Appendixes

Appendix A

Calculating Budgetary Savings and Distributional Effects

The budgetary savings in this analysis derive from the economic and budget assumptions contained in the Congressional Budget Office (CBO) publication *The Economic and Budget Outlook: Fiscal Years 1995-1999*, released in January 1994. They are also based on CBO's simulations of options for reducing net entitlement spending. This appendix describes the methodology used to estimate those savings and the distributional effects of the options.

Constructing the Database

CBO based the simulations it conducted for this study on data from the March 1991 Current Population Survey (CPS), a microdata file created by the Bureau of the Census that is representative of the noninstitutionalized U.S. population in 1990. CBO adjusted the basic CPS file to reflect the distribution of income from federal tax returns as shown in the Internal Revenue Service's 1990 Statistics of Income and to mirror information about the receipt of entitlements derived from administrative records of the various entitlement programs.

The resulting file, referred to here as the transfer income file, contains records for about 150,000 people in nearly 60,000 households and represents the noninstitutionalized domestic population of the United States in 1990. Tabulations of this file provided the information presented in Chapter 2 about the distribution of entitlement benefits.

Simulating Policy Options

CBO developed a microsimulation model based on data from the transfer income file to estimate the effects of alternative policy options. Simulation consisted of three steps.

1. Because each policy option was formulated to become effective in 1995, the model deflated all policy parameters denominated in dollars from 1995 dollars to 1990 dollars based on the consumer price index. Thus, for example, the $40,000 threshold for 1995 cuts in the benefit reduction option was deflated to about $34,200, the comparable value for 1990.

2. Using the deflated parameters, the model applied each option to each federal tax unit in the transfer income file to determine whether that unit would be subject to higher federal income taxes or reduced transfer benefits if the option was enacted.

3. CBO tabulated the tax increases or benefit cuts among categories of income, types of families, and entitlement programs to assess the overall effect of each option on the entire U.S. population.

The resulting tabulations estimate how the options and 1995 tax law--had they been in place--would have affected recipients of entitlement benefits in 1990. In particular, CBO estimated the percentage of total spending for each entitlement program that each option would recoup in either higher taxes or reduced benefits. Chapter 4 presents the results of those simulations.

To project the effects of the policy options, CBO assumed that the distribution of people among types of families and of incomes among families would remain essentially unchanged through the 1990s, at least for that portion of the population receiving entitlement benefits. In particular, CBO assumed that there would be little change in the composition of the population receiving entitlements and that the incomes of that population would grow roughly at the rate of inflation.

If those assumptions held, there would be no change over the decade in the fraction of families affected by each option, the fraction of their benefits that they would lose, and the share of total spending from each entitlement program that would be taken in higher taxes or reduced benefits. Although the assumptions undoubtedly will not hold precisely, they offer a sensible benchmark for estimating budgetary savings.

Estimating Budgetary Savings

CBO estimated the budgetary savings that each option would generate by multiplying the percentage reduction in benefits from each entitlement program--as estimated by the microsimulations described above--times the baseline outlay projections for each program. To develop the estimates shown in Chapter 3, CBO used differing assumptions for each option and type of entitlement about the distribution of revenues or savings among fiscal years.

Appendix B

Budgetary Savings and Distributional Effects of Options with Equivalent Budgetary Savings

The Congressional Budget Office (CBO) modeled the options examined in the body of this analysis after actual proposals for entitlement savings. As Chapter 3 indicates, the options would have widely divergent budgetary effects, ranging from savings of about $44 billion over five years under the benefit denial option to increased revenues of roughly $260 billion over the same period under the tax option.

This appendix describes the budgetary savings and distributional effects of three options similar in construct to those described in Chapter 3 but with modifications to the tax and benefit denial options that make them generate budgetary savings similar to those of the benefit reduction option. Comparing the distributional effects of equivalent options gives a better indication of which beneficiaries would bear the costs of reducing net spending for entitlements.

Modifying the Options

The modifications to the tax and benefit denial options focused on exemptions and thresholds. Exempting from taxation some or all of the benefits of low-income recipients would reduce the budgetary savings of the tax option and limit its effects on the lower end of the income distribution. Lowering the thresholds above which the benefit denial option would take away all benefits from higher-income recipients would increase budgetary savings and spread the costs of those savings farther down the income distribution.

The Tax Option

For the tax option, low-income beneficiaries would have to count only some or none of their benefits as taxable income. Therefore, they would suffer no or only small effective cuts in their entitlements. In particular, married couples who filed joint tax returns and had combined adjusted gross income (AGI) and entitlement income--which will be termed "modified AGI"--of less than $13,000 in 1995 would have none of their benefits included in their taxable income. For other tax units, the threshold would be $10,000.

A tax unit with modified AGI greater than the threshold would count as taxable income the smaller of its entitlement income or the amount by which its modified AGI exceeded the threshold. Thus, a couple with $5,000 of nonentitlement income and $7,000 from Social Security would count none of the Social Security income as taxable because its modified AGI of $12,000 would not exceed the threshold. If the couple also received Medicare benefits valued at $6,000, it would include $5,000 of entitlements as taxable income, the amount by which its modified AGI of $18,000 exceeded the $13,000 threshold. This modification to the tax option would exempt the poorest recipients from taxes on their benefits and would limit the effects of taxes on other low-income beneficiaries. For some families with incomes above the threshold, however, each additional dollar of earnings would add two dollars to taxable income, thus doubling the marginal tax rates those families would face.

The Benefit Denial Option

To obtain greater budgetary savings from this option, CBO lowered its income thresholds substantially. Rather than taking away all benefits from couples with 1995 incomes above $130,000 and from other tax units with incomes above $110,000, the income thresholds were cut by more than half to $60,000 and $52,000, respectively.

Left unchanged was the $10,000 interval below these cutoff thresholds to which a 50 percent rate of benefit reduction applied. Thus, a couple with a total income, including entitlements, of less than $50,000 would lose no benefits; a couple with an income between $50,000 and $60,000 would lose half of the benefits that caused its total income to exceed $50,000. A couple for whom nonentitlement income alone exceeded $60,000 would get no benefits.

Budgetary Savings

As modified, the three options would generate roughly similar budgetary savings, although some differences would arise. Variations occur because the effects of the options would be spread differently over fiscal years and because their growth over time would depend on the mix of programs affected.[1]

The unmodified benefit reduction option would save about $9 billion in 1995, rising to less than $50 billion in 1999 and just slightly less than $190 billion over five years (see Table B-1). The modified tax option would raise federal revenues by about $13 billion in 1995, increase 1999 revenues by slightly more than $50 billion, and generate budgetary savings of about $192 billion over the 1995-1999 period. The modified benefit denial option would save somewhat more over the period--almost $207 billion--primarily because it would have significantly larger savings in the first year than the other options. When fully effective, all three options would reduce net annual outlays for affected entitlements by about 5 percent.

1. In addition, CBO defined the modifications to the tax and benefit denial options in even thousands of dollars. Finer adjustments to the values for the exemptions and thresholds under those options could generate budgetary savings that were more nearly equal for the three options.

Distributional Effects

The general pattern of distributional effects of the three options observed for the initial forms described in Chapter 4 would still obtain for the modified versions. Differences between the options, however, would be smaller. The tax option would still affect many more recipient families than the other options and take less of their benefits in taxes. The benefit denial option would take larger shares of entitlement income away from fewer beneficiaries.

The tax option would affect nearly twice as many recipient families as the benefit reduction option and six times as many as the denial option (see Table B-2). Two-fifths of all recipient families would pay higher taxes; only at the bottom of the income distribution would fewer than half of the families see their tax bills rise. In contrast, the denial option would affect hardly any families with incomes below $40,000, and less than one-fourth of families with incomes between $50,000 and $75,000 would lose benefits. Elderly recipients would be half again as likely as the average recipient to lose benefits under either the tax or denial options, but only slightly more likely to be affected by the reduction option.

The elderly would bear more of the total cost of the tax and denial options than of the reduction option, primarily because the former options protect families with children (see Table B-3). Both the tax and the denial options would generate five-sixths of their savings from the elderly and less than one-twentieth from families with children. In comparison, the reduction option would obtain less than three-fourths of its savings from the elderly and one-eighth from families with children.

At the same time, the benefit reduction and denial options would impose costs primarily on families at the top of the income distribution, whereas the tax option would be more broadly based, in part because 85 percent of Social Security benefits are already taxable for high-income families. Roughly half of the savings from both the reduction and denial options would come from families with incomes above $100,000 and more than 90 percent from families with incomes above $50,000. In contrast, the tax option would get half of its revenues from families with incomes below $40,000 and nearly 90 percent from those with incomes below $100,000.

Affected families would lose the greatest fraction of benefits under the denial option and the smallest under the tax option (see Table B-4). Families affected by the benefit denial option would lose an average of three-fifths of their benefits, compared with one-fourth for those affected by the reduction option and one-ninth for those paying higher taxes under the tax option. A similar pattern obtains for each type of family and for families in each of the income categories above $50,000. Affected families with lower incomes would lose more under the tax option than under the other two options, principally because the tax option would subject more of their benefits to loss. Similar relationships among options can be observed for individual programs (see Table B-5).

Table B-1.
Estimated Gains in Revenues and Reductions in Spending Under Three Policy Options Generating Equivalent Budgetary Savings in Net Entitlement Costs, Fiscal Years 1995-1999 (In billions of dollars)

Policy Option	1995	1996	1997	1998	1999	1995-1999
Broaden Definition of Taxable Income to Include Entitlements	13.5	39.0	42.4	46.5	50.8	192.2
Reduce Entitlement Benefits for Middle- and High-Income Recipients[a]	9.4	45.4	42.2	44.9	47.9	189.8
Deny Entitlement Benefits to High-Income Recipients	19.3	47.5	43.7	46.5	49.7	206.7

SOURCE: Congressional Budget Office.

NOTE: The table covers the following entitlements: Social Security and Railroad Retirement, unemployment compensation, veterans' compensation and pensions, Medicare, Medicaid, Supplemental Security Income, Aid to Families with Dependent Children, and the Food Stamp program.

a. This option closely resembles the proposal of the Concord Coalition to reduce spending for entitlements and is identical to the option to reduce benefits for middle- and high-income recipients discussed in Chapter 3.

Table B-2.
Percentage of Recipient Families Losing Benefits Under Three Policy Options Generating Equivalent Budgetary Savings in Net Entitlement Costs, by Family Income and Type

Family Category	Broaden Taxable Income to Include Entitlements	Reduce Benefits to Middle- and High-Income Recipients	Deny Benefits to High-Income Recipients
All Families	42	22	7
Income (1995 dollars)[a]			
1 to 9,999	7	0	0
10,000 to 19,999	33	b	0
20,000 to 29,999	63	1	b
30,000 to 39,999	62	20	b
40,000 to 49,999	57	74	3
50,000 to 74,999	56	75	23
75,000 to 99,999	55	74	45
100,000 to 149,999	62	77	60
150,000 or more	77	89	78
Type[c]			
With children	12	20	1
Elderly	60	25	11
Other	42	21	7

SOURCE: Congressional Budget Office based on data from the Census Bureau's March 1991 Current Population Survey, the Internal Revenue Service's 1990 Statistics of Income, and administrative statistics from individual entitlement programs.

NOTES: Families are groups of related people living together. Individuals not living with relatives are considered one-person families.

The table covers the following entitlements: Social Security and Railroad Retirement, unemployment compensation, veterans' compensation and pensions, Supplemental Security Income, Aid to Families with Dependent Children, the Food Stamp program, Medicare, and Medicaid. Food stamps are measured at face value; Medicare and Medicaid benefits are assigned their insurance value net of any premiums paid.

a. Family income comprises all cash income plus the face value of food stamps; it excludes the value of other benefits received in kind. Families with zero or negative income are included only in totals.

b. Less than 0.5 percent.

c. Families with children are all families with at least one member under age 18. Elderly families are all families without children who have at least one member age 65 or older. Other families are all families not in the first two categories.

Table B-3.
Distribution of Budgetary Savings Under Three Policy Options Generating Equivalent Budgetary Savings in Net Entitlement Costs, by Family Income and Type (In percent)

Family Category	Broaden Taxable Income to Include Entitlements	Reduce Benefits to Middle- and High-Income Recipients	Deny Benefits to High-Income Recipients
All Families	100	100	100
Income (1995 dollars)[a]			
1 to 9,999	0	0	0
10,000 to 19,999	9	b	b
20,000 to 29,999	22	b	b
30,000 to 39,999	20	1	b
40,000 to 49,999	12	6	b
50,000 to 74,999	18	26	17
75,000 to 99,999	8	21	29
100,000 to 149,999	6	25	30
150,000 or more	5	21	23
Type[c]			
With children	4	12	2
Elderly	80	72	84
Other	17	15	14

SOURCE: Congressional Budget Office based on data from the Census Bureau's March 1991 Current Population Survey, the Internal Revenue Service's 1990 Statistics of Income, and administrative statistics from individual entitlement programs.

NOTES: Families are groups of related people living together. Individuals not living with relatives are considered one-person families.

The table covers the following entitlements: Social Security and Railroad Retirement, unemployment compensation, veterans' compensation and pensions, Supplemental Security Income, Aid to Families with Dependent Children, the Food Stamp program, Medicare, and Medicaid. Food stamps are measured at face value; Medicare and Medicaid benefits are assigned their insurance value net of premiums.

a. Family income comprises all cash income plus the face value of food stamps; it excludes the value of other benefits received in kind. Families with zero or negative income are included only in totals.

b. Less than 0.5 percent.

c. Families with children are all families with at least one member under age 18. Elderly families are all families without children who have at least one member age 65 or older. Other families are all families not in the first two categories.

Table B-4.
Average Percentage of Benefits Lost by Families Losing Benefits Under Three Policy Options Generating Equivalent Budgetary Savings in Net Entitlement Costs, by Family Income and Type

Family Category	Broaden Taxable Income to Include Entitlements	Reduce Benefits to Middle- and High-Income Recipients	Deny Benefits to High-Income Recipients
All Families	11	23	60
Income (1995 dollars)[a]			
1 to 9,999	2	0	0
10,000 to 19,999	7	b	0
20,000 to 29,999	10	b	b
30,000 to 39,999	13	2	b
40,000 to 49,999	12	6	7
50,000 to 74,999	13	19	27
75,000 to 99,999	15	38	72
100,000 to 149,999	16	64	92
150,000 or more	19	81	99
Type[c]			
With children	5	20	40
Elderly	12	23	61
Other	10	22	57

SOURCE: Congressional Budget Office based on data from the Census Bureau's March 1991 Current Population Survey, the Internal Revenue Service's 1990 Statistics of Income, and administrative statistics from individual entitlement programs.

NOTES: Families are groups of related people living together. Individuals not living with relatives are considered one-person families.

The table covers the following entitlements: Social Security and Railroad Retirement, unemployment compensation, veterans' compensation and pensions, Supplemental Security Income, Aid to Families with Dependent Children, the Food Stamp program, Medicare, and Medicaid. Food stamps are measured at face value; Medicare and Medicaid benefits are assigned their insurance value net of any premiums paid.

a. Family income comprises all cash income plus the face value of food stamps; it excludes the value of other benefits received in kind. Families with zero or negative income are included only in totals.

b. Too few families would be affected to allow estimation of a statistically meaningful value.

c. Families with children are all families with at least one member under age 18. Elderly families are all families without children who have at least one member age 65 or older. Other families are all families not in the first two categories.

Table B-5.
How Three Policy Options Generating Equivalent Budgetary Savings in Net Entitlement Costs Affect the Benefits Lost by Recipient Families, by Program (In percent)

	Broaden Taxable Income to Include Entitlements	Reduce Benefits to Middle- and High-Income Recipients	Deny Benefits to High-Income Recipients
	Recipient Families Losing Benefits		
Cash Social Insurance Programs			
Social Security[a]	56	24	9
Unemployment compensation	b	32	4
Veterans' benefits[c]	57	39	14
Means-Tested Assistance			
Supplemental Security Income	25	7	2
Aid to Families with Dependent Children[d]	18	5	1
Food stamps	21	2	e
Health Programs			
Medicare	57	23	10
Medicaid	20	6	1
All Benefits	42	22	7
	Benefits Lost by Families Losing Benefits		
Cash Social Insurance Programs			
Social Security[a]	10	23	60
Unemployment compensation	b	25	78
Veterans' benefits[c]	15	21	50
Means-Tested Assistance			
Supplemental Security Income	7	18	38
Aid to Families with Dependent Children[d]	5	13	f
Food stamps	4	f	f
Health Programs			
Medicare	16	23	63
Medicaid	7	16	f
All Benefits	11	23	60

Table B-5.
Continued

	Broaden Taxable Income to Include Entitlements	Reduce Benefits to Middle- and High-Income Recipients	Deny Benefits to High-Income Recipients
	Benefits Lost by All Recipient Families		
Cash Social Insurance Programs			
Social Security[a]	6	7	7
Unemployment compensation	b	9	5
Veterans' benefits[c]	10	10	9
Means-Tested Assistance			
Supplemental Security Income	2	2	1
Aid to Families with Dependent Children[d]	1	1	e
Food stamps	1	e	e
Health Programs			
Medicare	10	6	7
Medicaid	2	1	1
All Benefits	5	5	5

SOURCE: Congressional Budget Office based on data from the Census Bureau's March 1991 Current Population Survey, the Internal Revenue Service's 1990 Statistics of Income, and administrative statistics from individual entitlement programs.

NOTE: Families are groups of related people living together. Individuals not living with relatives are considered one-person families.

a. Includes Railroad Retirement benefits.

b. The tax option would not affect recipients of unemployment compensation because that entitlement is already subject to income taxation.

c. Veterans' benefits comprise veterans' compensation and veterans' pensions.

d. Because the data do not distinguish accurately between recipients of Aid to Families with Dependent Children (AFDC) and recipients of general assistance, some recipients of general assistance are included with recipients of AFDC.

e. Less than 0.5 percent.

f. Too few families would be affected to allow estimation of a statistically meaningful value.

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