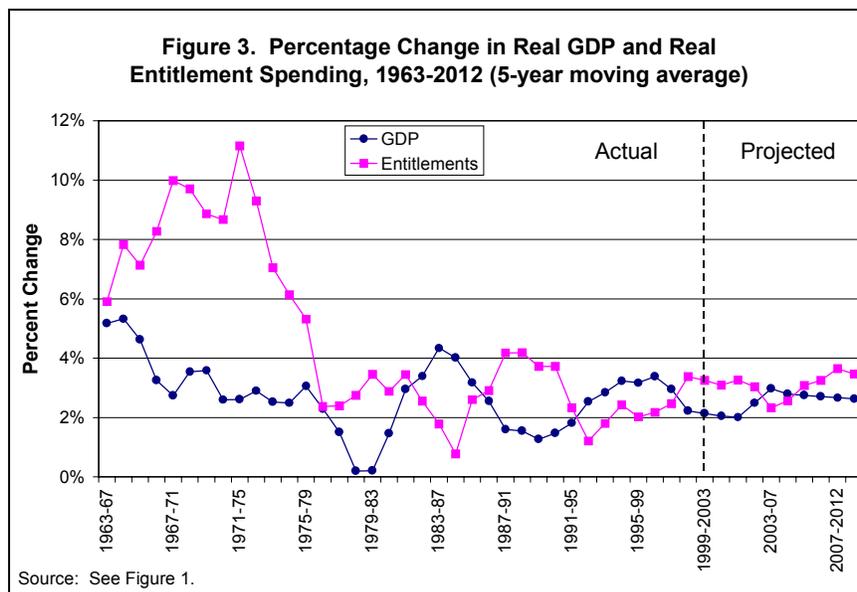
Source: See Figure 1.

* Growth rates are calculated starting in 1967 or later.

In fact, we can distinguish between secular (long-term) and cyclical (short-term) growth in entitlements. In effect, secular growth in entitlements, measured as a percent of the economy, ended in 1976, after a prolonged recession, and since then entitlement change has been strictly countercyclical, fluctuating inversely with economic cycles (see Figure 2). Figure 2 shows the annual percent change in real GDP and real entitlement spending (in 2000 dollars) since FY1962 (and projected out to FY2012).

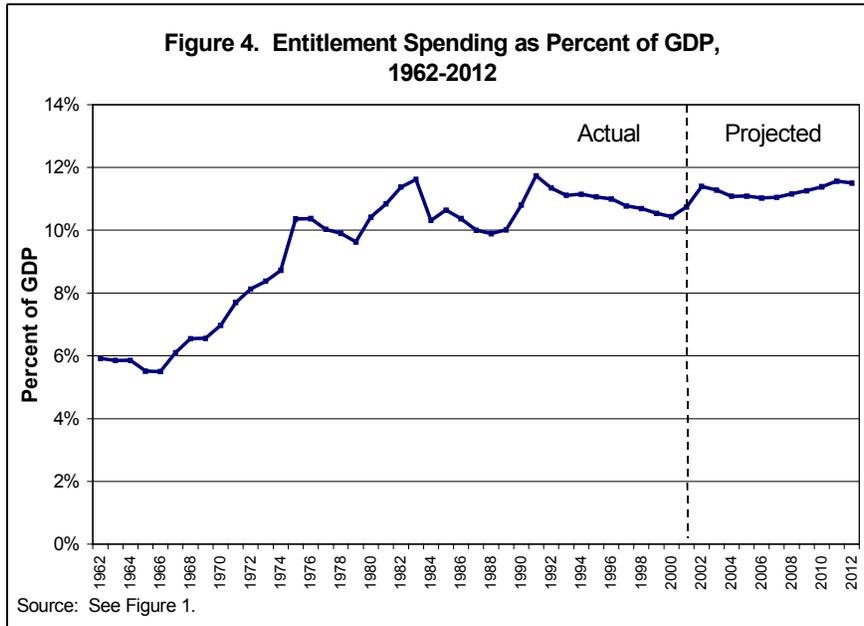


Three points emerge from this chart. First, the amplitude of the change in entitlement spending was much larger than that of GDP in the first 15 years of the period, but the two lines have been much more stable since. Second, the lines have moved closer together. Third, the lines move in opposite directions. This can be seen a bit more readily in Figure 3, which smooths the annual fluctuations somewhat by showing percent changes as 5-year moving averages. Again, the lines move in opposite directions—there is a -0.28 correlation between the two series—demonstrating the countercyclical nature of entitlement spending, which helps to counter fluctuations in the economy.

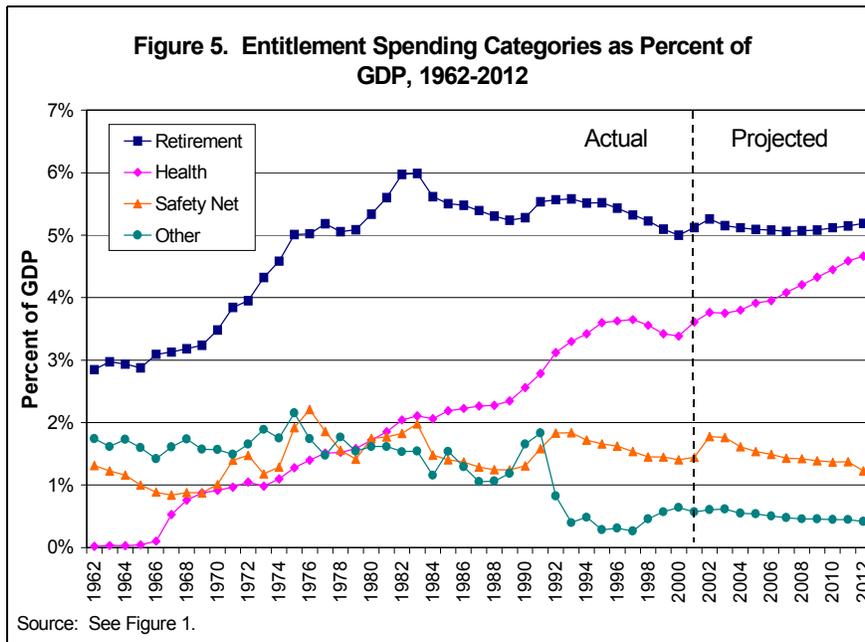


3.2. Growth Relative to the Economy

One of the results of the “countercyclical” pattern of entitlement spending is that it increases as a share of Gross Domestic Product (GDP) during recessions and declines as a share during expansions. A sustained period of economic growth since 1991 caused entitlements to decline steadily as a percent of the economy until 2000. After approaching 12 percent of GDP in the last recessionary cycle (FY1991), entitlement spending reached a level of 10.4 percent of GDP in 2000, about where it was in 1975, and only slightly higher than the bottom of the last recessionary cycle (Figure 4).



More revealing than the overall growth rate is the fact that different categories of entitlements have experienced very different growth paths. If we separate entitlements functionally into those that fund retirement (Social Security, federal civilian and military retirement), those that pay for health care (Medicare and Medicaid), those that fund safety net programs (e.g., Supplemental Security Income (SSI), food stamps, social services, and unemployment compensation), and the rest, we find that only one category of entitlement spending—health care—has increased as a share of the economy in the past 15 years or is projected to do so in the next 10 years (Figure 5). The others combined declined by 2.4 percent of GDP between FY1983 and FY2001, and continue to decline in projections by another 0.3 percent of GDP by FY2012. Health entitlements, meanwhile, have increased by 1.5 percent of GDP in the same period, and are projected to grow by another one percent of GDP in the next decade.



4. Distribution of Entitlements

4.1. Spending Entitlements

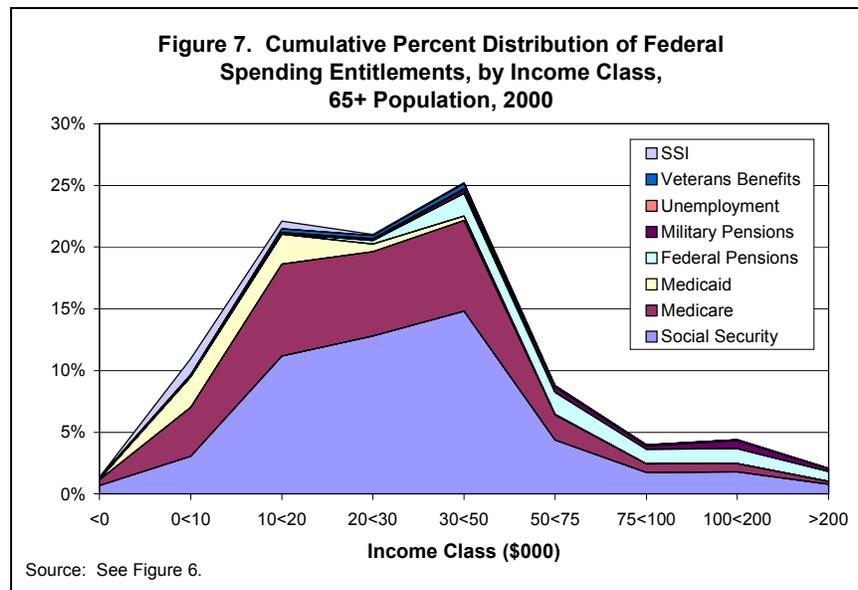
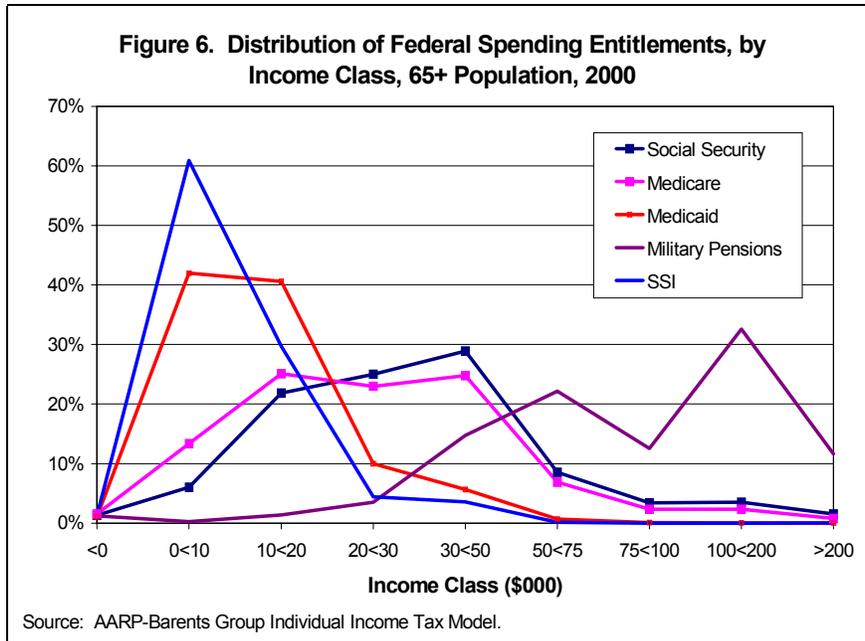
Any attempt to allocate entitlement dollars to individuals is flawed because it is not always clear who are the ultimate beneficiaries of entitlement spending. No uniform data system for all programs classifies expenditures by the age of the recipient. The Congressional Budget Office (2000) said:

...even when the identity of the recipients is clear, the identity of the ultimate beneficiaries may not be. For example, income support and medical benefits for the elderly may substitute for spending that relatives would have made on behalf of their elders, in which case the nonelderly would be the true beneficiaries of program spending.

Indeed, increased Social Security benefits were the chief reason for the increased independence of older persons and the rise in the number of older Americans who live alone (from 18.6 percent in 1960 to nearly one-third today), thus reducing the burden on their children and their families (McGarry and Schoeni, 1998; CBO, 1988). Recognizing that the allocation of dollars to individuals is flawed, we use it here to illustrate a point about spending and tax benefits and because it is still the most common practice of assigning benefits from federal dollars.

Figure 6 shows that, when we classify people according to an “expanded income” definition (adjusted gross income *plus* Social Security benefits *plus* tax-exempt interest), more than half of Social Security benefits and nearly two-thirds of the actuarial value of Medicare benefits go to household units whose annual incomes are below \$30,000. Since both of those programs were intended to be nearly universal in their coverage of older people, it should come as no surprise that they are not limited to low-income people, as SSI and Medicaid are. Although some have argued that these programs ought to be

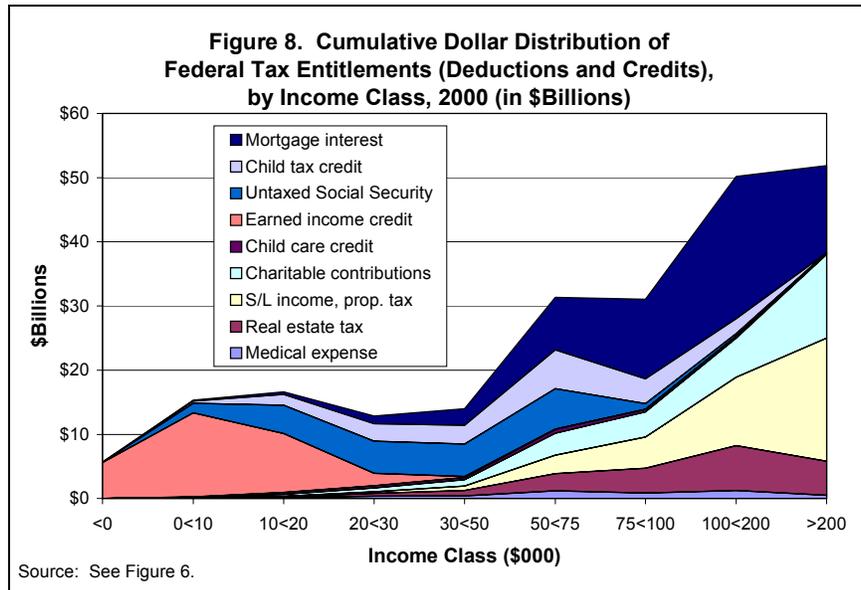
means-tested (as SSI and Medicaid are), because some of their benefits go to the very affluent, they are not as skewed to the more affluent as are some spending entitlements (e.g., military pensions). Even when we aggregate the largest eight spending entitlements and examine the cumulative percent distribution of these entitlements by income among the age-65-and-older population, the distribution shows that the majority of benefits go to those with incomes under \$30,000 (Figure 7).



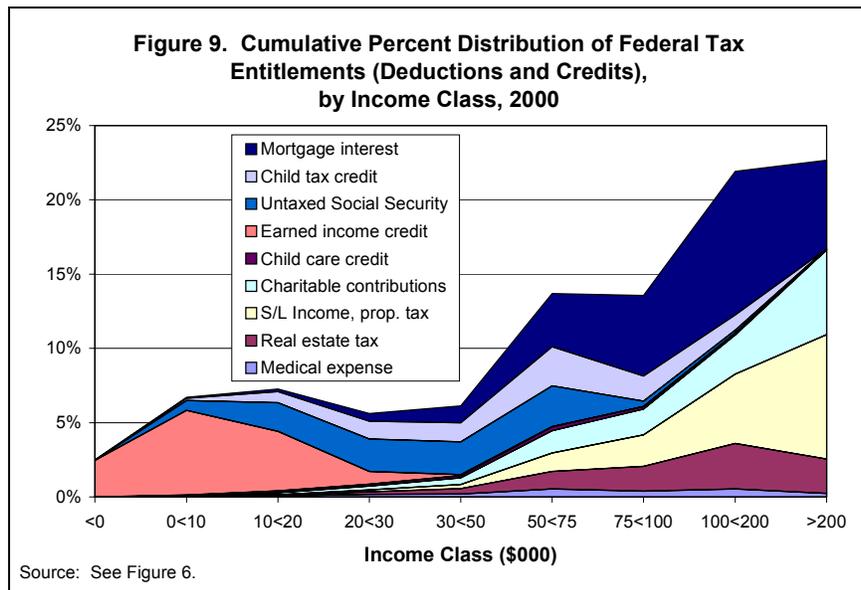
4.2. Tax Entitlements

Contrast the spending entitlement distribution with tax entitlements that are distributed through the Internal Revenue Code (IRC), such as mortgage interest deductions, health care deductions, pension exclusions, and capital gains preferences. Tax entitlements operate very much like spending entitlements in that they confer benefits on individuals

automatically through the IRC without any further action by Congress. Unlike entitlement spending, tax entitlements (with the solitary exception of the Earned Income Tax Credit) are highly skewed toward those at the upper reaches of the income distribution (Figure 8).

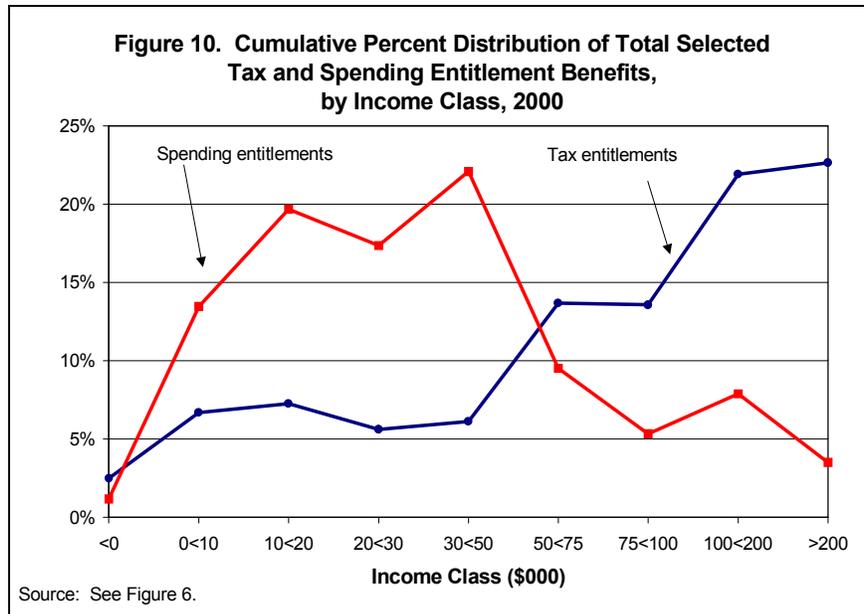


The distribution of the nine selected federal tax expenditures are plotted in the same way as the spending entitlements above—first in dollar terms (in Figure 8), then as percentages of the total tax entitlements shown (in Figure 9). It should be noted that mainly “middle class” tax expenditures are included here. Capital gains, which have the most skewed distribution of benefits in the IRC, are excluded, but they would shift the distribution even further toward the highest income classes.

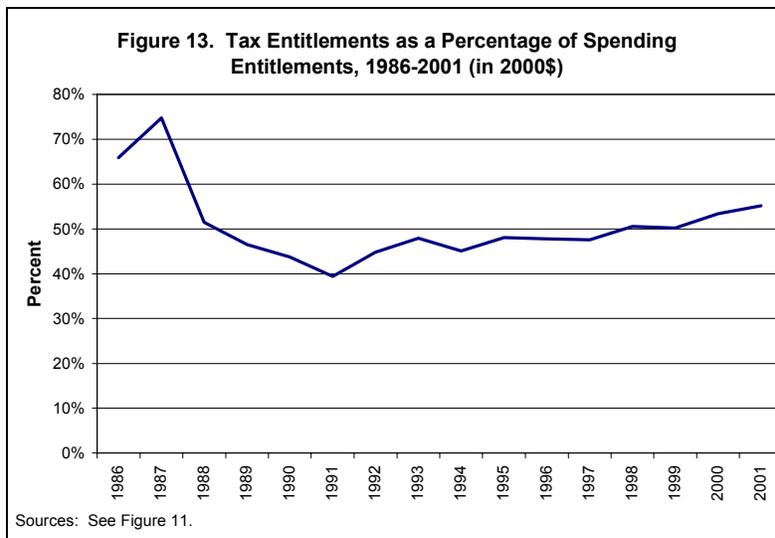
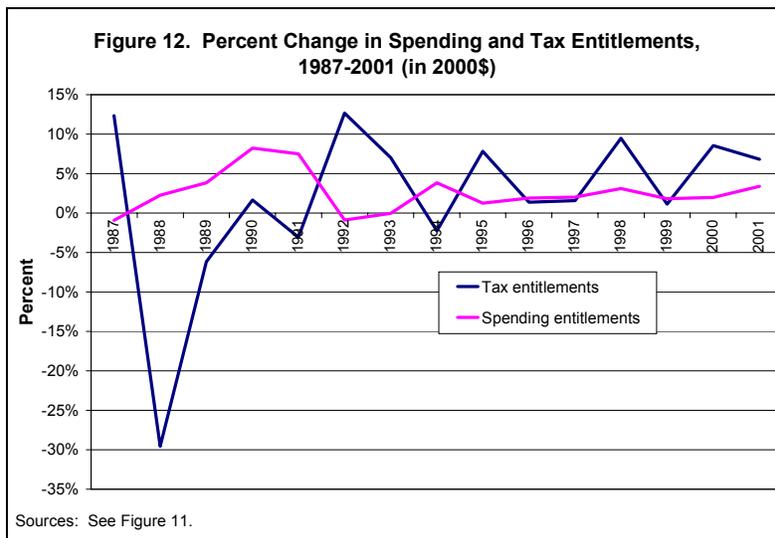
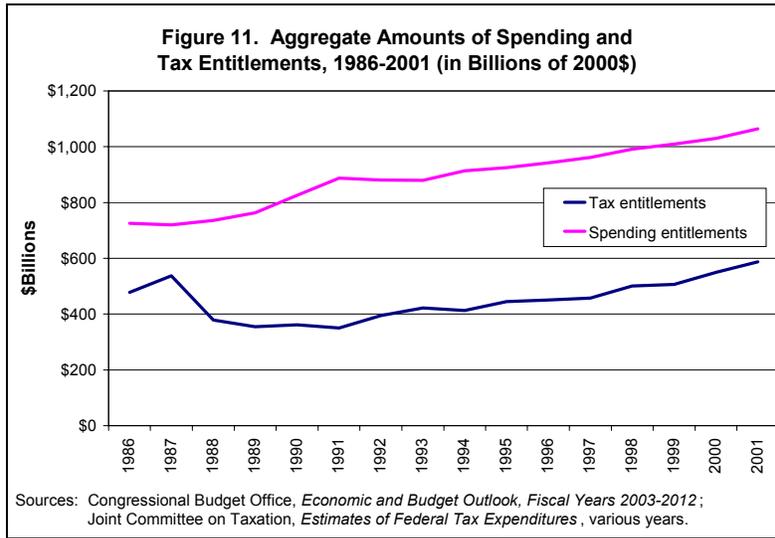


Only 22 percent of the tax entitlement benefits go to people with under \$30,000 income, compared with more than 50 percent of spending entitlements. The nine tax

entitlements that are reported in Figure 9 provide 45 percent of their benefits to people with more than \$100,000 income, and 72 percent of the tax benefits go to household units with incomes above \$50,000. If the earned income credit, which is *both* a spending entitlement and a tax entitlement (because it reduces taxes but also results in cash benefits), were excluded from the tax distribution, more than 82 percent of the tax benefits would flow to those with incomes above \$50,000. By contrast, entitlement spending benefits are skewed in the opposite direction. Only one-quarter (26.2 percent) of entitlement spending benefits is received by household units with incomes of more than \$50,000, using the Joint Committee on Taxation definition of income. Figure 10 directly contrasts the distribution of the tax and spending entitlements shown in Figures 7 and 9.



The relative magnitudes of spending and tax entitlements are shown in Figure 11 on the following page. Prior to the complete phase-in of the Tax Reform Act of 1986 (TRA86), tax entitlements exceeded \$500 billion, about two-thirds to three-fourths the size of spending entitlements, which surpassed \$700 billion. Following the phase-in of the TRA86 provisions, tax entitlement amounts dropped to about \$350 billion and remained fairly flat for two or three years, after which they began to increase, erratically but generally at a faster rate than spending entitlements (Figure 12). After dropping just below 40 percent of spending entitlements in 1991, tax entitlements have since increased to 55 percent in FY2001 (Figure 13).



5. Lifetime Perspective on Entitlement Benefits

The growth in Social Security and Medicare costs has focused attention on the share of the budget spent on retirees and children. Congressional testimony by the CBO Director reported that federal spending on people aged 65 and over was 34.8 percent of the budget in FY2000, compared with 8.4 percent for children under age 18. The testimony projected the spending on the older population to rise to 42.8 percent of federal outlays by FY2010, compared with only 9.4 percent for children (CBO, 2000). The CBO has also estimated that the average person between the ages of 20 and 64 pays about \$8,100 in federal taxes and receives about \$1,500 in benefits, whereas the average person between the ages of 65 and 79 pays about \$4,800 in taxes and receives about \$12,000 in benefits (CBO, 1998 p. 1).

Although such calculations illustrate how the spending side of the budget is allocated, tax benefits are not included. While most federal *spending* benefits are received by the older population, most federal *tax* benefits are received by those aged 20 to 64. The three largest tax entitlements are the exclusion of pension contributions in employer-provided plans, the exclusion of employer-provided health insurance, and the deductibility of mortgage interest on owner-occupied housing. Together, these three tax entitlements are estimated to total about \$220 billion in FY2002, or more than one-third of total federal tax entitlements. The pension and health insurance exclusions benefit workers almost exclusively, and the mortgage interest deduction is of much less value to older persons because they are carrying much less housing debt than younger households. Furthermore, as the CBO has noted, it is risky to attribute the benefits of entitlement spending to specific age groups because the ultimate beneficiaries may not be the ones receiving the direct cash or in-kind benefits. The income support provided retirees by Social Security benefits not only them but also their children, both financially and psychologically.

Beyond that, at any given moment, individuals in one age group may be beneficiaries of one type of entitlement while at the same time paying for another. Those who claim the mortgage interest deduction or the exclusion of pension contributions from income also pay the FICA taxes that fund Social Security benefits. For that matter, Social Security beneficiaries who continue to work receive benefits while paying Social Security taxes. These relative roles vis-à-vis the federal government shift over the life cycle.

Narrowly construed, entitlements are federal spending programs that confer benefits “automatically” without annual Congressional appropriations. More broadly construed, as we have maintained, the term “entitlements” can also refer to tax provisions that automatically confer benefits on those who claim them. Still more broadly, entitlements can encompass other levels of government and the entire life cycle. Fiscal experts have come to recognize the advantages of looking at government taxes and benefits from a lifetime, rather than a single year, perspective (Metcalf, 1994; Fullerton and Rogers, 1993; Reschovsky and Chernick, 1995). If we broaden the view of entitlement spending to take into account both the life cycle and the role of other levels of

government, we recognize that individuals receive public benefits from various levels of government at different times throughout their lives.

Federal benefits are typically skewed toward later life, whereas state and local benefits are concentrated on younger Americans. The benefits to the young, most notably in the form of public education, come mainly from state and local governments, and can reasonably be regarded as state/local entitlement benefits. According to the Census Bureau's annual survey State and Local Government Finances (1999), state and local governments spent more than \$480 billion in 1998-99 on public education, or about 30 percent of total state/local spending. Compare this with the 35 percent spent of federal dollars spent by the federal government on older persons, about \$600 billion in the same year. Taking into account combined federal, state, and local spending, the amounts spent on the elderly and children for "entitlements" are much more comparable than if we compare only federal spending on children and elderly persons.

Rom has attempted to quantify federal entitlement benefits in a broader framework to include direct expenditures, tax expenditures, and credit subsidies, as well as estimated state spending on entitlements (2002). He estimated that older persons received 59 percent of federal spending entitlements, but only 13 percent of tax entitlements. Overall older persons received 43 percent of federal entitlement benefits, broadly defined, and nonelderly adults received 50 percent. When federal- and state-level spending and taxes were combined, older persons received 35 percent of total entitlement benefits, nonelderly adults received 46 percent, and children received just under 20 percent (Rom, 2002).

6. Entitlements and the Long-Term Economic Outlook

Whether entitlements pose a threat to the long-term stability of the U.S. economy depends on the assumptions made about future demographics, the state of the economy, and the discretionary actions taken by both individuals and governments. The putative causal chain linking demographics to a future fiscal crisis begins with demographic aging (increased longevity, lower fertility, and boomers reaching retirement), which will lead to a smaller workforce to pay increased benefits for Social Security, Medicare, and Medicaid. As these entitlements claim larger and larger shares of the budget, surpluses will turn into ever-increasing deficits, causing federal borrowing and debt to increase. As a result, national saving will decline and interest rates will rise, both reducing investment and causing productivity (the engine of economic growth) to slow or decline. Although a widely held view has emerged among analysts about this "story," there is much less agreement about its gravity, considerable uncertainty about the projections, and little consensus about the solution.

6.1. Uncertain Projections

Demographic trends provide the most reliable link in the causal chain because the underlying numbers change so gradually and are less subject to influence, and because we already know much about the future based on today's population. Yet even here disagreement exists. The Social Security Administration (SSA) actuaries, the Bureau of the Census, and private demographers disagree about fertility, mortality, and dependency ratios, with SSA usually being the most optimistic from a fiscal standpoint (Board of Trustees, 2002) and private demographers the most pessimistic (Lee and Tuljapurkar, 1998; Lee and Skinner, 1999).

Fiscal forecasting uncertainties are even larger (Aaron, 2000; Penner, 2001) as reflected in CBO's recent attempts to project the long-range budgetary impact of entitlements using a measure it calls the "fiscal gap." The fiscal gap is defined by CBO as the size of an *immediate and permanent tax increase or spending cut* (measured as a percent of GDP) required to keep the ratio of debt to GDP at or below its current level for 75 years.⁴ In other words, if the fiscal gap were 1 percent of GDP, and the ratio of debt to GDP were 30 percent, a 1 percent of GDP tax increase (about \$100 billion in 2002) enacted immediately and permanently would keep the debt from rising above 30 percent for the next 75 years.

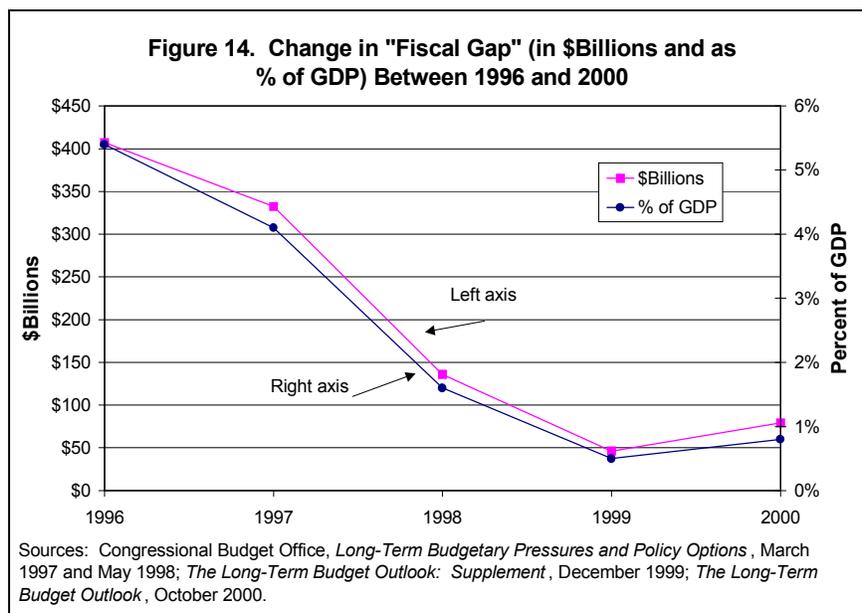
The fiscal gap thus measured by the CBO went from 5.4 percent of GDP in 1996 (about \$420 billion) to 4.1 percent in 1997, 1.6 percent in 1998, 0.5 percent (about \$46 billion) in 1999, and 0.8 percent in October of 2000 (see Figure 14). In just three years (1996 to 1999), the fiscal gap declined by 91 percent, 60 percent between 1997 and 1998 alone. The current *75-year* fiscal gap is estimated to be about 3.3 percent of GDP (Auerbach, Gale, and Orszag, 2002). But the average absolute (i.e., plus or minus) error in even CBO's *5-year* forecasts is about three percent of GDP (Penner, 2001). One therefore questions how seriously to weigh a 75-year projection that is within the error term of the 5-year forecasts.

There are numerous sources of error in forecasting, but two deserve mention. First, because future spending and revenue streams are discounted relative to current levels, current or near-term fiscal changes weigh more heavily in the calculations. Second, CBO's long-term projections are based on its 10-year forecast, with the projections beyond 10 years based on fixed economic assumptions. For example, CBO typically assumes that beyond the 10th year, revenues remain the same percentage of GDP that they reach in the 10th year, although in fact revenues have grown about one-half percent of GDP per decade since 1962.⁵ If revenues are declining relative to last year's projections (as they will be during the next decade as last year's Economic Growth and

⁴ The 75-year period is employed because the population projections published by the Social Security Administration cover that period of time.

⁵ Other fixed assumptions are that discretionary spending remains constant as a percentage of national income, age-specific labor force participation rates do not change, total factor productivity grows by a constant percentage per year, health care costs increase at the rate of growth in real wages, and inflation grows at 2.5 percent per year.

Tax Relief Reconciliation Act [EGTRRA] phases in), revenues will be much lower at the end of the decade than they would be otherwise, resulting in a lower long-term revenue forecast. Thus, short-term changes are likely to have disproportionate impacts on the fiscal gap going out 75 years.⁶



By making the short-run budget picture better (going from deficit to projected surpluses) or worse and adjusting the near-term baseline, the long-term forecast can be changed dramatically. The fluctuations in CBO projections show the remarkable sensitivity of long-range forecasts to both short-range changes and to underlying assumptions.

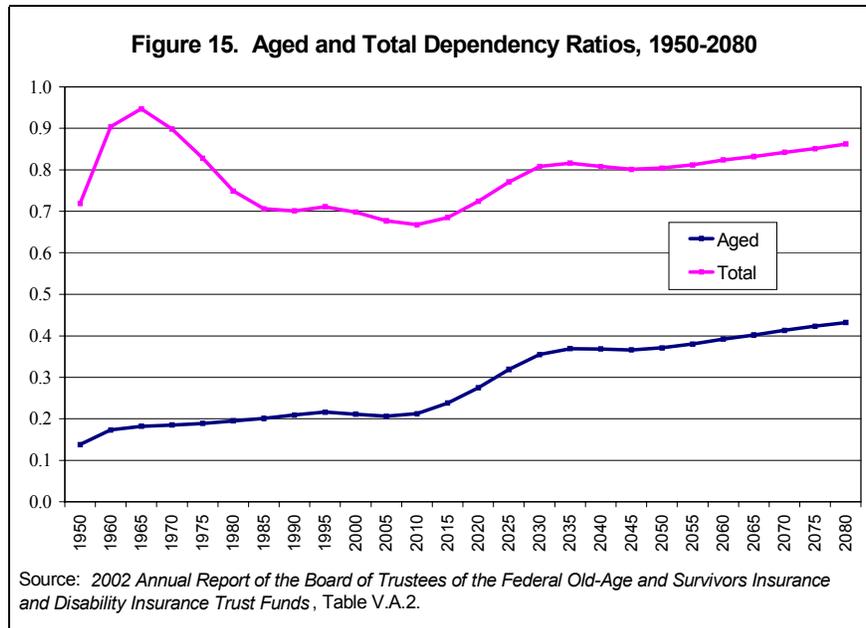
6.2. Mitigating Factors

If assumptions and short-run changes can have such a large impact on future projections, longer term changes in behavior such as longer work lives, longer and healthier retirements, higher saving, or greater productivity might have an even larger impact.

6.2.1. Total dependency ratios are the lowest in a half-century. The pessimistic projections typically examine the old-age dependency ratio to show the declining numbers of workers available to support the retired population in the years to come. As Figure 15 illustrates, the “aged dependency ratio,” the ratio of persons aged 65 and older to those aged 20 to 64 (regarded as working age), increased by 50 percent in the second half of the 20th century, from 0.14 to 0.21, and is projected to double in the next 70 years, reaching 0.43 by 2080. Less frequently noted is the fact that total dependency ratios (persons 65 and older plus persons under 20 divided by persons 20-to-64-year-olds) are lower than they were in 1950, and are headed still lower until 2010. When they do rise

⁶ Consequently, we can assume that recent fiscal and economic changes that have turned projected federal surpluses into deficits will have marked impacts on the long-term fiscal gap.

again, reaching 0.86 by 2080, they will still be below the 0.95 level the ratio reached in 1965 (Board of Trustees, 2001, Table V.A.2).



6.2.2. A trend toward longer work lives. It is often assumed for modeling purposes that hours of labor supplied by workers of given ages remain constant over time. Further, as the population composition shifts from younger to older, it is assumed that labor supply shifts proportionately. However, the assumption of constant age-specific labor supply ignores shifts that are already taking place in labor force participation rates among older workers. There has been a perceptible increase over time in the percent of those aged 65-to-74 who are in the labor force, from 15.5 percent in 1985 to slightly more than 20 percent in 2000 (Quinn, 1999). Between 1998 and 2000 alone, the Bureau of the Census reported, the population aged 65-to-74 who were in the labor force increased by 13.6 percent, from 3.16 million to 3.59 million (U.S. Bureau of the Census, 2000). These developments in the late 1990s were undoubtedly due in part to the robust economy, but they indicate the importance of strong economic growth and astute policies to manage the economy. Higher labor force participation means more income and FICA tax revenue to finance entitlement programs.

Although the Bureau of Labor Statistics (BLS) projects that the labor force participation rate for those aged 55 and older will increase by 5.5 percentage points from 1998 to 2008 (Fullerton, 1999), there are good reasons to expect the increase to be larger than that (Verma and Rix, 2002). First, 80 percent of boomers report that they expect to work at least part time in retirement (AARP, 1999). Second, the long-term downward trend in labor force participation among persons aged 65 and older has been reversed since 1985. Third, the age at which people can receive full Social Security benefits is increasing to 67, and will reduce benefits accordingly. If the labor force participation rate of people aged 65 and older were to increase to the level reached in the 1950s (more than 25 percent), and benefit receipt were delayed until age 70, it would save about \$500 billion in annual benefits by 2029, and benefits would then constitute only about 5 percent of GDP, rather than 5.8 percent. However, the delay in benefit receipt has a far

more powerful effect on benefits in the long run than the increased labor force participation (Verma and Rix, 2002).

Of potentially greater importance to program costs, the percent of men aged 62-to-64 who are receiving Social Security benefits declined by about two percentage points between 1995 and 1998 (Purcell, 2000). Although costs are little affected if people voluntarily delay Social Security benefit receipt, because of actuarial adjustments,⁷ opting for later benefits may indicate a willingness and ability to delay retirement and the potential for scaling back early retirement benefits.

6.2.3. Increased personal saving. Aging of the population does not necessarily mean reduced saving, despite the predictions of the life-cycle model that individuals will begin to consume their accumulated savings in retirement. An Urban Institute study using long-term macroeconomic simulations found that national saving unexpectedly *increased* as a result of changing population age composition. Younger workers are much higher spenders than retirees due to expenses for housing, children, and education (Rogers et al., 2000). Furthermore, there is recent evidence that the expected life-cycle “dissaving” among elderly persons at retirement is actually delayed well into retirement years, as many retirees continue to save either as a result of reduced consumption, the desire to leave bequests, or uncertain life expectancy (Haider et al., 1999).

Although standard personal saving measures have declined steadily in recent years, reaching negative territory for the entire year in 2000, there is evidence that private saving is inaccurately measured and has not declined to the extent reflected in the National Income and Product Accounts (Gale and Sabelhaus, 1999; Verma and Lichtenstein, 1999). First of all, aggregate rates of saving have changed little over the past two decades. Personal saving has declined, but some of that decline is attributable to the exclusion of capital gains from mutual funds in estimates of personal saving, while counting the taxes on those capital gains as subtractions from income, thus artificially reducing the personal saving rate (Verma and Lichtenstein, 1999). Furthermore, private saving has actually declined in part due to the “wealth effect” created by the booming stock market of the late 1990s (Maki and Palumbo, 2001). If capital purchases and capital gains are included, the private saving has not dropped off nearly as much as official figures depict, although the trend has still been downward (Gale and Sabelhaus, 1999).

Promoting private saving should be a higher national priority, not only to improve aggregate saving but to increase saving among lower-income people. Proposals to privatize Social Security by either “carving out” a portion of the FICA tax rate or by transferring general revenues and borrowing to make up the difference may increase the private saving rate, but only by decreasing the *public* saving rate by the same amount, leaving national saving unchanged. Saving incentives that have been broadly available, such as employer-provided pensions and 401(k) plans (and Individual Retirement Accounts between 1974 and 1986), have been somewhat successful at increasing total

⁷ Some cost reduction occurs if people die prior to receiving benefits.

private saving (Poterba, Venti, and Wise, 1996; Engen, Gale and Scholz, 1996). But even though these saving instruments have been concentrated among higher-earning groups, they are more likely to represent net additions to wealth among low-earning groups than among high-earners because the latter have greater ability to merely shift assets to take advantage of tax savings. These incentives have been much less successful in promoting net new saving among higher-wage people (Engen and Gale, 2000).

Research suggests that if the objective is to increase total national saving as well as to target those who are in the bottom tier of income, incentives of the “carrot” type may not work as well as those that carry a “stick” or limit one’s choice. Studies have found that employer-based salary reduction plans that are structured in ways to take advantage of inertia and the “path of least resistance” that is frequently exhibited by workers generally have a better chance of success. Those plans that have automatic enrollment as the default option, an employer (or government) match for those with lower incomes, a moderate-risk default investment portfolio, and sharply limited opportunities for cashing out accounts are the most likely to increase saving among lower-income workers than plans that require employees to opt in, do not offer a match, allow workers to invest too conservatively, and make cashouts relatively easy (Choi et al., 2001a; 2001b).

6.2.4. Increased public saving. Personal saving is not the only saving that counts. Declines in private saving in recent years have been offset by *public* saving due mostly to federal budget surpluses. Robust economic growth and the late-1990s stock market boom caused revenue, particularly capital gains revenue, to soar. For years, some fiscal experts said that the best way to raise national saving was to eliminate the federal budget deficit, which reached its all-time high water mark of \$290 billion in 1992. What once seemed impossible—a balanced federal budget—was achieved within six years of that mark. The unified budget deficit was eliminated by FY1998 (the first surplus since 1969), and an on-budget surplus materialized in FY1999. Not coincidentally, the economy boomed and in 1999, federal revenues reached more than 20 percent of GDP (and rose even higher in the next year). The revenue surge that helped us to “grow out of” the deficits was facilitated by higher marginal tax rates on ordinary income dating back to 1993 and higher capital gains realizations spurred by lower capital gains rates. From a long-term fiscal perspective, these were salutary developments that were projected as recently as 2001 to continue into the era of baby boomers’ retirement, permitting the elimination of the entire public debt by FY2010.

All of this fiscal progress was abruptly terminated by a series of events—the Economic Growth and Tax Relief Reconciliation Act (EGTRRA), the reversal in the equities markets, a mild recession, and the terrorist attacks of 9/11. The EGTRRA cut taxes by more than \$1.35 trillion over 10 years (not counting added interest costs). Combined with the recession and budget requests for defense and homeland security, the tax cut eliminated both the projected FY 2001 on-budget surplus (\$125 billion) and exhausted the Social Security surplus as well. Overall, public saving will be reduced by \$4 trillion from FY2001 to FY2011 by this series of events, of which well over 40 percent can be attributed to the tax cut alone (CBO, 2002).

Based on surveys taken shortly before its enactment, the public did not give high priority to the 2001 tax cut. Before President George W. Bush took office, a national poll reported that the public ranked education (29 percent), Social Security (18 percent), and drugs for seniors (17 percent) as higher priorities than tax relief (16 percent) (Newsweek, 2000). After President Bush took office, a survey of 1,513 U.S. adults found that three times as many respondents thought either making Social Security and Medicare financially sound (37 percent) or increased spending on domestic programs (23 percent) were more important uses for the surplus than cutting taxes (19 percent) (Pew Research Center, 2001). And a Newsweek poll that offered only the more abstract concept of paying down the debt as an alternative to cutting taxes for the uses of the surplus found that paying down the debt still won by more than two to one (65 percent to 28 percent) (Newsweek, 2001). After the tax cut was enacted, another poll showed that more than half the U.S. population felt that the tax cut would not leave enough money to balance the budget and provide for Social Security, education, and health care (ABC News/Washington Post, 2001).

Furthermore, the lack of sentiment for a tax cut was understandable given low U.S. tax burdens. Despite historically high levels of revenue as a share of GDP and statutory rates as high as 39.6 percent in the late 1990s, *effective* federal tax rates (i.e., not statutory rates but the amount of taxes paid as a percentage of personal income) actually *fell* for every income quintile of the U.S. population between 1979 and 1997 (CBO, 2001). The decline was the largest for the highest income quintile. In light of both public opinion and tax burdens, EGTRRA did not appear to respond to any obvious need, nor did it make sense as short-term fiscal stimulus, since most of the cuts were “back-loaded.” Now that the more immediate elements of the law have taken effect and the economy appears to be slowly recovering, the back-loaded elements of EGTRRA are likely to become more contentious. They are certain to make the long-run budget picture bleaker, and there is already evidence that they will actually reduce rather than increase national saving in the long term, thus lowering the level of capital and national output (Auerbach, 2002).

6.2.5. Health care costs. The rate of growth in health care costs is a critical factor driving up entitlement spending. Medicare spending has exceeded the growth in real wages by about two percent per year for the past decade. The Medicare trustees have consistently assumed that this growth rate will eventually slow to the rate of real wage growth, on the argument that costs cannot continue to exceed economic growth without taking over the economy. CBO has in the past made the same growth assumption as the trustees, and has come in for considerable criticism for doing so. In 2000, CBO modified its baseline assumption to assume that health care costs would grow by about one percentage point above real wages (CBO, 2000). The Medicare trustees followed suit in 2001. But if the rate of growth in health care costs were in fact to fall to the rate of growth in wages, the long-term fiscal gap (imbalance between revenues and outlays) would decline by 1.5 percent of GDP, which would be more than sufficient to achieve long-run solvency in Social Security.

There is some encouraging news on this front, however. A recent study found that disability among older Americans is declining at an accelerating pace (Manton and Gu, 2001). The percent of people aged 65 and older with disabilities declined 1.6 percent per year from 1989 through 1994 and 2.6 percent annually from 1994 through 1999. The population is living longer, but doing so with lower incidence of disability in later life, perhaps reducing the costs of chronic health and nursing care, although the evidence is sparse, especially in the acute care area.

Singer and Manton (1998) have argued that if a 1.5 percent annual decline in chronic disability continued indefinitely, it would ensure the long-term fiscal solvency of *both* the Medicare and Social Security programs until 2070 without cuts or increases in taxes. That rate of disability decline has not only continued but has accelerated, suggesting an even better long-term outlook for the trust funds, if these estimates were correct. However, this conclusion, while intriguing, has not been well documented or established. It is not clear on its face how savings in the Social Security Disability Insurance program could make the retirement program solvent. And others have suggested that, although savings are likely to result from reductions in the incidence of disability, the increase in technology-driven costs are still likely to exceed those savings (Cutler, 2001).

Although they did not estimate impacts on the Medicaid program, Manton and Gu found that the relative decline in nursing home use between 1994 and 1999 was larger (3.5 percent per year) than the decline in disability, suggesting the potential for significant savings in the Medicaid program as well. Another study has found that both the relative increase in the share of elderly males and healthier aging by the elderly in general have caused the growth in nursing home residents to decelerate rapidly since 1971 (Lakdawalla and Philipson, 2002). Health improvements have directly shrunk the long-term care market by reducing the base of people who need care, and indirectly shrunk the market by increasing the supply of healthy elderly people who can provide care at home.

6.2.6. Increased productivity. Productivity improvements cause wages to increase, which in turn cause GDP to grow faster, revenues to increase, and countercyclical spending to decrease. Rising wages cause Social Security benefits to increase, but with a lag relative to revenues, so wage increases provide a near-term improvement in the fiscal gap. Increased productivity is the key to faster economic growth. Productivity increased beyond expectations in the 1990s as a result of rapid improvements in information technology. Some forecasters projected before the recent recession that the technological boom would continue for at least another decade, which could support a sustained level of economic growth. However, one of the factors leading to the brief recession in 2001 was a slowdown in the acquisition of new computer hardware, and productivity forecasts have been less ebullient since the recession. A significant boost to productivity would be needed to spur strong economic growth.

7. Macroeconomic Simulations

In order to estimate how potential behavioral or policy changes might alter the future path of entitlement growth, we simulated several alternative economic and policy scenarios using a macroeconomic simulation model. We compared the impacts of the behavioral and policy changes on the share of GDP spent on Social Security, Medicare, and Medicaid; the baseline surplus/deficit in dollars and as a percent of GDP; and the ratio of federal debt to GDP. The scenarios were intended to test the sensitivity of future spending outcomes to factors likely to have a direct impact on entitlements, and were not necessarily selected for their realism. The factors we examined were economic growth, growth in health care costs, labor force participation of seniors, changes in the normal retirement age, and the EGTRRA tax cuts.

7.1 Key Factors in Simulations

We simulated these changes with the Washington University Macro Model of Macroeconomic Advisers (MA), LLC. This is a long-term forecasting model that allows us to simulate alternative economic futures projected to 2029. The MA model's baseline scenario incorporates the tax changes enacted in the EGTRRA in 2001, including the provision that sunsets the entire law in 2011. Therefore, the MA baseline phases in the various provisions of EGTRRA during 2002 to 2010 as enacted (including complete repeal of the estate tax), then repeals them (the baseline assumptions revert to pre-2001 law). This is the same approach used by CBO in its baseline scenario.

7.1.1 Economic growth. Economic growth forecasts have a powerful impact on long-run fiscal projections. CBO assumes in its projections that growth depends on hours worked, the size of the capital stock (investment), and productivity growth. Increased labor force participation is therefore one of the key factors in our projections. Productivity is the most important key to growth in GDP, and any scenario of rapid growth will necessarily assume a faster rate of productivity growth. Most macroeconomic forecasts today are pessimistic regarding long-term growth, despite the robust rate of growth in GDP in the latter half of the 1990s. CBO projects nominal GDP growth of about five percent for the next decade, but less than four percent after that. In inflation-adjusted terms, CBO's forecast is for growth of about three percent in the next decade, but only about two percent beyond that. The SSA Office of the Actuary projects higher nominal growth than does CBO but also higher inflation, with the net result that they too project about two percent real growth beyond the next decade. The MA model baseline has a comparable two percent long-term growth assumption.

7.1.2 Growth in health care costs. Figure 5 above showed that health is the only category of entitlements that has grown faster than GDP in the past 20 years. The reason is that federal health care costs have grown annually by about two percentage points faster than real wages. As mentioned earlier, the SSA trustees' annual reports have assumed in the past that the growth in health costs would eventually slow to the same rate of growth as GDP. CBO formerly used the same assumption as the SSA trustees, but in 2000 adopted the less optimistic assumption that growth in Medicare and Medicaid costs will

slow, from between 1.7 and 2 percentage points faster than real wage growth, to about one percentage point faster. The Medicare trustees also adopted this assumption in 2001. Containment of overall health care costs is critical to any long-term effort to control the rate of growth of Medicare and Medicaid spending, since they track private sector health spending per person.

7.1.3. Labor force participation of seniors. Labor force participation among persons aged 55 and older declined steadily throughout the 20th century until about 1985, when the decline appeared to stop and slowly reverse. Growth in labor force participation for those aged 65 and older would be expected to improve the outlook for entitlements because income and FICA tax revenues should increase. The Bureau of Labor Statistics projects an age 65+ labor force of about nine million by 2030. Only about 13 percent of persons aged 65 and older work. Many analysts believe that longer work lives are a key to controlling Social Security costs as well as improving the future retirement security of older workers.

7.1.4. Changing the normal retirement age (NRA). Lengthening work lives may improve the Social Security trust fund balance because of increased revenue from FICA taxes, but it will have little impact on Social Security outlays even if people delay receiving benefits. The program's rules provide an actuarial adjustment to those who delay receiving benefits, making their lifetime benefit actuarially equivalent in present value terms to the benefit received by one who retires at the "normal" retirement age, i.e., at the age of eligibility for full benefits. However, raising the ages of either early or normal retirement will have the effect of reducing benefits. It could also have an effect on Medicare costs, since Medicare is the secondary payer when the beneficiary (or spouse) is working and has employer-provided health insurance. Given the increase in life expectancy in this century, maintaining the same ratio of retirement years to work years that obtained in 1940 would mean a retirement age of 72 today and 74 by 2030 (Bosworth, 1995, p.6). Instead, the most common retirement age has dropped to 62.

7.1.5. Tax cuts. Tax cuts that lower marginal tax rates are generally thought to be beneficial for economic growth because they increase the incentives for work, saving, and investment. But tax cuts will also have an important effect on future budget scenarios because they will reduce revenues that could otherwise help finance entitlement growth or reduce public debt.

7.2 Alternative Scenarios

We examined four alternative scenarios to estimate their impacts on future budget and entitlement spending outcomes. The first scenario assumes a strong and steady rate of economic growth throughout the projection period. Scenarios 2 and 3 both examine changes in labor force participation, the age at which one can receive full Social Security benefits (the "normal retirement age" or NRA), and the growth in the cost of health care. Scenario 4 projects what would happen if the changes in Scenario 2 were implemented while the EGTRRA tax cuts were made permanent, rather than allowing them to expire as they do under current law and in the MA baseline.⁸

⁸ The estimates of the long-run costs of the tax cuts that we used in Scenario 4 assumed that changes were also made to the Alternative Minimum Tax (AMT) to reduce its effects (Gale and Potter, 2002). No AMT assumptions were made in Scenarios 1, 2 or 3 except those modest changes built into the tax bill and incorporated in the baseline.

We should note here that the MA macrosimulation model is a general equilibrium (internally consistent) forecasting model that requires that long-run simulations achieve an equilibrium in all six sectors of the economy: aggregate demand, financial markets, productivity and employment, wages and prices, income determination, and foreign economic activity. When a change takes place in one sector, other sectors are affected by their intersectoral dependencies. For example, when labor productivity increases in the factor market, not only does it raise the equilibrium wage rate, it also raises the GDP in the output sector, FICA tax revenue in the financial sector, and trust funds in the government sector. Similarly, when the labor participation rate grows, it increases labor supply in the labor market and decreases the equilibrium wage rate. The lower wage rate decreases the cost of production, and that decreases all prices, including medical prices, in the output sector. Thus, one policy change is not isolated from other policy variables in a general equilibrium model.

7.2.1. Scenario 1—Higher economic growth. The first, and most optimistic, scenario assumed that the growth in GDP from 2002 through 2029 would duplicate the average rate of growth that occurred in the decade of the 1990s. In effect, this assumed an average 3.2 percent rate of growth, adjusted for inflation, for the next quarter century. Although that is 1.2 percentage points higher than the MA growth assumption for that projection period, it is the same as the rate of growth attained in the 1990s and close to the average rates of growth for the 1980s and 1970s. In order to achieve a three percent rate of growth in the model, the model also assumes a large increase in the rate of productivity growth, because productivity is the driver of economic growth. A growth rate of 3.2 percent annually in GDP entailed an increase in productivity growth from the 1.7 percent per year assumed in the MA baseline to 3 percent per year.

7.2.2. Scenarios 2 and 3—Double 65+ labor force, later NRA, lower health costs. The second and third scenarios combined changes in three key factors: (1) labor force participation of those aged 65 and older; (2) the age at which people can receive their full Social Security benefits; and (3) the growth in health care costs relative to inflation. The two scenarios differed only in their treatment of the age at which full Social Security benefits could be received and the health costs variable.

In the second scenario we simulated an increase in the normal age of retirement, which is currently increasing to 67 by 2028. We accelerated that scheduled increase so that it would reach 67 by 2018 and 68 by 2030. We did this by raising the age of full benefit receipt by one month per year over the entire projection period. We simulated a more draconian change in Scenario 3, by increasing the normal retirement age to 70 effective immediately. Although this is an unrealistic scenario, it will suggest how sensitive the macro results are to changes in this parameter.

In both simulations, we assumed that labor force participation among persons aged 65 and older will rise gradually to about the same level it attained in the 1950s (or about 26 percent), compared with the current rate of about 13 percent. Instead of just under 9 million workers aged 65 and older, we project a work force with just under 18 million workers in that age group. As we noted earlier, labor force participation among persons aged 65 and older has trended upward since 1985 (Quinn, 1999) but this would require a significant acceleration in that trend. The increase in the labor force participation rate is assumed to occur gradually.

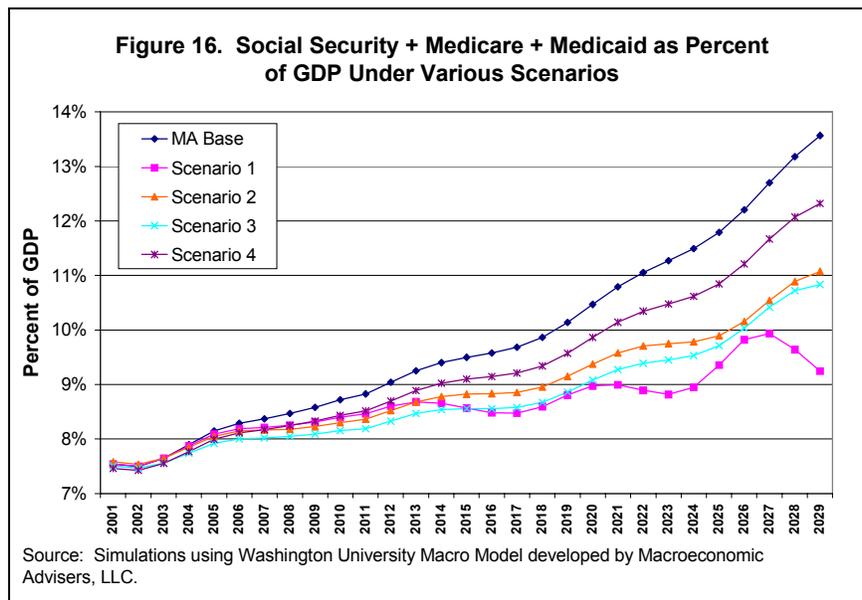
In both the second and third scenarios, we assumed that health care costs would be lower than they are in the baseline—by 1.3 percentage points in Scenario 2, and by 1.4 percentage points in Scenario 3. Health care costs grow by an average of 5.8 percent per year in the baseline, but by 4.5 percent in Scenario 2 and by 4.4 percent in Scenario 3. These assumptions about health care costs are somewhat more optimistic than the assumption made by CBO (about 1.1 percentage points lower) and the Medicare actuaries (about 1 percentage point lower) in their optimistic scenarios.

7.2.3. Scenario 4—Making tax cuts permanent. The fourth scenario implements the same changes as Scenario 2, but assumes that the provisions of the EGTRRA tax cut are made permanent. Since the MA model follows current law, as does the CBO, the model’s baseline only reflects the provisions of EGTRRA that take effect between 2002 and 2010, and then “sunset” (repeals) the statute on January 1, 2011. By making EGTRRA permanent, this simulation extends the tax cuts throughout the forecast period (an additional 18 years), driving a permanent wedge between the revenue path of current law and the alternative. Making the EGTRRA tax cuts permanent may have little direct effect on the share of GDP consumed by entitlements via spending (although the elements of Scenario 2 will), since it does not affect outlays, but it might affect the entitlements share by affecting GDP. It will also have a profound impact on future deficits and public debt. At the same time, the marginal rate reductions might stimulate economic growth to offset the debt burden. Although the changes in labor force, health care costs, and retirement age might lower spending, the loss in revenue due to the tax law might offset the effects spending cuts would have on the fiscal gap.

7.3 Summary Measures

We will compare the four scenarios against the MA baseline in terms of four summary measures: (1) the ratio of combined Social Security, Medicare, and Medicaid spending to GDP, (2) the federal surplus/deficit in nominal dollars, (3) the federal surplus/deficit as a percentage of GDP, and (4) total debt as a percentage of GDP.

7.3.1. Social Security, Medicare, and Medicaid as a percent of GDP. The MA baseline estimates that Social Security, Medicare, and Medicaid combined will grow from 7.5 to 13.6 percent of GDP between 2002 and 2029. This is a bit more conservative than CBO’s baseline estimates, which assume that these three entitlements will grow from 7.8 percent to about 14.7 percent between now and 2030 (CBO, 2002). Figure 16 shows the growth path of the three largest combined entitlements—Social Security, Medicare, and Medicaid—as a percentage of GDP from 2002 to 2029 in the baseline and the four alternative scenarios.



The first scenario, which projects higher economic growth between 2002 and 2029, has the most dramatic impact on entitlement spending as a percent of GDP. In this scenario, the three largest entitlements increase as a share of GDP from 7.5 percent in 2002 to only 9.2 percent in 2029, compared with 13.6 percent in 2029 in the MA baseline scenario. Individually, both Social Security and Medicaid are projected to absorb a smaller share of GDP in 2029 than they do in 2002—3.84 percent for Social Security and 1.23 percent for Medicaid in Scenario 1 compared with 3.96 percent for Social Security and 1.25 percent for Medicaid in the 2002 MA baseline. Only the Medicare program grows as a share of GDP in this scenario, from 2.29 percent in 2002 to 4.17 percent in 2029, compared with 5.8 percent in the baseline in 2029.

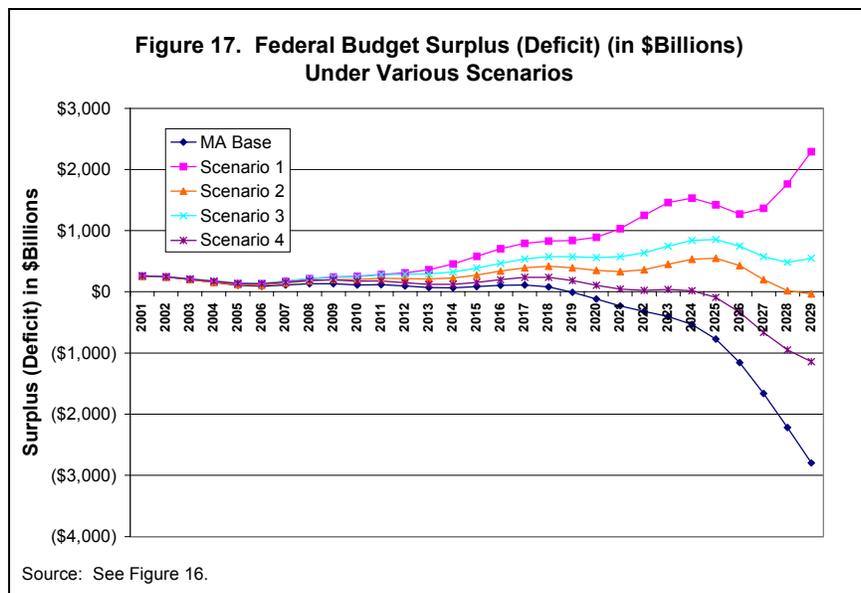
The second and third scenarios combine changes in labor force participation, the Social Security retirement age, and growth in health care costs. The three changes have fairly substantial impacts on the growth in the three entitlement programs, reducing their share of GDP by 2.6 percent (Scenario 2) and 2.8 percent (Scenario 3) in 2029. A somewhat surprising result is that increasing the age of retirement to 70 immediately instead of gradually has only a slightly greater impact on overall entitlement spending relative to GDP by 2029 than the increase to age 68 by 2029. Social Security, which is projected to reach 6.1 percent of GDP in 2029 in the baseline scenario, reaches only 5.5 percent of GDP in Scenario 2 (in which the NRA is gradually increased to 68) and 5.3 percent of GDP in Scenario 3 (in which the NRA reaches 70 right away).

In addition, the reduction in growth of health care costs keeps Medicare and Medicaid spending as shares of GDP below the baseline forecast by 2029 by about 1.5 and 0.4 percentage points, respectively, in both scenarios. As a result, the three major entitlements total 11.1 percent of GDP in 2029 in Scenario 2, and an even lower 10.8 percent of GDP in Scenario 3, both significant reductions from the projected 13.6 percent in the baseline.

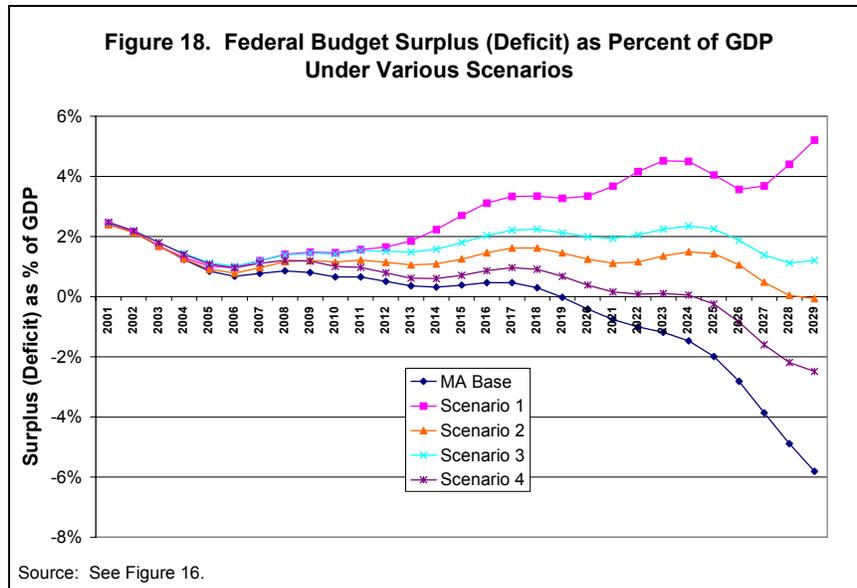
Finally, the fourth scenario, which would implement the changes in Scenario 2 but make the EGTRRA tax cuts permanent, gradually decreases the shares of the budget comprised of Social Security, Medicare, and Medicaid, with the difference reaching about 1.3 percent of GDP by 2029. This is the smallest reduction in the three entitlements as a

share of GDP of any of the four scenarios. In 2029, the three entitlements' share of GDP is 12.3 percent, compared with 13.6 percent in the baseline.

7.3.2. Surplus/deficit in nominal dollars and as percentage of GDP. In the MA baseline scenario, the budget has a surplus of \$243 billion in 2002, and it remains in surplus until 2019, when deficits emerge and grow gradually for several years. By 2025 the deficit has grown to more than \$750 billion (2 percent of GDP), then it accelerates, reaching \$2.7 trillion (about 5.8 percent of GDP) in 2029. The trend in surpluses/deficits for the baseline and four alternative scenarios is shown in nominal dollars in Figure 17 and as a percent of GDP in Figure 18. Scenarios 1 through 3, which all improve the surplus/deficit outlook through 2029, keep the budget in surplus throughout the forecast period with the exception of Scenario 2 in 2029, which is slightly in deficit. Scenario 4 (which implements the same changes as Scenario 2 while making EGTRRA permanent) results in long-run deficits that are smaller than in the baseline but are much larger than in the other three scenarios.

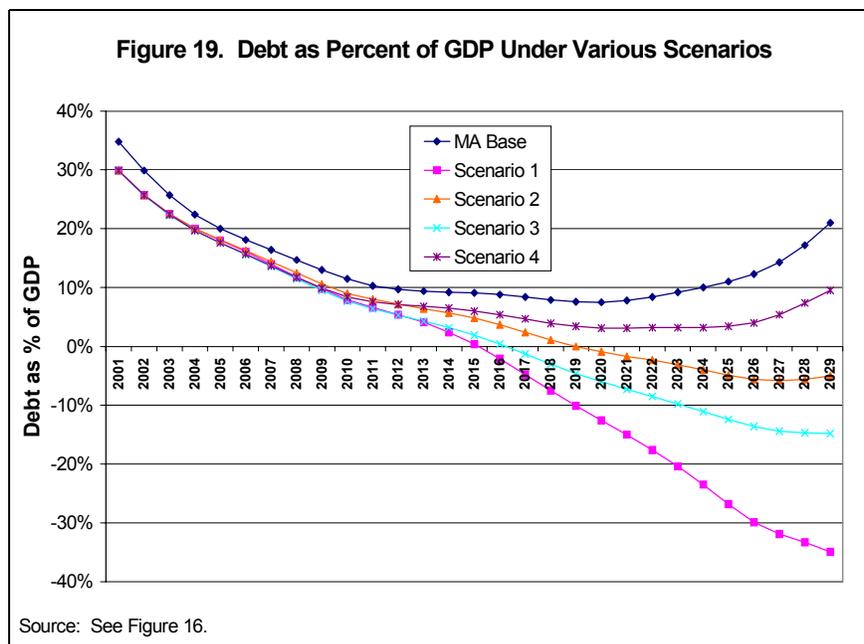


Scenario 1 (high growth) produced the most favorable result, with a substantial and rising surplus reaching \$2.3 trillion (5.2 percent of GDP) in 2029. Scenario 3 (NRA reaches 70 immediately) produces the second best surplus outcome, generating budget surpluses throughout the period, and reaching a high of \$850 billion (2.3 percent of GDP) by 2025 but appearing to stabilize at about \$550 billion in 2029 (1.3 percent of GDP). Scenario 2, which raises the NRA gradually to 68, produces steadily increasing surpluses until 2025 (\$550 billion and 1.4 percent of GDP), which then decline rapidly and turn slightly negative in 2029. Scenario 4, which lowers health care costs and delays Social Security benefit receipt but also makes the tax cut permanent, steadily reduces future budget deficits relative to the baseline. However, it still leaves the largest budget deficits of any of the four scenarios, reaching \$1.1 trillion in 2029 (2.5 percent of GDP), about 40 percent of the deficit in the MA baseline scenario.



7.3.3. Debt as percentage of GDP. In the MA baseline scenario, debt as a percent of GDP declines from 30 percent in 2002 to a low of 7.5 percent of GDP in 2020, then rises again to 21 percent in 2029. The first three scenarios all eventually produce negative debt/GDP ratios that remain negative through 2029.⁹ Scenario 4 results in a declining debt to GDP ratio through 2020, which begins to rise after that. Figure 19 shows the trend in the debt/GDP ratio for the baseline and four scenarios through 2029.

Again, Scenario 1 (high growth) is the most favorable, with the debt/GDP ratio declining steadily at about the same rate as in the baseline for the first decade (the projected growth rates are the same during that period), then continuing to decline to -35



⁹ Negative debt-to-GDP ratios indicate that accumulated budget surpluses have not only eliminated debt but allowed for the accumulation of assets by the government, i.e., net saving. In the MA model, such saving by the government is assumed to earn the same rate of interest as it pays on government bonds.

percent of GDP. Scenario 3 results in a steadily declining ratio that reaches –15 percent, and Scenario 2 results in a declining ratio that reaches a low of about –5 percent of GDP between 2025 and 2029. Scenario 4 (reduced health costs, delayed Social Security, and permanent EGTRRA tax cuts) has the effect of steadily lowering the ratio of debt to GDP until about 2020, when it begins to rise slowly and then accelerates to just under 10 percent of GDP by 2029. By 2029, the debt to GDP ratio in Scenario 4 is just about half of the level in the baseline scenario, whereas it was negative in all three other scenarios.

8. Conclusion

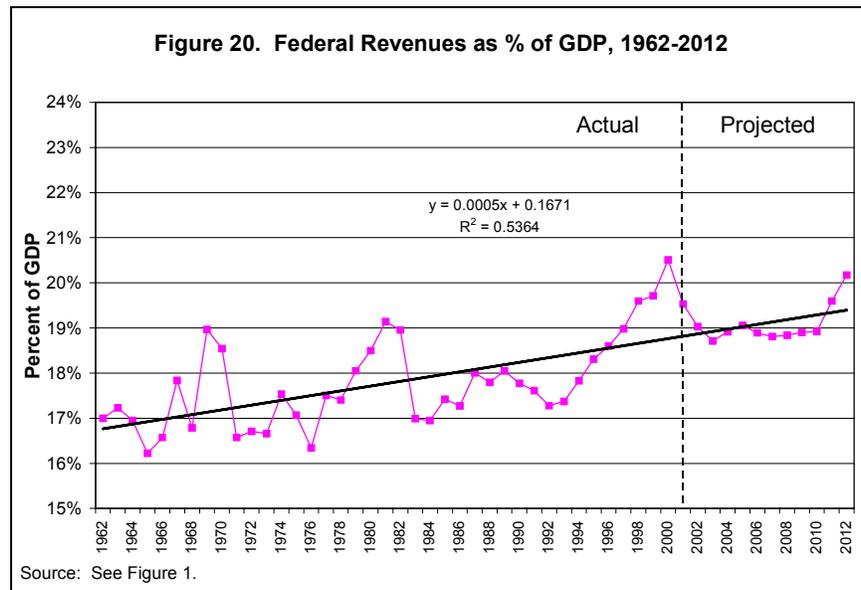
Although the demographic outlook represents a fiscal challenge to the nation, it is not a determinant of the future. Society can adapt by means of social and economic policies, and individuals can adapt by making different personal choices.

Individual adaptation to demographic circumstances has been a hallmark of boomers' lives. The size of the boomer cohort increased competition in that generation's youth for schools, jobs, resources, and partners (Easterlin, 1985). Much as the boomers adapted to that competition by getting more education, deferring marriage and/or children or remaining single or childless, and women entering the labor force, the same boomers will adapt later in life as well. Although the boomer cohorts have fewer "degrees of freedom" to adapt now than they did in their youth, they are not without options. The most obvious and important ones are saving more and working longer. Working longer can make a significant difference in achieving a comfortable retirement. This was illustrated in a study that found that households with a breadwinner aged 51-61 (i.e., within about ten years of retirement), and given their accumulated assets and wage levels, on average needed to save about 16 percent of income to achieve a 69 percent replacement rate at age 62. However, they would only need to save a little more than 7 percent of income to achieve a 78 percent replacement rate if they worked instead until age 65 (Moore and Mitchell, 2000).

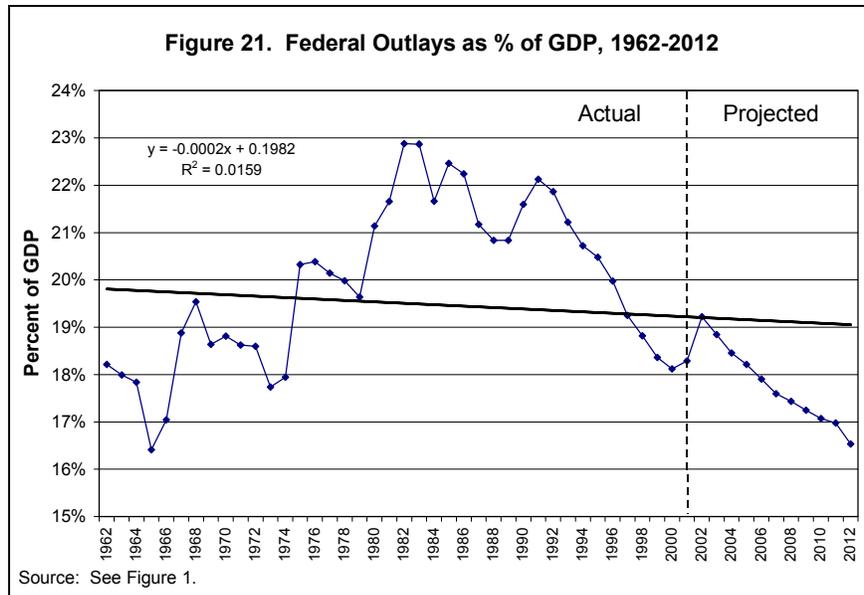
Societal adaptation can come from government policies of both a macro and micro nature. Micro policies should seek to support individuals' adaptation by promoting higher personal saving for retirement, improving opportunities to lengthen work lives, extending health insurance coverage, and controlling health care costs. The most effective macro policy would be to promote strong economic growth via debt reduction, which should help lower long-term interest rates, spur investment, and increase productivity.

The nation's ability to afford entitlements is vastly understated by many political observers, both advocates and experts, conservatives and liberals. Some observers are merely opposed to higher spending and taxes for ideological reasons. Others believe it will hurt the economy because of excessive debt accumulation. Both views ignore critical facts about the budget and economy. First, the pessimism that often accompanies entitlement projections is to a large extent built on questionable assumptions. The models that forecast long-term budget scenarios typically assume a flat ratio of tax revenue to GDP, while they assume entitlements to be ever-growing in size due to population aging. The Kerrey-Danforth Commission assumed revenues to be a constant 19 percent of GDP. CBO takes a similar approach—rising spending and flat revenues.

Although this approach has its rationale, recent experience has been nearly the opposite—rising revenues and *falling* expenditures. As Figure 20 demonstrates, federal revenues have steadily risen as a share of GDP since 1962. The straight line estimates the average rate of increase during the period, about 0.05 percent of GDP per year, or one percent of GDP every 20 years. And the R^2 of 0.54 indicates a close relationship with relatively little dispersion around the trend. So the assumption of flat revenues in the future seems unwarranted on empirical grounds.



At the same time, federal spending as a share of GDP has been steadily declining (see Figure 21) since 1983 after a steady run-up prior to that. In fact, federal spending as a percent of GDP was the lowest in FY2000 (18.1 percent) that it has been since FY1974. Moreover, it is projected by CBO to *drop* steadily for the next 10 years. Although there is barely any trend (-0.02 percent of GDP per year) for the entire period since 1962 and the low R^2 (0.02) indicates wide dispersion, there are really two distinct trends here—FY1962 to FY1982 and FY1982 to FY2012. In the first 20 years, the trend is one of *increasing* spending at the rate of 0.2 percent of GDP per year, or two percent of GDP per decade. In the next 30 years, the trend is strikingly negative, with an equal and opposite rate of decline of 0.2 percent of GDP per year and an R^2 of 0.92, a very tight fit. The decline in federal spending, according to *current* CBO projections (i.e., after 9/11, the recession, and the emergency spending of 2001), will reach a low of 16.5 percent of GDP by FY2012, which would be lower than at any time in the half century from FY1962 to FY2012, with the exception of FY1965.



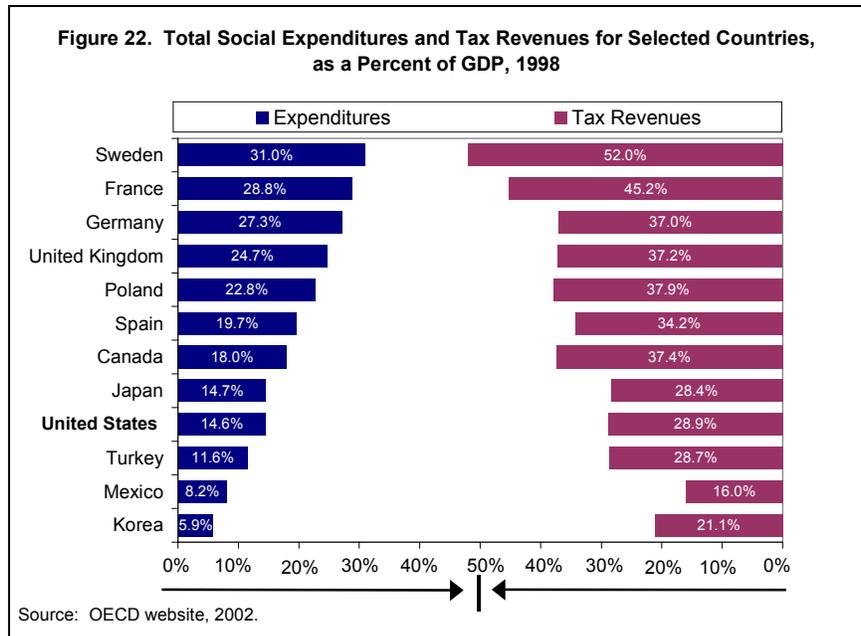
Critics would quickly, and correctly, point out that these trends are mostly backward-looking and at best only take us up to the early years of boomers’ retirement, after which budget pressures intensify. But that is precisely why we should take comfort in the state of our fiscal house today. The evidence from the government’s own experts is that the burden on American taxpayers is the lowest that it has been in nearly *half a century*. To quote the Congressional Budget Office (2001),

...between 1979 and 1997, the effective tax rate fell for every income quintile, or fifth, of the income distribution. Had 2000 tax law been in effect in 1997, the declines in effective tax rates would have been even greater.

According to the U.S. Department of the Treasury, tax burdens for the median household are now at their lowest level since the *1950s* (Shapiro, 2002). How is this possible when, as we just noted, tax revenues have increased steadily relative to GDP? The answer lies in the fact that effective tax rates are measured relative to personal income, which is not equivalent to GDP. The main difference is capital gains income, which generated a large share of revenue growth in the 1990s. Although capital gains income and taxes are included in calculating effective tax rates, capital gains taxes are counted as federal tax receipts in GDP—but capital gains *income* is not included in GDP. As a result, taxes as a share of GDP rose while tax burdens fell. Falling individual tax burdens for the past two decades suggest that there is much greater capacity to pay for entitlement growth than many analyses imply. In no case does it make sense to assume a constant future ratio of taxes to GDP—this not only ignores recent history but significantly underestimates our capacity to pay more to meet future entitlement demands.

The capacity of the U.S. to address future expenditure needs is also illustrated by our ranking relative to our trading partners (see Figure 22). The Organization for Economic Cooperation and Development (OECD) ranks the United States 25th out of 29 OECD countries in terms of total tax revenue as a percent of GDP—28.9 percent in 1998. Only Mexico, Korea, Japan, and Turkey have lower tax burdens (OECD, 2000). And among the OECD countries, the United States ranks 24th out of 29 in the share of GDP

going to social expenditures—14.6 percent (OECD, 2001). We are one of only six nations whose social expenditures did not surpass the 15 percent of GDP threshold in 1998, the others being Japan, Korea, Mexico, Slovak Republic, and Turkey.



The coming boomer retirement wave promises to be a challenge to the U.S. economy and budget. However, it is one that the remarkable fiscal improvements of the past decade and our recent experience demonstrate that we are fully capable of meeting. The resiliency of the economy, the low and declining tax burdens, and the relatively low levels of social welfare expenditures in the U.S. also provide plenty of slack for increases in our social commitments in the next two decades.

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