THE CHANGING DISTRIBUTION OF FEDERAL TAXES: A CLOSER LOOK AT 1980

Staff Working Paper
July 1988

The Congress of the United States
Congressional Budget Office

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Summary and Introduction

A recently released study by the Congressional Budget Office measured changes in the distribution of combined federal tax liabilities by family income classes during the 1975-1990 period.[1] That study presented a detailed analysis of the distribution of federal tax liabilities in three representative years: 1977, 1984, and 1988. In the study, combined federal taxes included individual and corporate income taxes, social insurance payroll taxes, and excise taxes except for the windfall profit tax. This staff working paper uses identical methods to study the same federal tax liabilities in one intervening year, 1980.

As reported in the earlier CBO study, total effective tax rates (the ratio of taxes from all four sources to family income) rose between 1977 and 1984 for the 10 percent of families at the lowest end of the distribution and fell for the 10 percent of families at the highest. Overall, the distribution of total federal taxes became less progressive.

1977 - 1980

Subdividing the 1977-1984 period helps to place those changes in the context of the economic and tax policy events of the late 1970s and early 1980s. Between 1977 and 1980, the total effective tax rate for all four taxes combined declined for the 20 percent of families in the bottom of the income distribution and generally rose for the 50 percent of families in the upper end, except

1. Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990* (October 1987).

for the 10 percent of families with the highest incomes. Total effective tax rates for other family income classes changed little between 1977 and 1980.

The total effective tax rate is the combination of effective rates for each separate federal tax source (where each effective rate is the ratio of taxes paid from that source to family income). Thus, changes in effective tax rates depend both on changes in the share of revenue raised by different tax sources and on shifts in the distributional burden of each source separately. For example, a shift toward the relatively more regressive excise or payroll taxes would increase the measured share of overall taxes paid by lower income groups, while a shift toward the individual income tax would decrease their share.

Between 1977 and 1980, effective tax rates for individual income and social insurance taxes rose for most income classes, while rates for excise and corporate income taxes fell. For the 20 percent of families with the lowest incomes, the drop in the effective excise tax rate was responsible for most of the drop in the total effective tax rate. For most of the top half of the income distribution, the decline in the effective excise and corporate income tax rates was too small to offset the increase in effective social insurance and individual income tax rates. For the other families, the net effect of the changes was very small.

Between 1977 and 1980, effective individual income tax rates rose for most family income classes, as rising nominal incomes pushed families into higher income tax brackets. These increases came despite legislated reductions in some tax rates and increases in personal exemptions, zero bracket amounts (standard

deductions), and the width of tax brackets enacted in the Revenue Act of 1978. For the 1 percent of families with the highest incomes, however, effective individual income tax rates fell slightly between 1977 and 1980, reflecting a reduction in the tax rate on capital gains that also was enacted in the Revenue Act of 1978.

Effective social insurance tax rates rose between 1977 and 1980 for families in all income classes except the lowest, as a result of increases in the Social Security payroll tax rate enacted in the Social Security Amendments of 1977. The exception for families in the lowest class came about because of a change in the composition of income for those families as the fraction of their income from wages declined.

Between 1977 and 1980, effective corporate income tax rates declined for families in all income classes. This drop reflected a decline in corporate profits over those years and, to a lesser extent, a reduction in statutory corporate income tax rates enacted in the Revenue Act of 1978.

Effective federal excise tax rates fell between 1977 and 1980 for families in all income classes as inflation caused nominal incomes to rise while statutory excise tax rates remained largely unchanged. Because most federal excise tax revenue derives from taxes that are levied on a per-unit or specific basis (for example, cents per gallon or per number of cigarettes) rather than as a percent of expenditures, tax payments do not increase proportionally with increases in nominal incomes. It was this decline in effective excise tax rates that was

primarily responsible for the decline in total effective tax rates for lower-income families between 1977 and 1980.

1980 - 1984

Between 1980 and 1984, the total effective tax rate for all families taken together dropped noticeably, from 23.3 percent in 1980 to 21.7 percent in 1984. The decline was not uniform across all income classes, however. Effective tax rates rose for the 30 percent of families at the lowest end of the income distribution and fell for the 70 percent of families in the upper end, with the size of the reduction increasing with family income. The 10 percent of families at the highest end of the distribution had both the largest percentage and the largest absolute decrease in effective tax rates.

These changes were the result of different movements in the distribution of effective rates for each separate tax source. Between 1980 and 1984, the overall effective tax rates for all families rose for social insurance and excise taxes and fell for individual and corporate income taxes, but the effective individual income tax rate did not drop for low-income families. Effective tax rates rose for families in the bottom 30 percent of the income distribution because their payroll and excise tax rates rose while their effective individual income tax rates did not fall. The drop in the corporate income tax rates had little effect on low-income families. For the remaining 70 percent of families, the drop in the income tax rates more than offset the increase in payroll and excise taxes. The decline in effective individual income tax rates was largest for families with the highest incomes.

The changes in effective rates under the individual income tax resulted largely from the Economic Recovery Tax Act of 1981 (ERTA). ERTA substantially cut statutory tax rates and increased allowable deductions, but it failed to offset the effect on low-income families of an inflation-induced decline in the real value of personal exemptions, zero bracket amounts (standard deductions), and the earned income credit. The increase in social insurance taxes between 1980 and 1984 reflected additional increases in the Social Security payroll tax rate and in the maximum amount of earnings subject to the tax, enacted in the Social Security Amendments of 1977 and of 1983. The decline in the effective corporate income tax rate occurred as a result of the increase in corporate tax preferences enacted in ERTA, and despite an increase in the corporate profit share of gross national product between 1980 and 1984.

Effective excise tax rates rose between 1980 and 1984 for all family income classes, except for the 10 percent of families with the highest incomes. This rise reflected increases in the taxes levied on gasoline, tobacco, and telephone services. Although the increase in effective rates was small for families in most income classes, the increase for low-income families was sizable. This effect occurred not only because of the increase in statutory tax rates, but also because of a large increase in measured expenditures as a percentage of income for low-income families, particularly expenditures on gasoline.

1980 - 1988

By 1988, the distribution of combined federal taxes is projected to become more progressive than in 1984, but to remain less progressive than in either 1977 or

in 1980.[2] Although the combined effective tax rate for all families taken together is expected to drop slightly from 1980 to 1988, total effective federal tax rates are projected to be higher for families in the bottom half of the income distribution and lower for families in the top half. The largest reductions between 1980 and 1988 will be for the 1 percent of families with the highest incomes.

Most of the change in the distribution of taxes between 1980 and 1988 is the result of an increase in social insurance taxes and a decrease in individual income taxes. For families in the bottom half of the income distribution, the effective social insurance tax rate will increase more than the individual income tax rate will fall. For families in the top half, the lower individual income tax will outweigh the increase in social insurance taxes. Because the individual income tax is a highly progressive tax, while social insurance taxes are much less progressive and even regressive in the highest-income range, a shift from income to payroll taxes reduces the progressivity of total federal taxes.

By 1988, the effective individual income tax rate is projected to fall to 10.4 percent, down from 12.3 percent in 1980. The net result of all changes since 1980, which include ERTA and the Tax Reform Act of 1986, is that effective individual income tax rates will be lower in 1988 than they were in 1980 for families in all income deciles. Conversely, by 1988 the effective social insurance tax rate is projected to rise to 8.7 percent, up from 7.2 percent in 1980. The

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2. Incomes for 1988 are based on the Congressional Budget Office economic projections of August 1987. Simulated 1988 taxes do not reflect changes enacted in the Omnibus Budget Reconciliation Act of 1987. For a description of the changes in the CBO forecast since August 1987 and the effects of legislation enacted in the fall of 1987, see Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1989-1993* (February 1988).

higher rate reflects increases in the Social Security payroll tax rates enacted in the Social Security Amendments of 1977 and of 1983.

Comparing Effective Tax Rates in 1980 and 1988

The distribution of effective tax rates can change between years not only because of changes in tax policy but also as the result of changes in the distribution of incomes and expenditures. Evaluating effective tax rates under different tax laws but at a constant level of income helps to isolate the separate effect of tax policy changes.

When effective tax rates are computed for 1988 incomes using 1980 law adjusted to 1988 levels, the decline in progressivity between 1980 and 1988 is reduced. This result suggests that some of that decline stems from shifts in the distribution of income between the two years. When expenditures as well as incomes are held constant at their 1988 levels, the decline in progressivity between 1980 and 1988 is further reduced. Holding expenditures constant at their 1988 level removes much of the difference in effective federal excise tax rates between 1980 and 1988 for families in the lowest income class.

Additional Distribution Information

The share of taxes paid by the 10 percent of families with the highest incomes rose by between 1.0 and 1.5 percentage points between 1980 and 1988. This occurred even though these families had the largest reduction in taxes as a percentage of income--in both absolute and percentage terms--over the same period. The increase in the share of taxes paid by this group resulted from a growth

of nearly 3 percentage points in their share of pre-tax income between 1980 and 1988, more than offsetting the decline in their effective tax rate.

Summary Indexes of Tax Progressivity

Several measures are available that summarize the progressivity of the tax system with a single index number. Comparisons across years of two widely used tax progressivity indexes show no noticeable difference in progressivity between 1977 and 1980, a decrease in progressivity between 1980 and 1984, and an increase between 1984 and 1988. While these indexes project an increase in progressivity between 1984 and 1988, they also suggest that the distribution of federal tax liabilities will remain less progressive in 1988 than in either 1980 or 1977.

Measuring Family Incomes and Federal Tax Liabilities

In this report, as in the earlier CBO study, combined federal taxes include individual and corporate income taxes, social insurance payroll taxes, and excise taxes except for the windfall profit tax. The distribution of taxes is classified as progressive if the ratio of taxes to incomes (the effective tax rate) rises as incomes rise, regressive if the ratio falls as incomes rise, or proportional if the ratio is the same at all income levels.

The results of any study of the distribution of tax liabilities necessarily depend on assumptions that are subject to challenge. There is no definitive way in which to assign combined federal taxes to particular family income groups. Nor is there a definitive way in which to measure family incomes.

Although federal tax payments are made by persons, corporations, and non-corporate employers, the economic burden of all taxes ultimately rests with families and individuals. Economists speak of the reduction in family income or purchasing power as the incidence of a tax. The incidence of some taxes, particularly the corporate income tax, has not been estimated conclusively, and remains a controversial issue. The following incidence assumptions are used in this study.[3]

- The individual income tax burden is attributed to the families who directly pay the tax. The study assumes no shifting of the tax among families.
- The social insurance payroll tax burden is allocated to employee compensation.
- The corporate income tax burden is allocated in two different ways. In alternative one, the burden is allocated to capital income. This is the standard treatment if the supply of investment capital is fixed, as in an economy where the rate of saving is relatively constant and domestic capital markets are isolated from international markets. In alternative two, the burden is allocated to employee compensation. This is an appropriate treatment if the supply of investment capital is highly responsive to taxes and other prices, as in a world economy with interdependent capital markets. Because capital income is a larger share of the total income of higher-income families than of moderate- and lower-income families, the corporate tax is more progressive with the first alternative than the second.
- The excise tax burden is allocated in proportion to expenditures on the taxed goods and services.

The study does not attempt to allocate the distributional effects of general government spending. In comparing the distribution of federal taxes in different years, shifts in the distribution of general expenditures between those years

3. For a more detailed discussion of these incidence assumptions, see Chapter III in Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990.*

are ignored. The study also separates the distributional effects of taxes from the effects of expenditures specifically related to those taxes. Social Security revenues are thus implicitly treated as independent of benefit payments.

In the study, family income is measured on a cash receipts basis, a definition generally consistent with the measure of income used by the federal tax system. Family income equals the sum of wages, salaries, self-employment income, and personal rents, interest, and dividends, plus cash pension benefits and realized capital gains. Family income excludes accrued but unrealized capital gains, employer contributions to pension funds, in-kind government transfer payments, and other noncash income. Because income is measured before reductions for any federal taxes, employer contributions for federal social insurance and federal corporate profits taxes are added to family income.[4] For a discussion of the source of the data and adjustment to the data, see the accompanying box.

The Year 1980

Both 1977 and 1984 were years of relatively high growth in gross national product (GNP), declining unemployment rates, rising but relatively modest rates of inflation, and relatively high corporate profits. In both years the economy had come out of a recession two years before and had just attained or was about to attain its new peak.

4. For a discussion of different definitions of family income and the reasons for using this particular definition, see Chapter IV in Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990*.

BOX

SOURCES OF DATA ON FAMILY INCOME, AND ADJUSTMENTS TO THE DATA

Distributions of family income for 1977, 1980, and 1984, and the projected distribution in 1988, are based on data from three sources. The primary source is the March Current Population Survey (CPS) for 1978, 1981, and 1985. The CPS is a monthly survey of approximately 60,000 families, conducted by the Bureau of the Census. Each March, the survey collects detailed information on family characteristics and family income in the previous calendar year. The reported data on income from taxable sources from the CPS files were adjusted for consistency with reported income from Statistics of Income (SOI) samples for calendar years 1977, 1980, and 1984. The SOI is an extensive annual sample of actual individual income tax returns. Data on consumer expenditures were taken from the 1980/1981 and 1984 Consumer Expenditure Survey (CES) Interview Surveys. The CES Interview Survey is a quarterly panel survey conducted by the Bureau of Labor Statistics. The survey collects detailed data on household expenditures over a 12-month period. The 1980/1981 CES data were adjusted to 1977 levels by changes in per capita expenditures of certain types as reported in the National Income and Product Accounts. Each of the 1984 files was adjusted to 1988 using actual growth rates in population, income, and expenditures through 1986, and projected growth rates for 1987 and 1988.

For purposes of comparing the distribution of family incomes in those years, income was divided into four categories: labor income (wages, salaries, and income from self-employment), capital income (rents, interest, dividends, and capital gains), transfer income (Social Security, unemployment insurance, Aid to Families with Dependent Children, Supplemental Security Income, workers compensation, and veterans' benefits), and other income (alimony, child support, and private pension payments).

Many people incur "paper losses" for tax purposes In order to approximate better the economic income of families, rental losses and most partnership losses were not subtracted from family income. All losses of sole proprietorships were allowed.

Reported pre-tax family incomes were adjusted to include the amount of the employer share of the Social Security payroll tax, the unemployment insurance payroll tax, and the corporate income tax. The unemployment insurance payroll tax and the employer share of the Social Security payroll tax were allocated to the employee on whose behalf the taxes were paid.

The corporate income tax was assigned to incomes in two ways, consistent with the two tax incidence assumptions. In the first alternative, all wages were increased by the ratio of corporate income taxes to total wages. In the second alternative, capital income (consisting of positive rents, interest, dividends, and an adjusted amount of realized capital gains) was increased by the ratio of corporate taxes to the sum of capital income. (Total adjusted capital gains in a particular year are computed as a fixed percentage of national income. Each family's share of adjusted gains is assumed to be the same as its share of realized gains. This procedure prevents assignment of a disproportionate share of the corporate tax to capital gains in those years when realizations are especially high.)

In 1980 the economy was feeling the effects of the huge run-up in oil prices during 1979. Between 1979 and 1980, consumer prices grew at a 13.5 percent rate, the highest rate since 1947. Real GNP declined by 0.2 percent for the year, although only in the second quarter was the change in real GNP actually negative. The unemployment rate for the year stood at 7.1 percent, the same as in 1977 and lower than the 7.5 percent rate for 1984. In both 1977 and 1984, however, the unemployment rate had declined from the previous year, while in 1980 the rate had increased from 5.8 percent in 1979. Corporate profits as a share of GNP dropped sharply between 1979 and 1980. Table 1 shows

TABLE 1. SELECTED ECONOMIC INDICATORS, 1970-1990

Calendar Year	Civilian Unemployment Rate	Percent Change in Real GNP	Percent Change in CPI	Economic Profits as a Percent of GNP
1970	4.9	-0.3	5.9	7.4
1971	5.6	2.8	4.3	7.9
1972	5.6	5.0	3.3	8.3
1973	4.9	5.2	6.2	8.3
1974	5.6	-0.5	11.0	6.9
1975	8.5	-1.3	9.1	7.4
1976	7.7	4.9	5.8	8.1
1977	7.1	4.7	6.5	8.8
1978	6.1	5.3	7.7	8.8
1979	5.8	2.5	11.3	8.0
1980	7.1	-0.2	13.5	6.5
1981	7.6	1.9	10.4	6.2
1982	9.7	-2.5	6.1	4.7
1983	9.6	3.6	3.2	6.3
1984	7.5	6.8	4.3	7.1
1985	7.2	3.0	3.6	6.9
1986	7.0	2.9	1.9	6.7
1987	6.2	2.9	3.7	6.6
Projected				
1988	6.5	3.0	4.3	6.6
1989	6.3	3.0	4.3	6.7
1990	6.1	3.1	4.3	6.7

SOURCE: *Economic Report of the President* (February 1988); and CBO projections.

NOTE: GNP = gross national product; CPI = consumer price index. CPI data beginning in 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.

some important economic indicators for 1970 through 1987, and projected levels for 1988 through 1990.

Macroeconomic conditions affect not only the level of average or median pre-tax family income but also the shape of the distribution of family incomes. This, in turn, influences the measured distribution of tax liabilities. A recession tends to widen the distribution of family incomes chiefly through a reduction in earnings for low-income families. The effects of inflation are less clear. Despite the often expressed characterization of inflation as a tax on the poor, the evidence suggests that an increase in prices may narrow the distribution of family incomes.[5]

Because 1980 was a year of both recession and inflation and because the unemployment rates for 1977 and 1984, although moving in the opposite direction, were as high or higher than the rate in 1980, it is not clear how economic conditions may have changed the distribution of family incomes in 1980 relative to the distribution in 1977 or 1984.

A number of changes in tax policy between 1977 and 1980 tended to increase tax burdens. Social Security payroll tax rates were increased by the Social Security Amendments of 1978. The lack of indexing in the individual income tax allowed inflation to erode the value of personal exemptions and the zero bracket amount (standard deduction) and push families into higher income tax brackets.

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5. See Rebecca M. Blank and Alan S. Blinder, "Macroeconomics, Income Distribution, and Poverty," in Sheldon H. Danziger and Daniel H. Weinberg, eds., *Fighting Poverty: What Works and What Doesn't* (Cambridge, Mass.: Harvard University Press, 1986).

Other factors tended to reduce taxes between 1977 and 1980. Some of the effects of inflation were offset in the Revenue Act of 1978 in which individual income tax rates were reduced, individual income tax brackets were widened, and the personal exemption amount, zero bracket amount, and the earned income credit were increased. For upper-income families, the most significant change between 1977 and 1980 was a reduction in the marginal tax rate on capital gains resulting from an increase in the exclusion for long-term capital gains from 50 percent to 60 percent. While excise tax rates were not changed between 1977 and 1980, because many federal excise tax rates were (and still are) fixed in nominal terms, inflation reduced the relative burden of excise taxes.

More significant changes in tax policy came after 1980. The major change in tax policy during the period was the enactment of the Economic Recovery Tax Act of 1981. ERTA reduced the top marginal individual income tax rate from 70 percent to 50 percent, cut other individual income tax rates by 23 percent over a three-year period, and enacted a number of other provisions that lowered individual and corporate income tax liabilities. Some of the corporate tax reductions in ERTA were later offset by provisions of the Tax Equity and Fiscal Responsibility Act of 1982.

At the same time ERTA was reducing individual income tax rates, social insurance tax rates were rising. Most of the changes in Social Security payroll taxes between 1980 and 1984 had been enacted in 1977 but did not take effect until later. These changes included an increase in the employee and em-

ployer payroll tax rate from 6.13 percent to 6.65 percent and two of the three special increases in the taxable wage base.

Distribution of Family Income in 1977, 1980, 1984, and 1988

The distribution of family income became more unequal between 1977 and 1980, and between 1980 and 1984. This trend is projected to continue through 1988. Between 1980 and 1984, a growing share of both labor and capital income was received by the top 1 percent of families in the income distribution. For the 20 percent of families with the lowest incomes, a drop in government transfer payments was the most significant change over this period.

Table 2 shows the distribution of total family incomes by population decile and the share of income received by the top 5 percent and 1 percent of the population in 1977, 1980, 1984, and 1988, under both allocations of the corporate income tax.[6] In this table and all subsequent tables, the tenth of the population with the lowest incomes excludes families without positive incomes, although those families are included in the totals.

As the table shows, the share of income in all deciles except the two highest declined between 1980 and 1984 under either allocation of the corporate income tax. The share of income in the highest income decile increased by 6 percent (from a 32.9 percent to a 35.0 percent share) under the allocation of the corporate tax to capital income, or by 8 percent (from a 32.0 percent share

6. Family income deciles are formed by dividing all families, ranked by income, into 10 equal groups. Because family income includes the family's share of the corporate tax, and because the share depends on which allocation method is used, families may have different incomes and may lie in different deciles under the two allocations.

to a 34.4 percent share) under the allocation of the tax to labor income. The share of income for the top 1 percent of families increased by about two percentage points.

TABLE 2. DISTRIBUTION OF TOTAL FAMILY INCOME BY POPULATION DECILE (In percent)

Decile[a]	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
First[b]	1.1	1.0	0.9	0.9
Second	2.5	2.4	2.3	2.2
Third	3.9	3.8	3.6	3.6
Fourth	5.4	5.2	5.0	5.0
Fifth	7.1	6.8	6.5	6.5
Sixth	8.7	8.6	8.2	8.1
Seventh	10.6	10.4	10.1	10.0
Eighth	12.9	12.9	12.6	12.5
Ninth	16.2	16.3	16.3	16.1
Tenth	31.9	32.9	35.0	35.7
Top 5 Percent	21.5	22.2	24.3	25.1
Top 1 Percent	9.2	9.8	11.8	12.5
All Deciles[c]	100.0	100.0	100.0	100.0
Corporate Income Tax Allocated to Labor Income				
First[b]	1.1	1.0	0.9	0.9
Second	2.5	2.4	2.3	2.2
Third	3.9	3.8	3.6	3.6
Fourth	5.5	5.3	5.0	5.0
Fifth	7.1	6.9	6.6	6.5
Sixth	8.9	8.7	8.3	8.2
Seventh	10.9	10.6	10.2	10.2
Eighth	13.2	13.1	12.8	12.7
Ninth	16.6	16.6	16.4	16.4
Tenth	30.6	32.0	34.4	34.9
Top 5 Percent	20.1	21.3	23.7	24.2
Top 1 Percent	8.1	9.0	11.2	11.8
All Deciles[c]	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

Tables A-3 and A-4 in the Appendix show the distribution of separate components of income by family income decile. The tables indicate that the increase in the top decile's share of income between 1980 and 1984 resulted from an increase in its share of all types of income--labor, capital, transfer, and other. The distribution of family income in 1988 is expected to look much the same as in 1984. The top decile's share of income, however, is expected to increase further.

There is no evidence that the 1980 distribution of pre-tax total family incomes is unusual relative to the distributions in 1977 and 1984. Rather, the 1980 distribution fits the observed trends in income between 1977 and 1984. The increasing share of income received by families in the highest income decile began before 1980, although the rate of change accelerated somewhat in the early 1980s. Between 1977 and 1980, the share of income in the highest income decile increased by 3 percent (from a 31.9 percent to a 32.9 percent share) under the allocation of the corporate tax to capital income, or by 5 percent (from a 30.6 percent share to a 32.0 percent share) under the allocation of the tax to labor income.

The particular economic characteristics of 1980 did have some effect on the composition of total income for certain income classes. For families in the bottom decile, the share of income from wages and salaries was lower in 1980 than in 1977 or 1984. The share of income from unemployment insurance was noticeably higher in 1980 than in 1977 or 1984 for low-income families. As

discussed later in the paper, these changes in the composition of income had some important consequences for the distribution of tax liabilities.

Tables 3 and 4 show average family income for each family income decile and for the top 5 percent and 1 percent of families in 1977, 1980, 1984, and 1988. Average incomes are shown in nominal dollars (Table 3) and 1987 dollars (Table 4) for both corporate tax allocations. Table 4 shows a sizable drop in average real income between 1977 and 1980, with decreases in average income for all family income deciles.[7] Average real income increased only for the richest 1 percent of families between 1977 and 1980. Between 1980 and 1984, average real income increased, although not all families shared in this growth. Average real income fell for families in the bottom half of the income distribution between 1980 and 1984, while it rose for families in the upper 40 percent.[8]

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7. The values in Table 4 for 1977, 1984, and 1988 differ slightly from the values reported in the earlier CBO study. In that study, which was completed during 1987, the projected change in consumer prices for 1987 was used to adjust incomes to 1987 levels. In the current study, the actual 1987 change in consumer prices is used.

8. The changes in average real income shown in Table 4 are consistent with published data from the Bureau of the Census that show a decline in real family income between 1977 and 1984. (Bureau of the Census, *Money Income of Households, Families, and Persons in the United States: 1984,* Current Population Reports, Series P-60, No. 151, April 1986.) A recent study by the Congressional Budget Office has reexamined that data. (Congressional Budget Office, *Trends in Family Income: 1970-1986,* February 1988.) After adjusting family incomes for changes in family size and correcting for a possible overstatement of the change in consumer prices, that study finds that an adjusted measure of median real family income increased by about 5 percent between 1977 and 1984.

TABLE 3. AVERAGE INCOME LEVEL IN EACH POPULATION DECILE, BY YEAR AND TREATMENT OF CORPORATE TAX
(In nominal dollars)

Decile[a]	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
First[b]	2,191	2,683	3,096	3,676
Second	4,438	5,560	6,756	8,043
Third	6,974	8,727	10,770	12,870
Fourth	9,722	12,010	15,040	17,970
Fifth	12,560	15,590	19,600	23,320
Sixth	15,590	19,570	24,690	29,330
Seventh	18,890	23,940	30,460	36,170
Eighth	22,960	29,290	37,940	45,050
Ninth	28,870	37,380	48,830	58,100
Tenth	56,920	75,180	105,100	128,600
Top 5 Percent	76,570	101,700	146,100	180,800
Top 1 Percent	163,400	223,900	352,600	452,000
All Deciles[c]	17,840	22,880	30,020	36,040
Corporate Income Tax Allocated to Labor Income				
First[b]	2,189	2,686	3,102	3,685
Second	4,435	5,558	6,769	8,064
Third	6,992	8,764	10,820	12,960
Fourth	9,810	12,120	15,130	18,110
Fifth	12,720	15,760	19,740	23,540
Sixth	15,870	19,870	24,910	29,660
Seventh	19,370	24,350	30,760	36,630
Eighth	23,580	29,850	38,400	45,750
Ninth	29,530	37,910	49,400	58,960
Tenth	54,660	73,110	103,300	125,800
Top 5 Percent	71,590	97,340	142,000	174,600
Top 1 Percent	143,700	205,500	335,400	425,400
All Deciles[c]	17,840	22,880	30,020	36,040

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE 4. AVERAGE INCOME LEVEL IN EACH POPULATION DECILE, BY YEAR AND TREATMENT OF CORPORATE TAX
(In 1987 dollars)

Decile[a]	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
First[b]	4,109	3,700	3,388	3,488
Second	8,323	7,668	7,392	7,632
Third	13,080	12,040	11,780	12,220
Fourth	18,230	16,560	16,460	17,050
Fifth	23,560	21,500	21,450	22,130
Sixth	29,240	26,990	27,010	27,840
Seventh	35,430	33,020	33,330	34,330
Eighth	43,060	40,390	41,510	42,750
Ninth	54,140	51,550	53,430	55,140
Tenth	106,700	103,700	115,000	122,100
Top 5 Percent	143,600	140,300	159,900	171,600
Top 1 Percent	306,500	308,800	385,800	429,000
All Deciles[c]	33,460	31,560	32,850	34,200
Corporate Income Tax Allocated to Labor Income				
First[b]	4,105	3,705	3,394	3,497
Second	8,317	7,666	7,407	7,653
Third	13,110	12,090	11,840	12,300
Fourth	18,400	16,710	16,560	17,180
Fifth	23,850	21,740	21,600	22,340
Sixth	29,760	27,400	27,250	28,150
Seventh	36,330	33,580	33,650	34,760
Eighth	44,210	41,170	42,020	43,420
Ninth	55,370	52,290	54,050	55,950
Tenth	102,500	100,800	113,000	119,400
Top 5 Percent	134,300	134,300	155,300	165,700
Top 1 Percent	269,500	283,400	367,000	403,700
All Deciles[c]	33,460	31,560	32,850	34,200

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

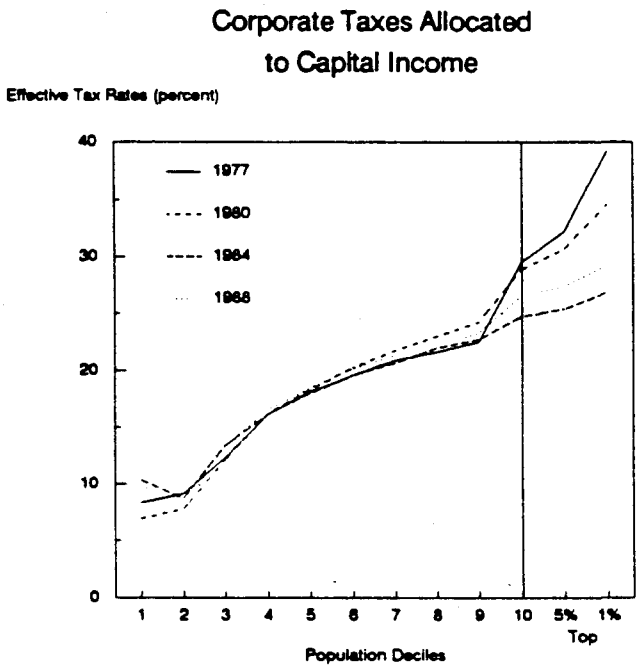
Average real incomes are projected to increase in all income deciles between 1984 and 1988, with the largest percentage increase for families in the top of the income distribution. By 1988, average real income is projected to be higher than in 1980 for families in all income deciles except for those in the bottom 20 percent of the income distribution.

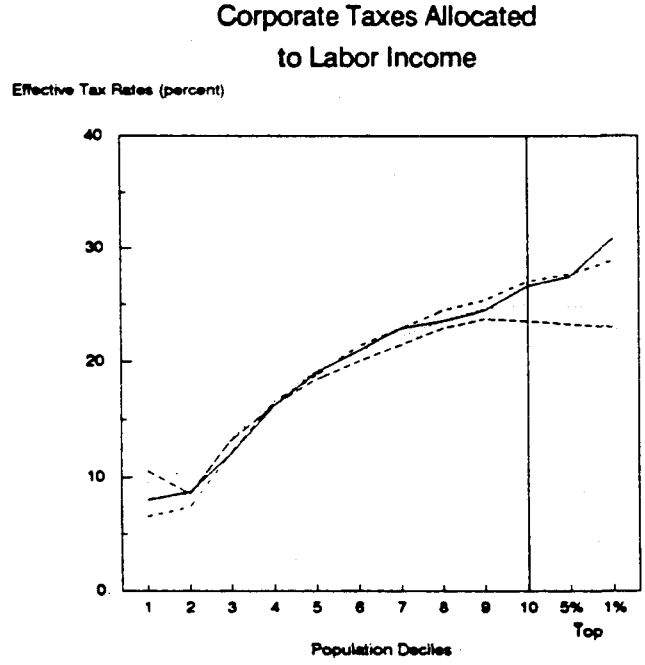
Effective Tax Rates in 1977, 1980, 1984, and 1988

Figure 1 compares combined effective tax rates in 1977, 1980, 1984, and 1988 under the two alternative assumptions about the allocation of the corporate income tax.[9] Between 1977 and 1980, total effective tax rates fell for families in the lowest 20 percent while remaining about the same for other families in the bottom half of the income distribution. Changes for families in the upper half depend on whether the corporate income tax, which fell sharply as a fraction of income between 1977 and 1980, is allocated to capital or labor incomes. When the corporate tax is allocated to capital incomes, the total effective tax rate rose for families in the sixth through ninth deciles, but fell for families in the highest income decile. When the tax is allocated to labor income, which is distributed more equally than capital income, the total effective tax rate either remained unchanged or rose only slightly for families in the five highest deciles.

9. For all tax sources, federal taxes were estimated as calendar year liabilities (some of which may not be paid to the government until the following year). Individual and corporate income taxes, payroll taxes, and excise taxes were allocated to each family using CBO tax simulation models. Because the individual income tax includes the refundable portion of the earned income credit, tax liabilities can be less than zero. Payroll taxes include the employee and employer shares of the Social Security payroll tax and the mandatory federal unemployment insurance tax. Neither excise taxes nor total taxes include the windfall profit tax.

FIGURE 1. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE: ALL TAXES COMBINED





SOURCE: Congressional Budget Office tax simulation models.

NOTE: Families are ranked by the size of family income. Because family income includes the family's share of the corporate income tax, the ordering of families depends on the allocation of corporate taxes. The lowest decile excludes families with zero or negative incomes.

The effective tax rate is the ratio of taxes to family income in each income class.

Under either allocation, however, the total effective tax rate for the 1 percent of families with the highest incomes was lower in 1980 than in 1977.

Between 1980 and 1984, total effective tax rates rose for families in the bottom 30 percent of the income distribution but fell for families in the upper 60 percent, with the size of the reduction increasing with family income. The effective tax rate for families in the highest income decile declined the most, falling from 28.9 percent in 1980 to 24.8 percent in 1984, with the corporate tax allocated to capital income, or from 27.1 percent to 23.6 percent with the corporate tax allocated to labor income. For the top 1 percent of families, the total effective tax rate declined from 34.6 percent in 1980 to 26.9 percent in 1984, with the corporate tax allocated to capital income, or from 28.9 percent to 23.1 percent when allocated to labor income. Between 1984 and 1988, total effective tax rates are projected to change in an almost reversed manner, falling for families in the bottom 20 percent of the income distribution and rising for families in the upper 80 percent.

By 1988, the average effective tax rate is projected to have declined from 23.3 percent in 1980 to 22.7 percent. Total effective tax rates are projected to be higher in 1988 than they were in 1980 for families in the bottom half of the income distribution and lower than they were in 1980 for families in the top half, with the largest reductions for families in the upper 1 percent of the income distribution.

Most of the change in the distribution of taxes between 1980 and 1988 is the result of an increase in social insurance taxes and a decrease in individual

income taxes. For families in the bottom half of the income distribution, the effective social insurance tax rate will increase more than the individual income tax rate will fall. For families in the top half, the lower individual income tax will outweigh the increase in social insurance taxes. Because the individual income tax is a highly progressive tax, while social insurance taxes are much less progressive and even regressive in the highest income range, a shift from income to payroll taxes reduces the progressivity of total federal taxes.

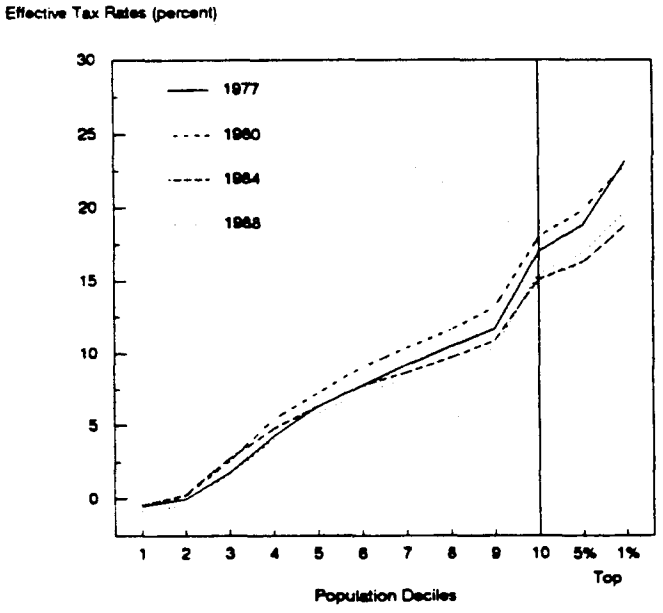
Figure 2 illustrates effective tax rates for the individual income tax and social insurance taxes under both allocations of the corporate income tax. Between 1977 and 1980, effective individual income tax rates generally rose for all family income deciles, as rising nominal incomes pushed families into higher income tax brackets despite legislated reductions in some tax rates and increases in personal exemptions, zero bracket amounts (standard deductions), and the width of tax brackets. For the highest 1 percent of families, however, the effective individual income tax rate fell slightly--from 23.2 percent to 22.9 percent under the capital income allocation, or from 26.7 percent to 25.2 percent under the labor income allocation. This drop reflected the reduction from 35 percent (excluding the effects of minimum and maximum taxes) to 28 percent in the maximum marginal tax rate on capital gains enacted in the Revenue Act of 1978.[10]

10. Before the change in 1978, the maximum marginal tax rate on capital gains could be as high as 49.1 percent for taxpayers subject to both the minimum tax and the maximum tax on personal service income.

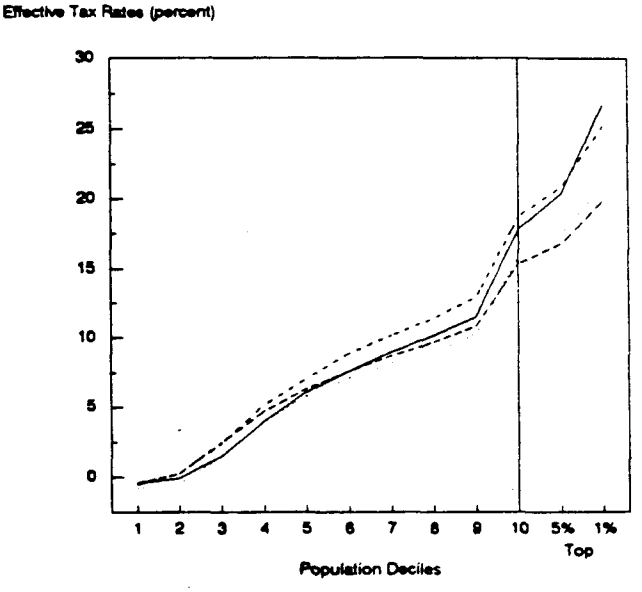
FIGURE 2. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE

INDIVIDUAL INCOME TAX

Corporate Taxes Allocated to Capital Income

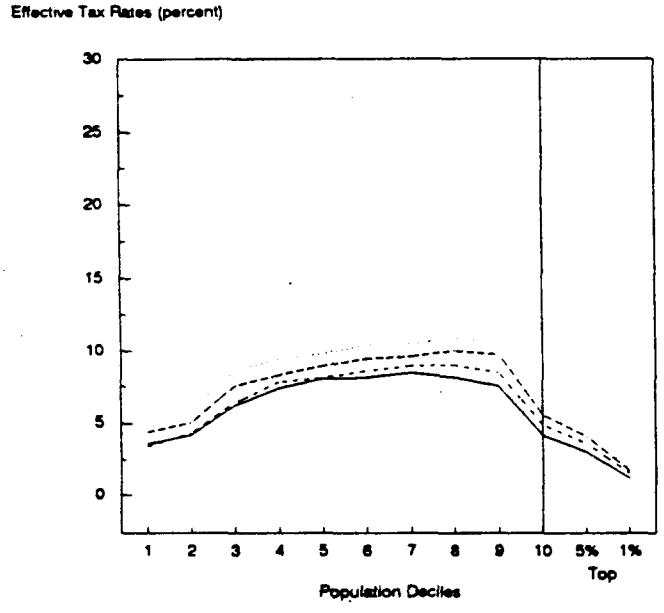


Corporate Taxes Allocated to Labor Income

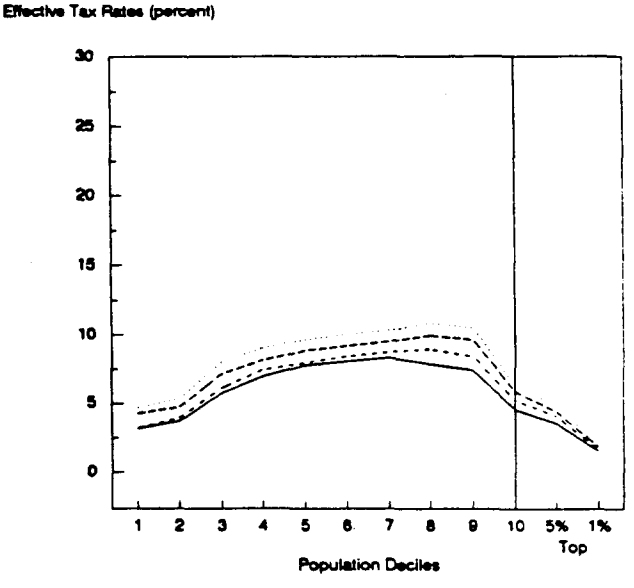


SOCIAL INSURANCE TAXES

Corporate Taxes Allocated to Capital Income



Corporate Taxes Allocated to Labor Income



SOURCE: Congressional Budget Office tax simulation models.

NOTE: Families are ranked by the size of family income. Because family income includes the family's share of the corporate income tax, the ordering of families depends on the allocation of corporate taxes. The lowest decile excludes families with zero or negative incomes.

The effective tax rate is the ratio of taxes to family income in each income class.

Between 1980 and 1984, effective individual income tax rates decreased from 12.3 percent to 10.6 percent overall. Effective rates fell for families in the upper 70 percent of the income distribution, but either rose slightly or remained about the same for families in the bottom 30 percent. These changes reflected the substantial cut in statutory tax rates and the increase in allowable deductions enacted in the Economic Recovery Tax Act of 1981, and also the failure of ERTA to offset the effect on lower-income families of the inflation-induced decline in the real value of personal exemptions, zero bracket amounts (standard deductions), and the earned income credit.

Between 1984 and 1988, effective individual income tax rates are projected to fall for families in all income deciles except the highest, with the largest reductions for the lowest-income families. The reductions for low-income families reflect increases in standard deductions, personal exemptions, and the earned income credit--enacted in the Tax Reform Act of 1986 and beginning in 1987 --the combination of which substantially raises income tax thresholds.[11] The reductions for families in other income deciles reflect these changes as well as a cut in statutory tax rates. These changes more than offset the elimination of certain deductions and exclusions also enacted in the Tax Reform Act of 1986.

Effective individual income tax rates are projected to be lower in 1988 than they were in 1980 for families in all income deciles. While the largest absolute declines are projected for families at the higher end of the income dis-

11. See Figure 2, p. 10, in Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990.*

tribution, the lowest-income families will experience the largest percentage reductions. The average effective individual tax rate for all families is projected to decline from 12.3 percent in 1980 to 10.4 percent in 1988.

The effective social insurance tax rate rose between 1977 and 1980 in all family income deciles except the lowest. This exception reflected a change in the composition of income for families in the lowest decile as the fraction of income from wages declined. Social insurance tax rates rose further between 1980 and 1984, and are projected to rise through 1988, reflecting continuing increases in the combined Social Security payroll tax rate.

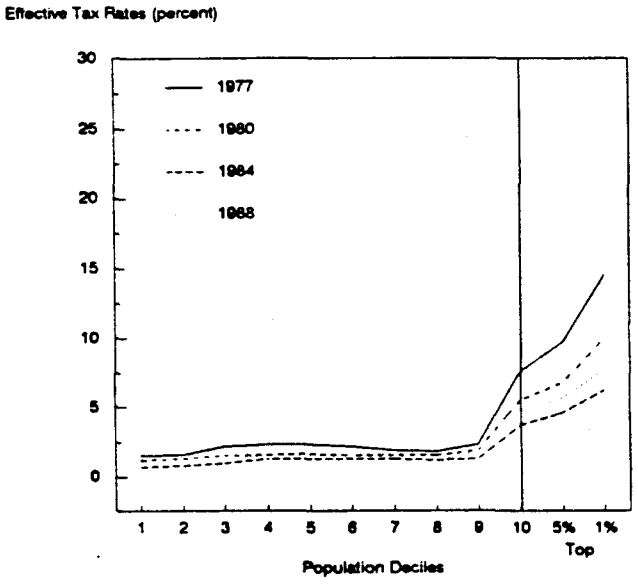
Figure 3 shows effective corporate income tax rates and effective federal excise tax rates under both allocations of the corporate income tax. The average effective corporate tax rate for all families declined from 3.9 percent in 1977 to 2.9 percent in 1980, reflecting a decline in corporate profits over those years and, to a lesser extent, a reduction in statutory tax rates. The effective corporate rate was lower in 1980 than in 1977 in all family income deciles. Between 1980 and 1984, the effective tax rate fell further, from 2.9 percent to 2.1 percent, again declining in all family income deciles. This decline came as a result of the increase in corporate tax preferences enacted in ERTA, and despite an increase in the corporate profit share of GNP.

The average effective corporate tax rate for all families is projected to return to nearly its 1980 level by 1988. Because of shifts in the distribution of different types of income, corporate income taxes in 1988 are projected to be

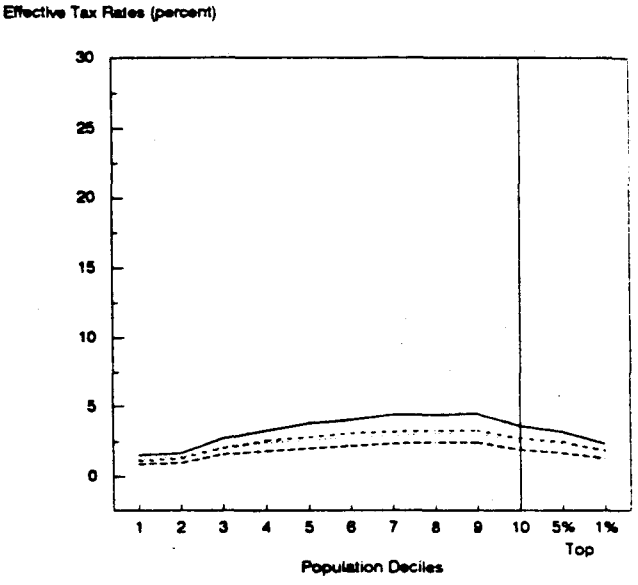
FIGURE 3. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE

CORPORATE INCOME TAX

Corporate Taxes Allocated to Capital Income

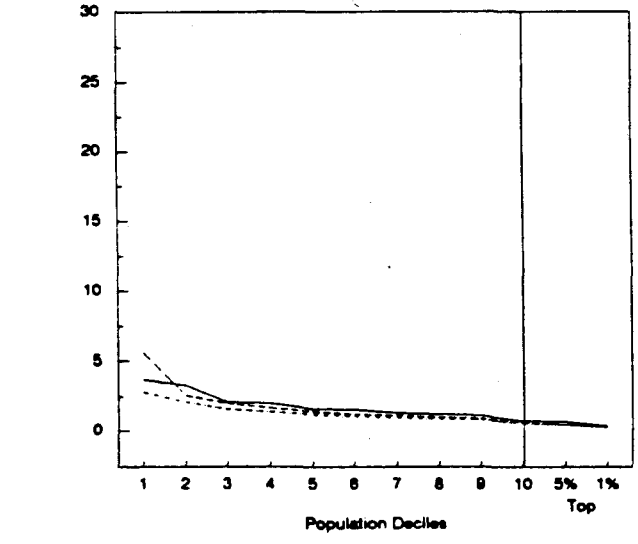


Corporate Taxes Allocated to Labor Income

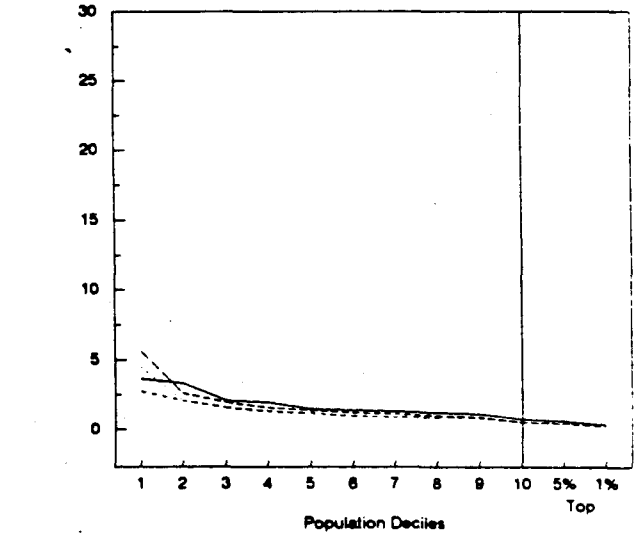


EXCISE TAXES

Corporate Taxes Allocated to Capital Income



Corporate Taxes Allocated to Labor Income



SOURCE: Congressional Budget Office tax simulation models.

NOTE: Families are ranked by the size of family income. Because family income includes the family's share of the corporate income tax, the ordering of families depends on the allocation of corporate taxes. The lowest decile excludes families with zero or negative incomes.

The effective tax rate is the ratio of taxes to family income in each income class.

distributed less progressively than they were in 1980, especially under the capital income allocation of the tax.

Effective federal excise tax rates fell between 1977 and 1980 for families in all income deciles as inflation caused nominal incomes to rise while statutory excise tax rates remained largely unchanged. Because most federal excise tax revenue derives from taxes that are levied on a per-unit or specific basis (for example, cents per gallon or per number of cigarettes) rather than as a percentage of expenditures, tax payments do not increase proportionally with increases in nominal incomes. Rising gasoline prices drove down the number of gallons of gasoline purchased, and hence gasoline excise tax payments, between 1977 and 1980. Effective excise tax rates were also reduced by the decline in the statutory tax rate on telephone services.

For families in all income deciles except the lowest and the highest, effective excise tax rates rose slightly between 1980 and 1984, reflecting increases in the taxes levied on gasoline, tobacco, and telephone services. Effective excise tax rates remained at about their 1980 level in 1984 for the 10 percent of families with the highest incomes, but they rose sharply between 1980 and 1984 for families in the lowest income decile. This rise reflected the increase in certain statutory tax rates and a large increase in measured expenditures as a percentage of income, particularly expenditures on gasoline, by low-income families relative to the increase in expenditures by all other families.

By 1988, effective federal excise tax rates for families in all but the lowest income decile are projected to return to their 1980 levels. For families in that

decile, the effective excise tax rate is projected to decline between 1984 and 1988, but to remain well above its 1980 level.

The complete set of estimated effective tax rates, for combined taxes and for each of the four major tax sources, is shown in Tables 5 and 6.

Comparison of Effective Tax Rates in 1980 and 1988

The distribution of effective tax rates can change between years for three reasons: (1) changes in the tax law change the relationship between income and taxes, (2) changes in the tax law cause families to adjust their economic behavior, thereby changing the level and distribution of incomes, and (3) incomes change for reasons independent of the tax law. Because it is difficult to distinguish between income changes caused by changes in the tax law and income changes resulting from other causes, the present and previous CBO studies decompose the change in effective tax rates into only two of these components.

Effective tax rates are computed for 1988 incomes using 1980 law adjusted to 1988 levels.[12] The difference between these effective tax rates and actual effective tax rates for 1980 measures the effect of changes in the composition and distribution of incomes between 1980 and 1988, including changes both independent and as a result of changes in the tax law--reasons number two and

12. For a description of the methods used to simulate adjusted tax laws, see Chapter VI, Congressional Budget Office, *The Changing Distribution of Federal Taxes: 1975-1990*. The terms "adjusted tax law" and "income-indexed tax law" are used interchangeably.

TABLE 5. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE: CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		1977			
First[b]	-0.5	3.6	1.5	3.7	8.3
Second	0.0	4.2	1.6	3.3	9.1
Third	1.8	6.2	2.2	2.1	12.3
Fourth	4.3	7.4	2.3	2.0	16.1
Fifth	6.3	8.0	2.3	1.6	18.2
Sixth	7.8	8.1	2.2	1.5	19.6
Seventh	9.2	8.4	1.9	1.3	20.9
Eighth	10.5	8.1	1.8	1.2	21.7
Ninth	11.7	7.5	2.3	1.1	22.6
Tenth	17.0	4.2	7.6	0.7	29.5
Top 5 Percent	18.8	3.0	9.7	0.6	32.5
Top 1 Percent	23.2	1.2	14.5	0.3	39.2
All Deciles[c]	11.1	6.5	3.9	1.3	22.8
		1980			
First[b]	-0.5	3.4	1.2	2.8	6.9
Second	0.2	4.3	1.3	2.1	7.8
Third	2.6	6.4	1.5	1.6	12.1
Fourth	5.5	7.8	1.6	1.4	16.2
Fifth	7.2	8.1	1.7	1.2	18.3
Sixth	9.1	8.6	1.5	1.1	20.3
Seventh	10.4	8.9	1.5	1.0	21.8
Eighth	11.6	9.0	1.5	0.9	23.1
Ninth	13.2	8.4	1.9	0.8	24.3
Tenth	18.0	4.9	5.5	0.5	28.9
Top 5 Percent	19.8	3.6	6.8	0.4	30.7
Top 1 Percent	22.9	1.5	10.0	0.2	34.6
All Deciles[c]	12.3	7.2	2.9	0.9	23.3

(continued)

TABLE 5. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		1984			
First[b]	-0.4	4.4	0.7	5.6	10.3
Second	0.3	5.0	0.8	2.6	8.7
Third	2.8	7.5	1.0	2.0	13.4
Fourth	4.8	8.3	1.3	1.7	16.1
Fifth	6.3	8.9	1.3	1.4	18.0
Sixth	7.8	9.4	1.3	1.2	19.6
Seventh	8.7	9.6	1.3	1.1	20.7
Eighth	9.7	10.0	1.2	1.0	22.0
Ninth	10.9	9.7	1.3	0.9	22.8
Tenth	15.1	5.6	3.7	0.5	24.8
Top 5 Percent	16.3	4.1	4.6	0.4	25.4
Top 1 Percent	18.8	1.7	6.2	0.2	26.9
All Deciles[c]	10.6	8.0	2.1	1.0	21.7
		1988			
First[b]	-0.8	5.0	1.1	4.5	9.7
Second	-0.4	5.9	1.0	2.1	8.6
Third	1.7	8.6	1.3	1.6	13.3
Fourth	4.1	9.4	1.6	1.4	16.5
Fifth	5.9	9.8	1.6	1.1	18.5
Sixth	7.2	10.4	1.6	1.0	20.2
Seventh	8.3	10.5	1.7	0.9	21.4
Eighth	9.0	10.9	1.6	0.8	22.3
Ninth	10.4	10.6	1.7	0.8	23.4
Tenth	15.5	6.0	4.7	0.4	26.6
Top 5 Percent	16.9	4.4	5.7	0.4	27.4
Top 1 Percent	19.7	1.8	7.7	0.2	29.3
All Deciles[c]	10.4	8.7	2.7	0.9	22.7

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE 6. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE: CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		1977			
First[b]	-0.4	3.2	1.5	3.7	8.0
Second	-0.1	3.7	1.7	3.3	8.7
Third	1.5	5.7	2.7	2.1	12.0
Fourth	4.0	6.9	3.3	2.0	16.2
Fifth	6.1	7.7	3.8	1.5	19.1
Sixth	7.6	8.0	4.0	1.4	21.0
Seventh	9.0	8.3	4.4	1.3	23.0
Eighth	10.2	7.8	4.4	1.2	23.6
Ninth	11.5	7.4	4.5	1.1	24.5
Tenth	17.8	4.5	3.6	0.7	26.7
Top 5 Percent	20.3	3.5	3.2	0.6	27.5
Top 1 Percent	26.7	1.5	2.3	0.3	30.9
All Deciles[c]	11.1	6.5	3.9	1.3	22.8
		1980			
First[b]	-0.5	3.2	1.1	2.8	6.6
Second	0.2	3.9	1.3	2.1	7.4
Third	2.4	6.1	2.0	1.6	12.2
Fourth	5.2	7.4	2.6	1.3	16.5
Fifth	7.0	7.9	2.8	1.2	18.9
Sixth	8.9	8.4	3.1	1.0	21.4
Seventh	10.2	8.7	3.2	0.9	23.0
Eight	11.4	8.9	3.3	0.9	24.5
Ninth	12.9	8.4	3.3	0.8	25.4
Tenth	18.7	5.2	2.7	0.5	27.1
Top 5 Percent	20.8	4.0	2.5	0.4	27.7
Top 1 Percent	25.2	1.6	1.8	0.3	28.9
All Deciles[c]	12.3	7.2	2.9	0.9	23.3

(Continued)

TABLE 6. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		1984			
First[b]	-0.4	4.3	0.9	5.6	10.5
Second	0.2	4.7	1.0	2.6	8.5
Third	2.5	7.1	1.6	2.0	13.2
Fourth	4.7	8.1	1.8	1.6	16.3
Fifth	6.3	8.8	2.0	1.4	18.5
Sixth	7.6	9.1	2.2	1.2	20.1
Seventh	8.7	9.5	2.3	1.1	21.5
Eighth	9.7	9.9	2.4	1.0	23.0
Ninth	10.8	9.6	2.4	0.9	23.8
Tenth	15.3	5.8	1.9	0.5	23.6
Top 5 Percent	16.8	4.4	1.7	0.4	23.3
Top 1 Percent	19.8	1.8	1.3	0.2	23.1
All Deciles[c]	10.6	8.0	2.1	1.0	21.7
		1988			
First[b]	-0.8	4.7	1.2	4.5	9.6
Second	-0.5	5.3	1.4	2.1	8.3
Third	1.5	8.0	2.1	1.6	13.3
Fourth	4.0	9.0	2.4	1.4	16.8
Fifth	5.8	9.6	2.6	1.1	19.2
Sixth	7.1	10.0	2.8	1.0	20.9
Seventh	8.2	10.3	2.9	0.9	22.3
Eighth	8.9	10.8	3.1	0.8	23.6
Ninth	10.3	10.5	3.1	0.8	24.7
Tenth	15.8	6.3	2.5	0.5	25.0
Top 5 Percent	17.5	4.8	2.3	0.4	24.9
Top 1 Percent	20.9	1.9	1.9	0.3	24.9
All Deciles[c]	10.4	8.7	2.7	0.9	22.7

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

three from above. The difference between 1988 effective tax rates using adjusted 1980 tax law and actual 1988 effective tax rates measures the effects attributable to changes in the relationship between income and taxes--reason number one from above.[13]

Figure 4 shows this decomposition of the total change in effective tax rates between 1980 and 1988 under the two alternative assumptions about the allocation of the corporate income tax. Effective tax rates under 1980 law and under 1988 law are repeated from Figure 1. The new line in the figure, adjusted 1980 tax law, shows what effective tax rates would be in 1988 under 1980 tax law, if that law were adjusted for all income growth between 1980 and 1988.[14]

The difference between 1980 law and adjusted 1980 law is the change in effective tax rates resulting from changes in the composition and distribution of incomes between 1980 and 1988, evaluated under 1980 tax laws. Income changes between 1980 and 1988 caused effective tax rates to rise for families in the bottom 30 percent of the income distribution and to fall for families in the upper 70 percent.

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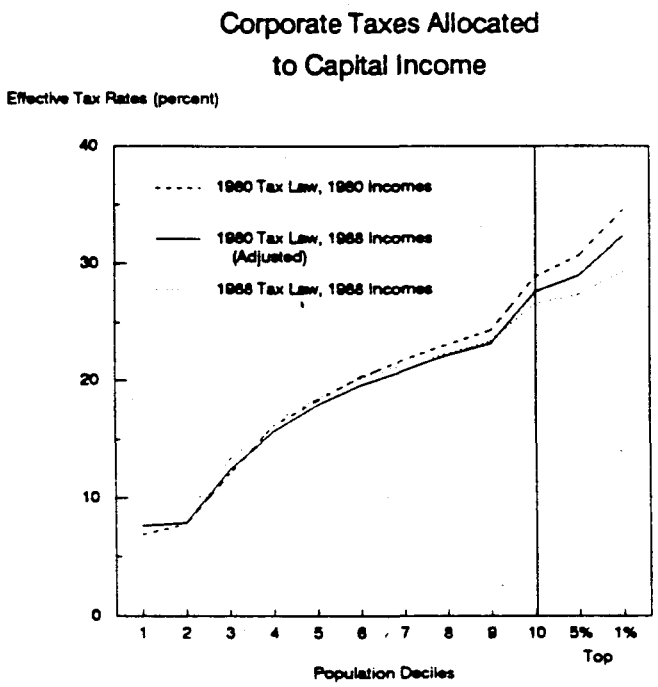
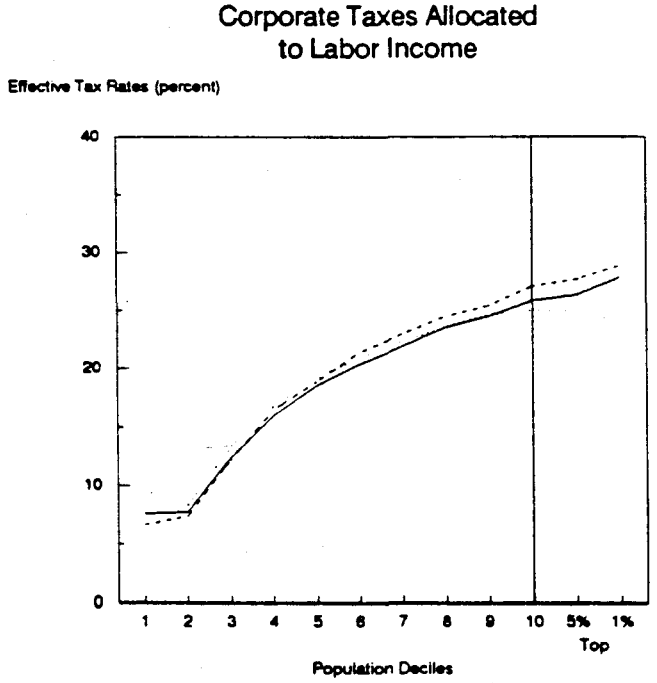
13. Changes in the relationship between income and taxes include specific tax law changes such as lowering individual income tax rates or raising Social Security payroll tax rates as well as implicit changes such as increases in effective individual income tax rates as a result of rising real incomes (or rising nominal incomes in years before 1985).

14. Adjusted 1980 tax law is not the tax law that would have been in effect in 1988 if ERTA, TEFRA, the Tax Reform Act of 1986, and all other tax legislation after 1980 had not been enacted. Adjusted 1980 law is 1980 law with all parameters (for example, personal exemption amounts, standard deductions, tax-bracket boundaries, maximum taxable earnings for the Social Security payroll tax) inflated by the growth in average incomes between 1980 and 1988.

FIGURE 4. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE FOR 1980 AND 1988, AND FOR 1980 TAX LAW ADJUSTED TO 1988: ALL TAXES COMBINED





SOURCE: Congressional Budget Office tax simulation models.

NOTE: Families are ranked by the size of family income. Because family income includes the family's share of the corporate income tax, the ordering of families depends on the allocation of corporate taxes. The lowest decile excludes families with zero or negative incomes.

The effective tax rate is the ratio of taxes to family income in each income class.

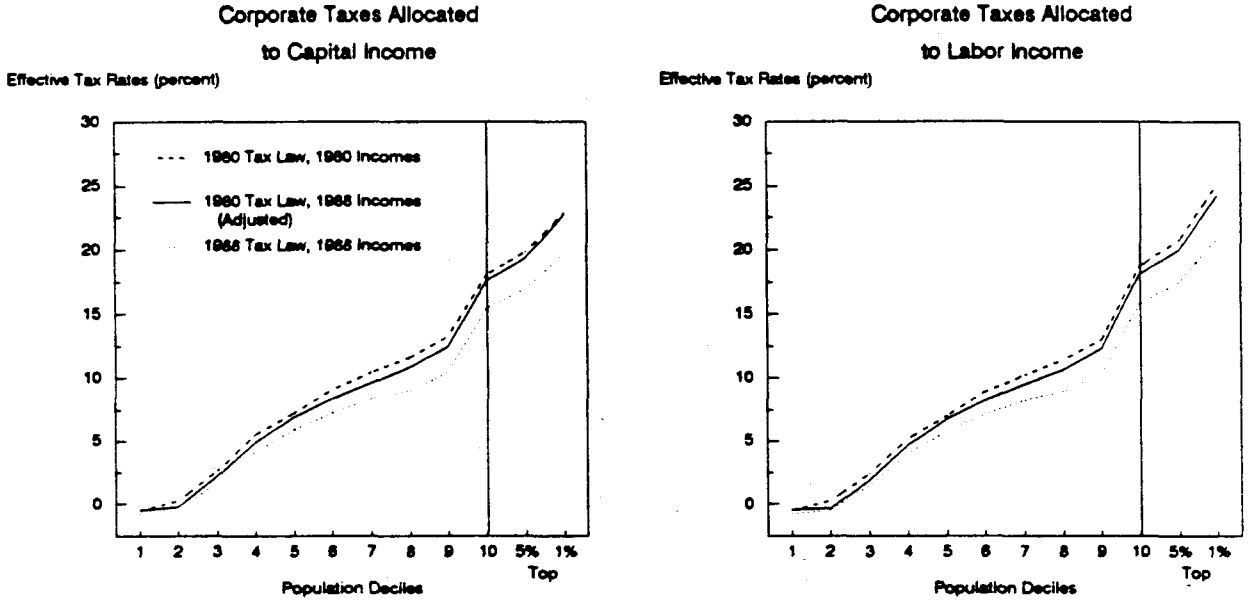
The difference between adjusted 1980 law and 1988 law shows the change in effective tax rates resulting from changes in the tax law between 1980 and 1988, evaluated at 1988 incomes. Except for families in the highest decile, effective tax rates rose in all income deciles between 1980 and 1988 because of changes in tax laws. For families in the highest income decile, the effective tax rate fell between 1980 and 1988 not only because of changes in income but also because of changes in tax laws. The net change between 1980 and 1988 is the sum of the change caused by changes in income and the change caused by changes in tax law--an increase in effective tax rates for families in the bottom half of the income distribution and a decrease for families in the top half.

A look at the changes between 1980 and 1988 for each tax source helps to explain these results. Figure 5 compares effective individual income tax and social insurance tax rates in 1988 using 1980 law adjusted to 1988 with actual individual income and social insurance effective tax rates in 1980 and 1988. Effective individual income tax rates in 1988 using adjusted 1980 tax law are slightly lower than actual 1980 effective individual income tax rates for all family income deciles except the lowest. This suggests that some of the decline in effective individual income tax rates between 1980 and 1988 is the result of changes in the composition and distribution of income between those years.

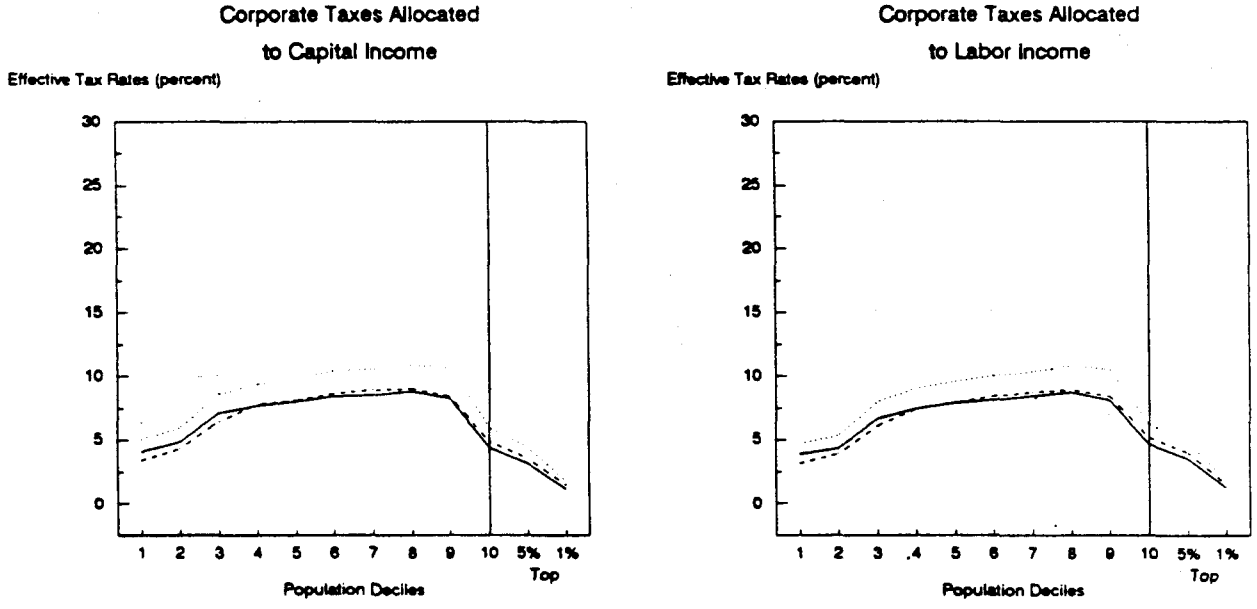
Between 1980 and 1988, income growth for families in the first through ninth income deciles was less than the average growth in income for all families. Because adjusted 1980 law is scaled upward by the growth in average incomes, effective individual income tax rates for families in the second through

FIGURE 5. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE FOR 1980 AND 1988, AND FOR 1980 TAX LAW ADJUSTED TO 1988

INDIVIDUAL INCOME TAX



SOCIAL INSURANCE TAXES



SOURCE: Congressional Budget Office tax simulation models.

NOTE: Families are ranked by the size of family income. Because family income includes the family's share of the corporate income tax, the ordering of families depends on the allocation of corporate taxes. The lowest decile excludes families with zero or negative incomes.

The effective tax rate is the ratio of taxes to family income in each income class.

ninth deciles are lower under adjusted 1980 law than they were under actual 1980 law. Effective individual income tax rates for the lowest income decile, which were already negative under 1980 law, are not affected by the slower-than-average growth in income and remain about the same under adjusted 1980 law.

Because average income for the highest income decile grew faster than the average for all families between 1980 and 1988, one would expect average effective individual income tax rates to be higher for this decile under adjusted 1980 law than they were in 1980. The effect of higher-than-average growth in incomes is offset by a change in the composition of income for families in the highest income decile. Capital gains are projected to account for a larger percentage of the income of families in the highest income decile in 1988 than they did in 1980. Because capital gains were taxed at a lower rate than other income under 1980 law (and hence also under adjusted 1980 law), effective individual income tax rates under adjusted 1980 law also are lower than they were in 1980 for the families in the highest income decile.

Most of the decrease in effective individual income tax rates between 1980 and 1988 is attributable to changes in individual income tax laws, as shown by a comparison of effective tax rates under adjusted 1980 law and under 1988 law. Between 1980 and 1988, the average decrease for all families in effective individual income tax rates attributable to changes in the tax law was 1.6 to 1.7 percentage points, with effective rates declining in all family income deciles.

The percentage change in effective tax rates is about the same in all family income deciles with positive rates, except for the third lowest decile. The large percentage reduction in effective rates for families in that decile reflects the increases in standard deductions and personal exemptions enacted in the Tax Reform Act of 1986.

Income changes caused effective social insurance tax rates to rise for families in the first three income deciles and to decline for families in the fifth through tenth deciles. Between 1980 and 1988, labor income became a larger share of family income for families in the first three deciles but a smaller share of total income for families in all other deciles. Even though labor income became a larger share of total income for the top 5 percent and top 1 percent of families, changes in income reduced effective social insurance taxes for those families. This reduction occurred because wages for these families generally exceeded the taxable maximum, and most of the increased labor income escaped Social Security payroll taxes.

Changes in the tax law between 1980 and 1988 increased effective social insurance tax rates for families in all income deciles. The increase was greatest for higher income deciles because Social Security payroll tax rates not only rose, but the amount of maximum taxable earnings also grew faster than average earnings.

Effective corporate income and excise tax rates are projected to be virtually the same in 1988 as in 1980. Neither changes in income nor changes in tax laws between those years had a marked effect on the average effective cor-

porate income tax rate for all families or for almost any family income decile. For excise taxes, the only noticeable difference between 1980 and 1988 is an increase in the effective tax rate for families in the lowest income decile. Some of this change is attributable to the increase in gasoline taxes and tobacco taxes enacted in 1983. The major portion of this difference, however, reflects a marked increase in measured expenditures as a percentage of income, and particularly in measured expenditures on gasoline, by very-low-income families. If expenditures as well as incomes are held constant at their 1988 levels when computing excise taxes under adjusted 1980 tax law, this observed increase in effective excise tax rates is nearly eliminated.

Tables 7 and 8 show the complete results for effective tax rates in 1988 under adjusted 1977, 1980, and 1984 tax laws, as well as for actual 1988 tax law. Effective tax rates for 1977, 1980, and 1984 tax laws using actual incomes from those years can be found in Tables 5 and 6.

Summary Indexes of Tax Progressivity

Several measures are available that summarize the progressivity of the tax system with a single index number. Two commonly used measures are the difference between pre-tax and post-tax Gini coefficients, and the Suits index.

The Gini coefficient is an index of the equality of the distribution of income. The calculation of the coefficient is based on the Lorenz curve, which

TABLE 7. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE, WITH CONSTANT 1988 INCOMES: CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		Adjusted 1977 Tax Law			
First[b]	-0.6	3.9	1.1	3.8	8.2
Second	-0.7	4.6	1.1	3.6	8.7
Third	1.5	6.8	1.3	2.2	11.8
Fourth	3.9	7.4	1.6	2.1	14.9
Fifth	5.8	7.7	1.7	1.6	16.8
Sixth	7.1	8.1	1.7	1.5	18.5
Seventh	8.5	8.0	1.8	1.4	19.6
Eighth	9.8	7.8	1.6	1.2	20.5
Ninth	11.3	7.2	1.7	1.1	21.4
Tenth	16.8	3.8	4.8	0.6	26.1
Top 5 Percent	18.6	2.7	5.9	0.5	27.7
Top 1 Percent	22.7	1.0	7.9	0.2	31.8
All Deciles[c]	11.1	6.2	2.8	1.2	21.4
		Adjusted 1980 Tax Law			
First[b]	-0.5	4.1	1.2	2.8	7.6
Second	-0.2	4.8	1.1	2.2	7.9
Third	2.2	7.1	1.4	1.6	12.4
Fourth	4.9	7.7	1.7	1.4	15.7
Fifth	6.9	8.0	1.7	1.2	17.9
Sixth	8.3	8.4	1.7	1.1	19.6
Seventh	9.6	8.5	1.8	1.0	20.9
Eighth	10.8	8.8	1.7	0.9	22.2
Ninth	12.4	8.2	1.8	0.8	23.2
Tenth	17.6	4.4	5.0	0.5	27.6
Top 5 Percent	19.3	3.2	6.1	0.4	29.0
Top 1 Percent	22.7	1.2	8.2	0.2	32.4
All Deciles[c]	12.1	6.9	2.9	0.9	22.7

(Continued)

TABLE 7. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		Adjusted 1984 Tax Law			
First[b]	-0.5	4.6	0.8	5.7	10.6
Second	0.2	5.4	0.8	2.8	9.1
Third	2.7	7.9	0.9	2.1	13.6
Fourth	4.8	8.6	1.1	1.7	16.2
Fifth	6.4	9.0	1.2	1.4	18.0
Sixth	7.6	9.5	1.2	1.2	19.4
Seventh	8.5	9.6	1.2	1.1	20.4
Eighth	9.4	10.0	1.1	1.0	21.6
Ninth	10.6	9.7	1.2	0.9	22.4
Tenth	15.4	5.4	3.4	0.5	24.7
Top 5 Percent	16.9	4.0	4.1	0.4	25.5
Top 1 Percent	20.1	1.6	5.5	0.2	27.4
All Deciles[c]	10.6	8.0	1.9	1.1	21.5
		Actual 1988 Tax Law			
First[b]	-0.8	5.0	1.1	4.5	9.7
Second	-0.4	5.9	1.0	2.1	8.6
Third	1.7	8.6	1.3	1.6	13.3
Fourth	4.1	9.4	1.6	1.4	16.5
Fifth	5.9	9.8	1.6	1.1	18.5
Sixth	7.2	10.4	1.6	1.0	20.2
Seventh	8.3	10.5	1.7	0.9	21.4
Eighth	9.0	10.9	1.6	0.8	22.3
Ninth	10.4	10.6	1.7	0.8	23.4
Tenth	15.5	6.0	4.7	0.4	26.6
Top 5 Percent	16.9	4.4	5.7	0.4	27.4
Top 1 Percent	19.7	1.8	7.7	0.2	29.3
All Deciles[c]	10.4	8.7	2.7	0.9	22.7

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE 8. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE, WITH CONSTANT 1988 INCOMES: CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		Adjusted 1977 Tax Law			
First[b]	-0.6	3.7	1.3	3.7	8.1
Second	-0.7	4.2	1.4	3.5	8.5
Third	1.2	6.3	2.2	2.2	11.9
Fourth	3.7	7.1	2.5	2.0	15.3
Fifth	5.6	7.6	2.7	1.6	17.5
Sixth	7.0	7.8	2.9	1.5	19.2
Seventh	8.4	7.9	3.0	1.3	20.7
Eighth	9.7	7.8	3.2	1.2	21.9
Ninth	11.2	7.1	3.2	1.1	22.7
Tenth	17.3	4.0	2.6	0.7	24.4
Top 5 Percent	19.4	2.9	2.3	0.5	25.1
Top 1 Percent	24.3	1.1	1.9	0.3	27.5
All Deciles[c]	11.1	6.2	2.8	1.2	21.3
		Adjusted 1980 Tax Law			
First[b]	-0.4	3.9	1.3	2.8	7.6
Second	-0.3	4.3	1.5	2.2	7.7
Third	1.9	6.6	2.3	1.6	12.4
Fourth	4.7	7.4	2.6	1.4	16.0
Fifth	6.7	7.9	2.8	1.2	18.6
Sixth	8.2	8.1	3.0	1.1	20.4
Seventh	9.5	8.4	3.1	1.0	21.9
Eighth	10.6	8.7	3.3	0.9	23.5
Ninth	12.3	8.1	3.3	0.8	24.5
Tenth	18.1	4.7	2.7	0.5	25.9
Top 5 Percent	20.0	3.5	2.4	0.4	26.3
Top 1 Percent	24.3	1.3	2.0	0.2	27.9
All Deciles[c]	12.0	6.8	2.9	0.9	22.7

(Continued)

TABLE 8. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Taxes
		Adjusted 1984 Tax Law			
First[b]	-0.4	4.4	0.9	5.6	10.5
Second	0.1	4.9	1.0	2.8	8.8
Third	2.5	7.5	1.5	2.1	13.5
Fourth	4.7	8.3	1.7	1.7	16.5
Fifth	6.4	8.9	1.9	1.4	18.6
Sixth	7.5	9.3	2.0	1.2	20.0
Seventh	8.5	9.5	2.1	1.1	21.3
Eighth	9.4	10.0	2.2	1.0	22.6
Ninth	10.6	9.7	2.2	0.9	23.4
Tenth	15.6	5.7	1.8	0.6	23.7
Top 5 Percent	17.4	4.3	1.6	0.4	23.8
Top 1 Percent	21.1	1.7	1.3	0.3	24.4
All Deciles[c]	10.6	8.0	1.9	1.1	21.6
		Actual 1988 Tax Law			
First[b]	-0.8	4.7	1.2	4.5	9.6
Second	-0.5	5.3	1.4	2.1	8.3
Third	1.5	8.0	2.1	1.6	13.3
Fourth	4.0	9.0	2.4	1.4	16.8
Fifth	5.8	9.6	2.6	1.1	19.2
Sixth	7.1	10.0	2.8	1.0	20.9
Seventh	8.2	10.3	2.9	0.9	22.3
Eighth	8.9	10.8	3.1	0.8	23.6
Ninth	10.3	10.5	3.1	0.8	24.7
Tenth	15.8	6.3	2.5	0.5	25.0
Top 5 Percent	17.5	4.8	2.3	0.4	24.9
Top 1 Percent	20.9	1.9	1.9	0.3	24.9
All Deciles[c]	10.4	8.7	2.7	0.9	22.7

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

graphs the cumulative percentage of income against the cumulative percentage of the population.[15] Figure 6 shows a Lorenz curve. The Gini coefficient is measured by dividing the area bounded by the 45-degree line and the Lorenz curve (Area A in the diagram), by the area of the triangle underneath the 45-degree line (Area A plus Area B). The coefficient thus ranges from 0 when income is equally distributed (each percentage of the population receiving an equivalent percentage of income) to 1 at perfect inequality (all income being received by the wealthiest family). The greater the distributional inequality, the higher the Gini coefficient.

Gini coefficients can be calculated for the distributions of both pre-tax and post-tax income. The difference between the pre-tax and post-tax Gini coefficients is one measure of the progressivity of a tax system.[16] The larger the absolute difference between the post-tax and pre-tax Gini coefficients, the more redistributive is the tax system.

A measure of the equality of the distribution of tax payments can be constructed that is related to the Lorenz curve. For this measure, called the Suits index, a tax concentration curve--analogous to the Lorenz curve--is plotted (see Figure 7), showing the cumulative percentage of the total tax burden measured

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15. For more information, see Donald W. Kiefer, "Changing Progressivity of the Federal, Individual Income Tax and Social Security Tax," Congressional Research Service, Report No. 87-723E (August 31, 1987).

16. This measure is referred to as the Reynolds-Smolensky index of distributional progressivity. See Donald W. Kiefer, "Distributional Tax Progressivity Indexes," *National Tax Journal*, vol. 37, no. 4 (December 1984), p. 498.

FIGURE 6. LORENZ CURVE

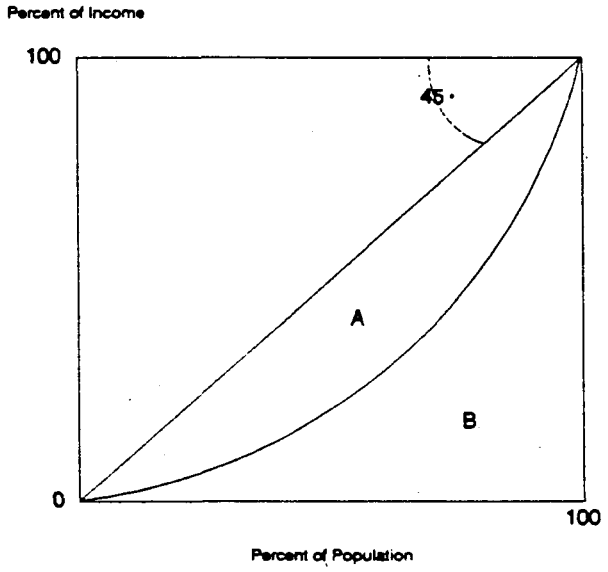
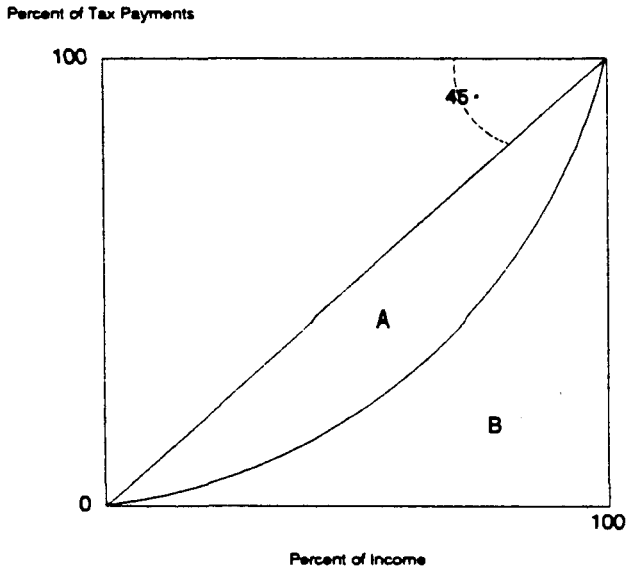


FIGURE 7. TAX CONCENTRATION CURVE



against the cumulative percentage of total income. The Suits index is the ratio of the area between the 45-degree line and the concentration curve to the total area underneath the 45-degree line (area A over the sum of areas A and B).[17] If the tax is proportional, this index has a value of 0. If the total tax burden is paid by those in the highest income bracket, the index has a value of 1. Thus, the more progressive the tax, the higher the Suits index. For a regressive tax (with lower-income families paying a higher percentage of the tax than their percentage of total income), the tax concentration curve lies above the 45-degree line and the value of the Suits index is negative. Because the value of the Suits index depends on the pre-tax distribution of income, it can change over years even if the tax structure remains the same.

Tables 9 and 10 show pre-tax and post-tax Gini coefficients, differences between the Gini coefficients, and Suits indexes for 1977, 1980, 1984, and 1988. The indexes are shown under the two alternative methods for allocating the corporate income tax. Table 9 shows the indexes at the actual (or expected) level and distribution of income for the four years. Table 10 shows the indexes at the distribution of income expected in 1988 using 1977, 1980, and 1984 tax laws adjusted to 1988 levels.

In Table 9, under the capital income allocation of the corporate tax, 1977 has the highest values for both the difference in the Gini coefficients and the Suits index. Under the labor income allocation of the corporate tax, the difference between the pre- and post-tax Gini coefficients is slightly larger in 1980

17. This index is described in Daniel B. Suits, "Measurement of Tax Progressivity," *American Economic Review*, vol. 67, no. 4 (September 1977), pp. 747-752.

than in 1977. These results suggest that the progressivity of federal taxes was not noticeably different in 1977 and 1980. In Table 10, with incomes held constant at the 1988 level and distribution, three of the four measures suggest greater progressivity in 1980 than in 1977, although the differences between 1977 and 1980 are small.

The difference between either 1977 or 1980 and 1984 is clear. All measures indicate that the tax system became less progressive in 1984. The values for the difference in Gini coefficients and for the Suits index are much lower in 1984 under either allocation of the corporate tax, and remain noticeably lower even when incomes are held constant.

While the progressivity of the tax system is projected to increase between 1984 and 1988, all measures indicate that the distribution of federal tax liabilities will remain less progressive in 1988 than in either 1980 or 1977.

TABLE 9. GINI COEFFICIENTS AND SUITS INDEXES

	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
Pre-Tax Gini Coefficient	.4502	.4627	.4884	.4940
Post-Tax Gini Coefficient	.4185	.4320	.4700	.4724
Difference	.0317	.0307	.0184	.0216
Suits Index	.1452	.1312	.0854	.0980
Corporate Income Tax Allocated to Labor Income				
Pre-Tax Gini Coefficient	.4427	.4570	.4845	.4890
Post-Tax Gini Coefficient	.4185	.4320	.4700	.4724
Difference	.0242	.0250	.0145	.0165
Suits Index	.1025	.1017	.0630	.0696

SOURCE: Congressional Budget Office tax simulation models.

TABLE 10. GINI COEFFICIENTS AND SUITS INDEXES WITH CONSTANT 1988 INCOMES

	Adjusted 1977 Law	Adjusted 1980 Law	Adjusted 1984 Law	Actual 1988 Law
Corporate Income Tax Allocated to Capital Income				
Pre-Tax Gini Coefficient	.4940	.4940	.4940	.4940
Post-Tax Gini Coefficient	.4703	.4675	.4765	.4724
Difference	.0237	.0265	.0175	.0216
Suits Index	.1210	.1120	.0847	.0980
Corporate Income Tax Allocated to Labor Income				
Pre-Tax Gini Coefficient	.4890	.4890	.4890	.4890
Post-Tax Gini Coefficient	.4705	.4679	.4747	.4724
Difference	.0185	.0210	.0142	.0165
Suits Index	.0894	.0904	.0643	.0696

SOURCE: Congressional Budget Office tax simulation models.

Appendix

Tables A-1 through A-10 provide additional detail on the distribution of family income and federal tax liabilities in 1977, 1980, 1984, and 1988. Table A-1 shows the lower income limits in nominal dollars for each family income decile and for the 5 percent and 1 percent of families with the highest incomes. Table A-2 provides the same information in 1987 dollars.[1] As Table A-2 shows, real median family income (the lower limit for the sixth income decile) decreased between 1977 and 1980 and between 1980 and 1984, measured with either allocation of the corporate income tax. Real median income is projected to increase between 1984 and 1988. By 1988, real median income is projected to be higher than in 1980 but lower than in 1977.

Tables A-3 and A-4 show the distribution of capital, labor, transfer, and other (chiefly pension) income among family income groups, under the two allocations of the corporate income tax. Tables A-5 and A-6 show the share of each decile's total income from each income source, under the two allocations of the corporate income tax.

Tables A-7 and A-8 show the share of pre- and post-tax family income received by each family income decile and by the 5 percent and 1 percent of families with the highest incomes, and the share of federal taxes paid by each income group under the two alternative allocations of the corporate income tax.

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1. The values in Table A-2 for 1977, 1984, and 1988 differ slightly from the values reported in the earlier CBO study, *The Changing Distribution of Federal Taxes: 1975-1990*. In that study, which was completed during 1987, the projected change in consumer prices for 1987 was used to adjust incomes to 1987 levels. In the current study, the actual 1987 change in consumer prices is used.

The tables show that the share of taxes paid by the highest income decile rose from 1980 to 1988 despite the drop in that group's effective tax rate over the same period. The increase in the share of taxes paid by the highest income group resulted from a growth of nearly 3 percentage points in their share of pre-tax income between 1980 and 1988, more than offsetting the decline in their effective tax rate.

Tables A-9 and A-10 show how the total federal tax bill for each income group was divided among the major revenue sources in 1980. In 1980, social insurance taxes were the largest part of total federal taxes for families in the bottom half of the income distribution. By 1988, social insurance taxes will be the largest part of total federal taxes for families in all deciles except the highest.

TABLE A-1. MINIMUM INCOME LEVEL IN EACH POPULATION DECILE, BY YEAR AND TREATMENT OF CORPORATE TAX
(In nominal dollars)

Decile[a]	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
First[b]	0	0	0	0
Second	3,316	4,165	4,992	5,908
Third	5,647	7,067	8,689	10,370
Fourth	8,381	10,420	12,810	15,320
Fifth	11,110	13,720	17,250	20,530
Sixth	14,030	17,550	22,000	26,200
Seventh	17,150	21,570	27,410	32,580
Eighth	20,760	26,380	33,840	40,170
Ninth	25,390	32,660	42,450	50,400
Tenth	33,300	43,470	57,020	68,000
Top 5 Percent	42,530	55,630	73,860	87,640
Top 1 Percent	85,600	109,500	144,200	185,200
Corporate Income Tax Allocated to Labor Income				
First[b]	0	0	0	0
Second	3,328	4,158	4,984	5,906
Third	5,670	7,084	8,740	10,470
Fourth	8,400	10,440	13,010	15,600
Fifth	11,290	13,800	17,400	20,770
Sixth	14,230	17,690	22,130	26,360
Seventh	17,530	21,970	27,580	32,860
Eighth	21,340	26,870	34,170	40,630
Ninth	26,030	33,200	43,050	51,270
Tenth	33,910	43,890	57,540	68,780
Top 5 Percent	42,770	55,440	74,020	88,120
Top 1 Percent	78,990	106,100	143,100	179,700

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.

TABLE A-2. MINIMUM INCOME LEVEL IN EACH POPULATION DECILE, BY YEAR AND TREATMENT OF CORPORATE TAX (In 1987 dollars)

Decile[a]	1977	1980	1984	1988
Corporate Income Tax Allocated to Capital Income				
First[b]	0	0	0	0
Second	6,219	5,745	5,462	5,607
Third	10,590	9,747	9,507	9,841
Fourth	15,720	14,370	14,020	14,540
Fifth	20,840	18,920	18,880	19,480
Sixth	26,310	24,210	24,070	24,860
Seventh	32,160	29,750	29,990	30,920
Eighth	38,940	36,390	37,030	38,120
Ninth	47,620	45,050	46,450	47,830
Tenth	62,450	59,960	62,390	64,530
Top 5 Percent	79,760	76,730	80,820	83,170
Top 1 Percent	160,500	151,000	157,800	175,800
Corporate Income Tax Allocated to Labor Income				
First[b]	0	0	0	0
Second	6,242	5,735	5,453	5,605
Third	10,630	9,771	9,563	9,936
Fourth	15,750	14,400	14,240	14,800
Fifth	21,170	19,030	19,040	19,710
Sixth	26,690	24,400	24,210	25,020
Seventh	32,880	30,300	30,180	31,180
Eighth	40,020	37,060	37,390	38,560
Ninth	48,820	45,790	47,100	48,650
Tenth	63,600	60,540	62,960	65,270
Top 5 Percent	80,210	76,470	80,990	83,620
Top 1 Percent	148,100	146,300	156,600	170,500

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.

TABLE A-3. DISTRIBUTION OF FAMILY INCOME FROM EACH SOURCE OF INCOME, BY POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME (In percent)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1977			
First[b]	0.3	0.4	9.5	1.5	1.1
Second	1.2	1.1	17.2	4.2	2.5
Third	2.9	2.3	15.2	7.8	3.9
Fourth	5.1	3.4	11.3	9.7	5.4
Fifth	7.1	4.4	10.0	10.2	7.1
Sixth	9.2	5.2	9.4	11.6	8.7
Seventh	12.0	5.4	7.5	10.3	10.6
Eighth	14.9	6.1	6.3	11.4	12.9
Ninth	18.6	9.6	6.2	13.4	16.2
Tenth	29.1	61.7	6.9	19.5	31.9
Top 5 Percent	17.4	53.0	3.7	11.9	21.5
Top 1 Percent	5.5	33.4	0.8	2.0	9.2
All Deciles[c]	100.0	100.0	100.0	100.0	100.0
		1980			
First[b]	0.3	0.4	8.5	1.8	1.0
Second	1.2	1.1	16.3	4.4	2.4
Third	2.9	2.0	14.4	7.6	3.8
Fourth	4.9	2.8	11.6	9.4	5.2
Fifth	6.8	4.1	11.0	10.6	6.8
Sixth	9.2	4.5	9.2	10.4	8.6
Seventh	11.7	5.5	8.0	11.3	10.4
Eighth	14.8	6.8	6.9	11.7	12.9
Ninth	18.7	10.5	6.6	12.4	16.3
Tenth	30.1	62.0	7.1	20.0	32.9
Top 5 Percent	18.5	51.9	3.8	11.5	22.2
Top 1 Percent	6.2	33.4	0.8	2.2	9.8
All Deciles[c]	100.0	100.0	100.0	100.0	100.0

(Continued)

TABLE A-3. (Continued)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1984			
First[b]	0.3	0.3	7.4	1.5	0.9
Second	1.2	0.8	15.3	3.7	2.3
Third	2.9	1.7	13.3	6.4	3.6
Fourth	4.6	2.8	12.2	8.7	5.0
Fifth	6.5	3.8	11.0	10.3	6.5
Sixth	8.8	4.7	9.6	10.4	8.2
Seventh	11.2	6.1	8.9	11.2	10.1
Eighth	14.6	6.9	7.8	10.8	12.6
Ninth	19.0	9.6	6.6	13.7	16.3
Tenth	31.9	63.0	7.3	22.6	35.0
Top 5 Percent	19.7	54.8	4.0	15.0	24.3
Top 1 Percent	7.4	36.9	0.8	4.0	11.8
All Deciles[c]	100.0	100.0	100.0	100.0	100.0
		1988			
First[b]	0.3	0.3	7.9	1.4	0.9
Second	1.2	0.8	15.5	3.5	2.2
Third	3.0	1.7	13.1	5.8	3.6
Fourth	4.6	2.8	11.8	8.2	5.0
Fifth	6.5	3.8	10.7	10.0	6.5
Sixth	8.7	4.8	9.6	9.9	8.1
Seventh	11.0	6.2	8.7	11.5	10.0
Eighth	14.2	7.1	7.9	11.4	12.5
Ninth	18.6	9.8	6.7	13.9	16.1
Tenth	32.9	62.3	7.5	24.0	35.7
Top 5 Percent	21.1	53.7	4.0	15.4	25.1
Top 1 Percent	8.8	36.2	0.8	3.4	12.5
All Deciles[c]	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-4. DISTRIBUTION OF FAMILY INCOME FROM EACH SOURCE OF INCOME, BY POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME (In percent)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1977			
First[b]	0.3	0.6	9.9	1.5	1.1
Second	1.1	1.5	17.8	4.3	2.5
Third	2.7	3.2	15.9	8.3	3.9
Fourth	4.7	4.5	12.4	10.9	5.5
Fifth	6.9	5.3	10.2	11.0	7.1
Sixth	9.2	5.8	9.1	12.2	8.9
Seventh	12.0	5.6	6.9	9.9	10.9
Eighth	14.8	7.1	6.1	11.3	13.2
Ninth	18.8	9.5	5.6	12.4	16.6
Tenth	30.0	56.5	5.9	17.7	30.6
Top 5 Percent	18.2	48.3	3.2	10.8	20.1
Top 1 Percent	5.9	30.5	0.7	2.0	8.1
All Deciles[c]	100.0	100.0	100.0	100.0	100.0
		1980			
First[b]	0.3	0.5	8.6	1.8	1.0
Second	1.1	1.3	16.8	4.5	2.4
Third	2.8	2.5	14.7	7.8	3.8
Fourth	4.7	3.4	12.2	10.2	5.3
Fifth	6.6	4.6	11.1	11.1	6.9
Sixth	9.1	5.2	9.3	10.6	8.7
Seventh	11.6	6.0	7.8	12.1	10.6
Eighth	14.8	6.9	6.7	11.0	13.1
Ninth	18.7	11.3	6.2	12.0	16.6
Tenth	30.9	58.1	6.2	18.6	32.0
Top 5 Percent	19.1	48.7	3.3	10.5	21.3
Top 1 Percent	6.4	32.1	0.8	2.1	9.0
All Deciles[c]	100.0	100.0	100.0	100.0	100.0

(Continued)

TABLE A-4. (Continued)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1984			
First[b]	0.3	0.4	7.5	1.5	0.9
Second	1.1	0.9	15.8	3.9	2.3
Third	2.7	2.1	14.0	6.7	3.6
Fourth	4.5	3.1	12.3	9.1	5.0
Fifth	6.5	4.1	11.0	10.2	6.6
Sixth	8.6	5.2	10.1	10.8	8.3
Seventh	11.2	6.1	8.5	11.5	10.2
Eighth	14.6	6.9	7.4	10.9	12.8
Ninth	19.0	9.6	6.4	13.0	16.4
Tenth	32.5	61.3	6.5	21.8	34.4
Top 5 Percent	20.2	53.1	3.5	14.3	23.7
Top 1 Percent	7.5	36.8	0.8	4.0	11.2
All Deciles[c]	100.0	100.0	100.0	100.0	100.0
		1988			
First[b]	0.3	0.4	7.9	1.3	0.9
Second	1.1	1.0	16.3	3.6	2.2
Third	2.8	2.2	13.7	6.1	3.6
Fourth	4.5	3.3	12.2	8.7	5.0
Fifth	6.3	4.4	10.8	10.2	6.5
Sixth	8.5	5.4	9.9	10.6	8.2
Seventh	10.9	6.4	8.6	11.5	10.2
Eighth	14.3	6.9	7.3	11.2	12.7
Ninth	18.6	9.8	6.1	13.6	16.4
Tenth	33.6	59.8	6.6	22.5	34.9
Top 5 Percent	21.6	51.5	3.4	14.9	24.2
Top 1 Percent	8.9	35.8	0.7	3.3	11.8
All Deciles[c]	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-5. DISTRIBUTION OF FAMILY INCOME BY SOURCE OF INCOME FOR EACH POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME (In percent)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1977			
First[b]	23.5	5.8	66.1	4.6	100.0
Second	36.3	6.5	51.7	5.5	100.0
Third	55.5	8.8	29.2	6.6	100.0
Fourth	69.3	9.3	15.6	5.8	100.0
Fifth	75.3	9.3	10.7	4.8	100.0
Sixth	78.8	8.7	8.0	4.4	100.0
Seventh	83.9	7.6	5.3	3.2	100.0
Eighth	86.4	7.1	3.7	2.9	100.0
Ninth	85.7	8.7	2.9	2.7	100.0
Tenth	67.8	28.6	1.6	2.0	100.0
Top 5 Percent	60.4	36.4	1.3	1.8	100.0
Top 1 Percent	44.9	53.7	0.7	0.7	100.0
All Deciles[c]	74.5	14.8	7.5	3.3	100.0
		1980			
First[b]	22.3	6.2	65.1	6.4	100.0
Second	35.8	6.7	51.1	6.4	100.0
Third	56.2	7.9	28.9	7.1	100.0
Fourth	68.5	8.3	16.9	6.3	100.0
Fifth	73.0	9.2	12.3	5.5	100.0
Sixth	79.4	8.1	8.2	4.3	100.0
Seventh	82.2	8.1	5.9	3.8	100.0
Eighth	84.6	8.1	4.1	3.2	100.0
Ninth	84.3	9.9	3.1	2.7	100.0
Tenth	67.2	29.0	1.7	2.1	100.0
Top 5 Percent	61.0	35.8	1.3	1.8	100.0
Top 1 Percent	46.2	52.4	0.6	0.8	100.0
All Deciles[c]	73.5	15.3	7.6	3.5	100.0

(Continued)

TABLE A-5. (Continued)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1984			
First[b]	24.4	5.5	62.9	7.1	100.0
Second	37.2	6.1	49.9	6.9	100.0
Third	57.5	8.0	27.1	7.4	100.0
Fourth	65.5	9.6	17.8	7.2	100.0
Fifth	71.2	9.9	12.3	6.5	100.0
Sixth	76.5	9.7	8.5	5.2	100.0
Seventh	78.9	10.2	6.4	4.6	100.0
Eighth	82.6	9.3	4.5	3.5	100.0
Ninth	83.5	10.1	3.0	3.5	100.0
Tenth	65.2	30.6	1.5	2.7	100.0
Top 5 Percent	58.0	38.3	1.2	2.5	100.0
Top 1 Percent	45.0	53.2	0.5	1.4	100.0
All Deciles[c]	71.6	17.0	7.3	4.1	100.0
		1988			
First[b]	23.9	6.7	62.4	7.0	100.0
Second	39.9	6.3	47.0	6.8	100.0
Third	60.3	7.8	24.8	7.1	100.0
Fourth	67.3	9.5	16.1	7.2	100.0
Fifth	72.2	9.7	11.3	6.8	100.0
Sixth	76.9	9.8	8.0	5.4	100.0
Seventh	78.8	10.3	5.9	5.0	100.0
Eighth	82.3	9.4	4.3	4.0	100.0
Ninth	83.4	10.0	2.8	3.8	100.0
Tenth	66.7	28.9	1.4	3.0	100.0
Top 5 Percent	60.7	35.5	1.1	2.7	100.0
Top 1 Percent	50.5	47.8	0.4	1.2	100.0
All Deciles[c]	72.3	16.6	6.8	4.4	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-6. DISTRIBUTION OF FAMILY INCOME BY SOURCE OF INCOME FOR EACH POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME (In percent)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1977			
First[b]	21.3	5.8	68.4	4.5	100.0
Second	34.1	6.6	53.5	5.7	100.0
Third	53.6	9.0	30.3	7.0	100.0
Fourth	67.7	9.0	16.8	6.5	100.0
Fifth	76.1	8.1	10.7	5.1	100.0
Sixth	80.8	7.1	7.6	4.5	100.0
Seventh	86.6	5.6	4.8	3.0	100.0
Eighth	87.9	5.8	3.5	2.8	100.0
Ninth	88.7	6.3	2.5	2.5	100.0
Tenth	76.6	20.1	1.4	1.9	100.0
Top 5 Percent	70.8	26.2	1.2	1.8	100.0
Top 1 Percent	57.2	41.3	0.7	0.8	100.0
All Deciles[c]	78.3	10.9	7.5	3.3	100.0
		1980			
First[b]	22.2	5.7	65.7	6.4	100.0
Second	34.2	6.5	52.8	6.5	100.0
Third	55.2	8.2	29.4	7.2	100.0
Fourth	67.6	8.1	17.6	6.8	100.0
Fifth	73.8	8.2	12.3	5.7	100.0
Sixth	80.1	7.4	8.2	4.3	100.0
Seventh	83.4	7.0	5.6	4.0	100.0
Eighth	86.6	6.5	3.9	3.0	100.0
Ninth	86.2	8.4	2.8	2.5	100.0
Tenth	73.9	22.6	1.5	2.0	100.0
Top 5 Percent	68.6	28.5	1.2	1.7	100.0
Top 1 Percent	54.2	44.4	0.6	0.8	100.0
All Deciles[c]	76.4	12.4	7.6	3.5	100.0

(Continued)

TABLE A-6. (Continued)

Decile[a]	Labor	Capital	Transfer	Other	Total
		1984			
First[b]	23.8	6.1	63.0	7.0	100.0
Second	35.5	6.1	51.3	7.1	100.0
Third	55.3	8.6	28.5	7.7	100.0
Fourth	65.4	9.2	17.9	7.4	100.0
Fifth	72.2	9.2	12.2	6.4	100.0
Sixth	76.3	9.4	8.9	5.4	100.0
Seventh	80.4	8.9	6.0	4.6	100.0
Eighth	84.2	8.1	4.2	3.5	100.0
Ninth	85.2	8.7	2.9	3.3	100.0
Tenth	69.5	26.5	1.4	2.6	100.0
Top 5 Percent	63.0	33.4	1.1	2.5	100.0
Top 1 Percent	49.2	48.9	0.5	1.5	100.0
All Deciles[c]	73.7	14.9	7.3	4.1	100.0
		1988			
First[b]	25.0	5.8	62.3	6.8	100.0
Second	37.3	6.3	49.3	7.1	100.0
Third	58.2	8.4	25.9	7.5	100.0
Fourth	66.8	9.1	16.5	7.6	100.0
Fifth	72.6	9.3	11.2	6.9	100.0
Sixth	77.1	9.1	8.1	5.7	100.0
Seventh	80.7	8.7	5.7	5.0	100.0
Eighth	84.7	7.5	3.9	3.9	100.0
Ninth	85.5	8.3	2.5	3.7	100.0
Tenth	72.1	23.8	1.3	2.8	100.0
Top 5 Percent	66.9	29.5	1.0	2.7	100.0
Top 1 Percent	56.4	42.0	0.4	1.2	100.0
All Deciles[c]	75.0	13.9	6.8	4.4	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-7. DISTRIBUTION OF FAMILY INCOME AND OF FEDERAL TAX PAYMENTS BY POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME (In percent)

Decile[a]	Family Income		Federal Taxes Paid				
	Before Tax	After Tax	Individual Income	Social Insurance	Excise	Corporate Income	All Taxes
			1977				
First[b]	1.1	1.3	-0.1	0.6	3.2	0.4	0.4
Second	2.5	2.9	0.0	1.6	6.6	1.0	1.0
Third	3.9	4.4	0.6	3.7	6.6	2.2	2.1
Fourth	5.4	5.9	2.1	6.2	8.5	3.3	3.8
Fifth	7.1	7.5	4.0	8.6	8.8	4.2	5.6
Sixth	8.7	9.1	6.1	10.8	10.1	5.0	7.5
Seventh	10.6	10.9	8.8	13.6	11.3	5.3	9.7
Eighth	12.9	13.1	12.3	15.9	12.4	6.0	12.3
Ninth	16.2	16.2	17.1	18.5	14.2	9.5	16.1
Tenth	31.9	29.1	48.9	20.3	17.8	62.8	41.3
Top 5 Percent	21.5	18.9	36.5	10.0	9.5	54.0	30.4
Top 1 Percent	9.2	7.2	19.2	1.7	2.1	34.3	15.8
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			1980				
First[b]	1.0	1.2	0.0	0.5	3.1	0.4	0.3
Second	2.4	2.9	0.0	1.4	5.6	1.1	0.8
Third	3.8	4.4	0.8	3.4	6.9	1.9	2.0
Fourth	5.2	5.7	2.3	5.7	7.9	2.8	3.6
Fifth	6.8	7.3	4.0	7.8	9.2	4.1	5.4
Sixth	8.6	8.9	6.3	10.3	10.0	4.5	7.5
Seventh	10.4	10.6	8.8	12.9	11.1	5.5	9.7
Eighth	12.9	12.9	12.1	16.2	12.7	6.7	12.7
Ninth	16.3	16.1	17.4	19.3	14.4	10.5	17.0
Tenth	32.9	30.4	48.1	22.4	18.7	62.3	40.8
Top 5 Percent	22.2	20.1	35.7	11.3	10.4	52.1	29.3
Top 1 percent	9.8	8.3	18.2	2.0	2.7	33.6	14.5
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Continued)

TABLE A-7. (Continued)

Decile[a]	Family Income: Before Tax	Family Income: After Tax	Federal Taxes Paid: Individual Income	Federal Taxes Paid: Social Insurance	Federal Taxes Paid: Excise	Federal Taxes Paid: Corporate Income	Federal Taxes Paid: All Taxes
			1984				
First[b]	0.9	1.0	0.0	0.5	4.7	0.3	0.4
Second	2.3	2.6	0.1	1.4	5.6	0.9	0.9
Third	3.6	4.0	0.9	3.4	7.0	1.8	2.2
Fourth	5.0	5.4	2.3	5.3	8.0	3.0	3.7
Fifth	6.5	6.8	3.9	7.3	8.7	4.0	5.4
Sixth	8.2	8.4	6.1	9.7	9.5	5.0	7.5
Seventh	10.1	10.3	8.4	12.2	10.7	6.4	9.7
Eighth	12.6	12.6	11.6	15.9	12.1	7.3	12.8
Ninth	16.3	16.0	16.8	19.7	14.1	10.1	17.1
Tenth	35.0	33.6	49.9	24.5	17.8	61.1	40.1
Top 5 Percent	24.3	23.2	37.6	12.5	9.8	52.6	28.5
Top 1 Percent	11.8	11.0	20.9	2.4	2.6	34.6	14.6
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			1988				
First[b]	0.9	1.0	-0.1	0.5	4.5	0.3	0.4
Second	2.2	2.6	-0.1	1.5	5.5	0.9	0.8
Third	3.6	4.0	0.6	3.5	6.7	1.7	2.1
Fourth	5.0	5.4	2.0	5.4	7.9	2.9	3.6
Fifth	6.5	6.8	3.7	7.3	8.4	3.8	5.3
Sixth	8.1	8.4	5.7	9.7	9.4	4.9	7.3
Seventh	10.0	10.2	8.0	12.1	10.7	6.3	9.5
Eighth	12.5	12.5	10.9	15.7	12.1	7.2	12.3
Ninth	16.1	16.0	16.1	19.6	14.3	9.9	16.7
Tenth	35.7	33.9	53.2	24.5	18.6	61.7	41.9
Top 5 Percent	25.1	23.5	41.0	12.7	10.3	53.0	30.4
Top 1 Percent	12.5	11.5	23.8	2.5	3.5	35.4	16.2
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-8. DISTRIBUTION OF FAMILY INCOME AND OF FEDERAL TAX PAYMENTS BY POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME (In percent)

Decile[a]	Family Income		Federal Taxes Paid				
	Before Tax	After Tax	Individual Income	Social Insurance	Excise	Corporate Income	All Taxes
			1977				
First[b]	1.1	1.3	0.0	0.5	3.2	0.4	0.4
Second	2.5	2.9	0.0	1.4	6.6	1.1	0.9
Third	3.9	4.5	0.5	3.4	6.5	2.7	2.1
Fourth	5.5	6.0	2.0	5.8	8.5	4.7	3.9
Fifth	7.1	7.5	3.9	8.4	8.7	6.9	6.0
Sixth	8.9	9.1	6.1	10.8	10.2	9.2	8.2
Seventh	10.9	10.8	8.8	13.8	11.2	12.2	11.0
Eighth	13.2	13.1	12.1	15.8	12.4	15.1	13.7
Ninth	16.6	16.2	17.2	18.7	14.3	19.1	17.8
Tenth	30.6	29.1	49.3	21.2	17.9	28.4	35.9
Top 5 Percent	20.1	18.9	36.9	10.6	9.7	16.5	24.3
Top 1 Percent	8.1	7.2	19.5	1.8	2.1	4.8	10.9
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			1980				
First[b]	1.0	1.2	0.0	0.4	3.1	0.4	0.3
Second	2.4	2.9	0.0	1.3	5.6	1.1	0.8
Third	3.8	4.4	0.8	3.3	6.9	2.7	2.0
Fourth	5.3	5.8	2.3	5.4	7.9	4.6	3.8
Fifth	6.9	7.3	3.9	7.6	9.2	6.6	5.6
Sixth	8.7	8.9	6.3	10.2	10.0	9.1	8.0
Seventh	10.6	10.7	8.8	12.9	11.1	11.7	10.5
Eighth	31.1	12.8	12.1	16.2	12.7	14.9	13.8
Ninth	16.6	16.1	17.4	19.3	14.3	18.9	18.1
Tenth	32.0	30.4	48.4	23.2	18.8	29.9	37.2
Top 5 Percent	21.3	20.0	35.9	11.9	10.5	18.1	25.3
Top 1 Percent	9.0	8.3	18.4	2.1	2.7	5.7	11.2
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Continued)

TABLE A-8. (Continued)

Decile[a]	Family Income		Federal Taxes Paid				
	Before Tax	After Tax	Individual Income	Social Insurance	Excise	Corporate Income	All Taxes
			1984				
First[b]	0.9	1.0	0.0	0.5	4.7	0.4	0.4
Second	2.3	2.6	0.0	1.3	5.6	1.1	0.9
Third	3.6	4.0	0.9	3.2	7.0	2.7	2.2
Fourth	5.0	5.4	2.3	5.1	8.0	4.4	3.8
Fifth	6.6	6.9	3.9	7.3	8.7	6.4	5.6
Sixth	8.3	8.5	6.0	9.5	9.5	8.6	7.7
Seventh	10.2	10.3	8.4	12.2	10.7	11.2	10.2
Eighth	12.8	12.6	11.7	15.9	12.2	14.7	13.6
Ninth	16.4	16.0	16.9	19.8	14.1	19.1	18.0
Tenth	34.4	33.6	50.0	25.0	17.8	31.5	37.5
Top 5 Percent	23.7	23.2	37.6	13.0	9.8	19.3	25.4
Top 1 Percent	11.2	11.0	21.0	2.5	2.6	6.9	11.9
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			1988				
First[b]	0.9	1.0	-0.1	0.5	4.5	0.4	0.4
Second	2.2	2.7	-0.1	1.4	5.5	1.1	0.8
Third	3.6	4.0	0.5	3.3	6.7	2.8	2.1
Fourth	5.0	5.4	1.9	5.2	7.9	4.5	3.7
Fifth	6.5	6.8	3.7	7.2	8.5	6.4	5.5
Sixth	8.2	8.4	5.7	9.5	9.4	8.5	7.6
Seventh	10.2	10.2	8.0	12.0	10.7	11.0	10.0
Eighth	12.7	12.5	10.9	15.8	12.0	14.5	13.2
Ninth	16.4	15.9	16.3	19.7	14.3	18.7	17.8
Tenth	34.9	33.8	53.2	25.2	18.6	32.0	38.6
Top 5 Percent	24.2	23.5	40.9	13.2	10.4	20.1	26.6
Top 1 Percent	11.8	11.5	23.8	2.6	3.6	8.1	13.0
All Deciles[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-9. DISTRIBUTION OF TOTAL FEDERAL TAXES PAID, BY TYPE OF TAX, FOR EACH POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO CAPITAL INCOME (In percent)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Excise Taxes	Corporate Income Tax	All Taxes
		1977			
First[b]	-6.4	43.7	44.8	17.9	100.0
Second	-0.1	45.7	36.5	17.9	100.0
Third	14.9	50.0	17.2	17.8	100.0
Fourth	27.0	46.2	12.2	14.6	100.0
Fifth	34.5	44.1	8.6	12.8	100.0
Sixth	39.8	41.5	7.5	11.3	100.0
Seventh	44.1	40.2	6.5	9.2	100.0
Eighth	48.7	37.3	5.6	8.4	100.0
Ninth	51.8	33.2	4.9	10.1	100.0
Tenth	57.6	14.1	2.4	25.9	100.0
Top 5 Percent	58.5	9.4	1.7	30.3	100.0
Top 1 Percent	59.2	3.1	0.7	37.0	100.0
All Deciles[c]	48.7	28.8	5.5	17.0	100.0
		1980			
First[b]	-7.1	49.7	40.4	17.1	100.0
Second	3.1	54.3	26.4	16.2	100.0
Third	21.4	52.9	13.5	12.2	100.0
Fourth	33.9	48.0	8.4	9.7	100.0
Fifth	39.4	44.5	6.6	9.5	100.0
Sixth	44.9	42.4	5.2	7.5	100.0
Seventh	47.8	40.7	4.4	7.0	100.0
Eighth	50.5	39.1	3.8	6.6	100.0
Ninth	54.2	34.8	3.3	7.7	100.0
Tenth	62.3	16.8	1.8	19.1	100.0
Top 5 Percent	64.5	11.8	1.4	22.3	100.0
Top 1 Percent	66.1	4.2	0.7	28.9	100.0
All Deciles[c]	52.9	30.7	3.9	12.5	100.0

(Continued)

TABLE A-9. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Excise Taxes	Corporate Income Tax	All Taxes
		1984			
First[b]	-4.1	42.8	54.4	6.9	100.0
Second	3.4	57.6	29.8	9.2	100.0
Third	20.8	56.4	15.1	7.8	100.0
Fourth	30.0	51.9	10.3	7.8	100.0
Fifth	35.3	49.7	7.7	7.2	100.0
Sixth	39.6	47.9	6.1	6.5	100.0
Seventh	42.1	46.2	5.3	6.4	100.0
Eighth	44.3	45.6	4.5	5.5	100.0
Ninth	47.9	42.4	4.0	5.7	100.0
Tenth	60.7	22.4	2.1	14.8	100.0
Top 5 Percent	64.3	16.1	1.6	17.9	100.0
Top 1 Percent	70.0	6.1	0.9	23.0	100.0
All Deciles[c]	48.7	36.8	4.8	9.7	100.0
		1988			
First[b]	-8.7	51.0	46.4	11.3	100.0
Second	-5.2	68.1	24.9	12.2	100.0
Third	12.9	65.1	12.1	9.8	100.0
Fourth	25.1	56.9	8.3	9.6	100.0
Fifth	32.0	53.1	6.1	8.7	100.0
Sixth	35.7	51.3	4.9	8.1	100.0
Seventh	38.7	49.0	4.3	8.0	100.0
Eighth	40.3	48.9	3.7	7.0	100.0
Ninth	44.3	45.3	3.3	7.1	100.0
Tenth	58.1	22.5	1.7	17.7	100.0
Top 5 Percent	61.7	16.1	1.3	20.9	100.0
Top 1 Percent	67.0	6.0	0.8	26.2	100.0
All Deciles[c]	45.7	38.4	3.8	12.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE A-10. DISTRIBUTION OF TOTAL FEDERAL TAXES PAID, BY TYPE OF TAX, FOR EACH POPULATION DECILE, WITH CORPORATE INCOME TAX ALLOCATED TO LABOR INCOME (In percent)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Excise Taxes	Corporate Income Tax	All Taxes
		1977			
First[b]	-4.7	40.0	46.0	18.7	100.0
Second	-1.3	42.9	38.6	19.9	100.0
Third	12.6	47.6	17.5	22.3	100.0
Fourth	24.8	42.5	12.1	20.6	100.0
Fifth	31.8	40.3	8.1	19.8	100.0
Sixth	36.0	38.0	6.9	19.1	100.0
Seventh	39.2	36.2	5.7	18.9	100.0
Eighth	43.1	33.1	5.0	18.8	100.0
Ninth	47.1	30.2	4.4	18.3	100.0
Tenth	66.8	17.0	2.8	13.4	100.0
Top 5 Percent	73.7	12.5	2.2	11.5	100.0
Top 1 Percent	86.6	4.8	1.1	7.5	100.0
All Deciles[c]	48.7	28.8	5.5	17.0	100.0
		1980			
First[b]	-7.2	48.6	42.4	16.2	100.0
Second	2.0	52.6	27.9	17.5	100.0
Third	19.8	50.1	13.3	16.8	100.0
Fourth	31.8	44.6	8.2	15.5	100.0
Fifth	37.2	41.8	6.3	14.7	100.0
Sixth	41.7	39.2	4.9	14.3	100.0
Seventh	44.5	37.6	4.1	13.9	100.0
Eighth	46.6	36.2	3.6	13.6	100.0
Ninth	51.0	32.9	3.1	13.1	100.0
Tenth	68.9	19.1	2.0	10.0	100.0
Top 5 Percent	75.0	14.4	1.6	8.9	100.0
Top 1 Percent	87.0	5.7	0.9	6.4	100.0
All Deciles[c]	52.9	30.7	3.9	12.5	100.0

(Continued)

TABLE A-10. (Continued)

Decile[a]	Individual Income Tax	Social Insurance Taxes	Excise Taxes	Corporate Income Tax	All Taxes
		1984			
First[b]	-3.6	41.3	53.4	8.9	100.0
Second	2.7	55.0	30.6	11.7	100.0
Third	19.3	53.6	15.3	11.8	100.0
Fourth	29.1	49.7	10.1	11.2	100.0
Fifth	33.9	47.6	7.4	11.0	100.0
Sixth	37.9	45.4	5.9	10.8	100.0
Seventh	40.3	44.0	5.0	10.7	100.0
Eighth	42.1	43.1	4.3	10.5	100.0
Ninth	45.6	40.4	3.7	10.3	100.0
Tenth	65.0	24.5	2.3	8.2	100.0
Top 5 Percent	72.1	18.8	1.8	7.4	100.0
Top 1 Percent	85.7	7.6	1.1	5.6	100.0
All Deciles[c]	48.7	36.8	4.8	9.7	100.0
		1988			
First[b]	-8.2	49.1	46.3	12.8	100.0
Second	-5.7	63.8	25.6	16.4	100.0
Third	11.4	60.6	12.1	15.9	100.0
Fourth	23.9	53.6	8.1	14.4	100.0
Fifth	30.3	50.1	5.8	13.8	100.0
Sixth	34.1	47.8	4.7	13.4	100.0
Seventh	36.7	46.1	4.1	13.1	100.0
Eighth	37.6	45.8	3.5	13.1	100.0
Ninth	41.8	42.5	3.1	12.6	100.0
Tenth	63.1	25.1	1.8	10.0	100.0
Top 5 Percent	70.3	19.1	1.5	9.1	100.0
Top 1 Percent	83.8	7.7	1.0	7.5	100.0
All Deciles[c]	45.7	38.4	3.8	12.0	100.0

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.