

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.

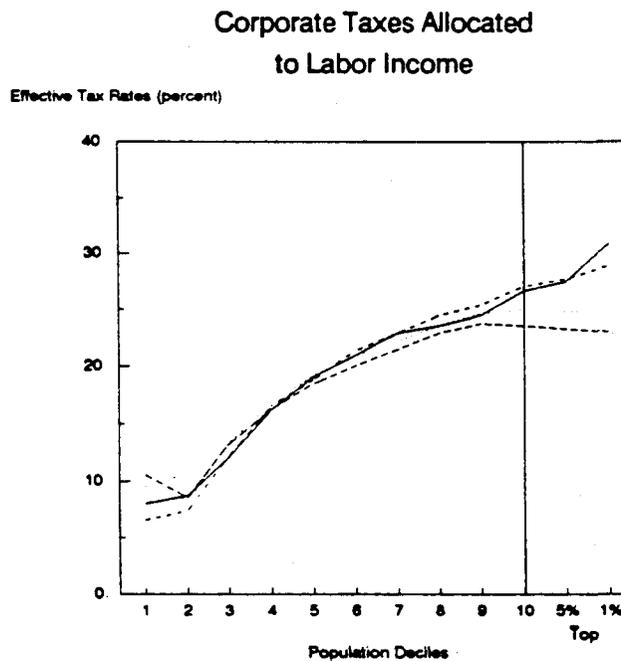
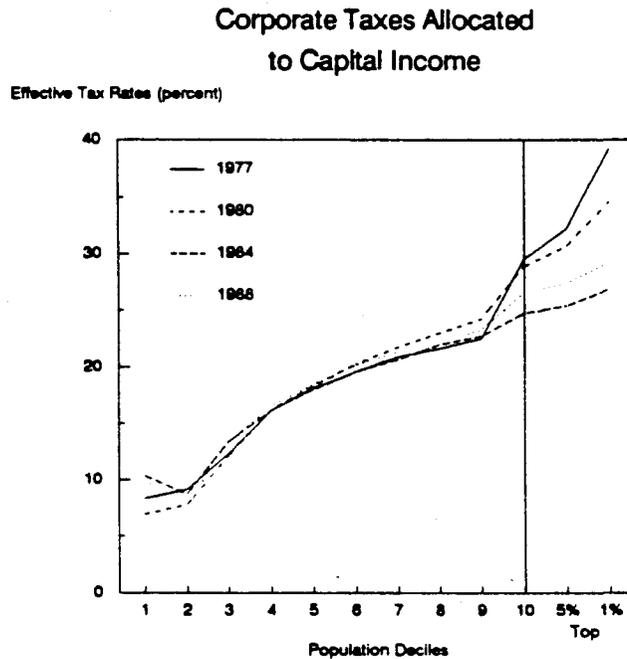
Average real incomes are projected to increase in all income deciles between 1984 and 1988, with the largest percentage increase for families in the top of the income distribution. By 1988, average real income is projected to be higher than in 1980 for families in all income deciles except for those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

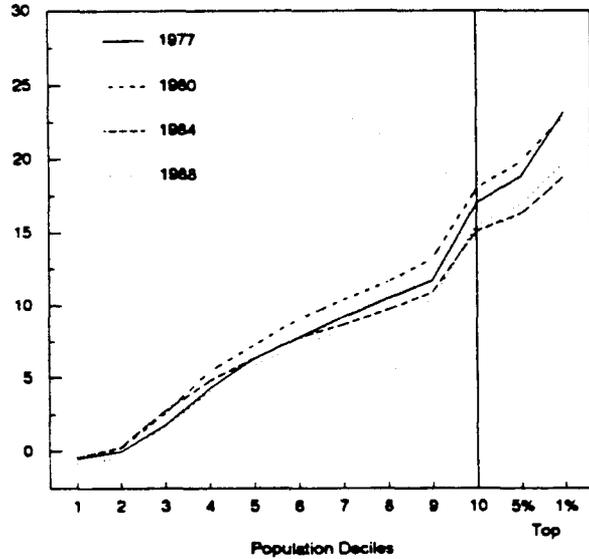
10. Before the change in 1978, the maximum marginal tax rate on capital gains could be as high as 49.1 percent for taxpayers subject to both the minimum tax and the maximum tax on personal service income.

FIGURE 2. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE

INDIVIDUAL INCOME TAX

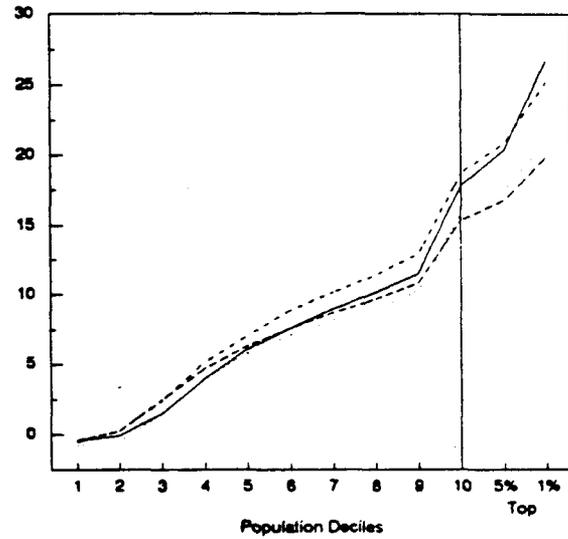
Corporate Taxes Allocated
to Capital Income

Effective Tax Rates (percent)



Corporate Taxes Allocated
to Labor Income

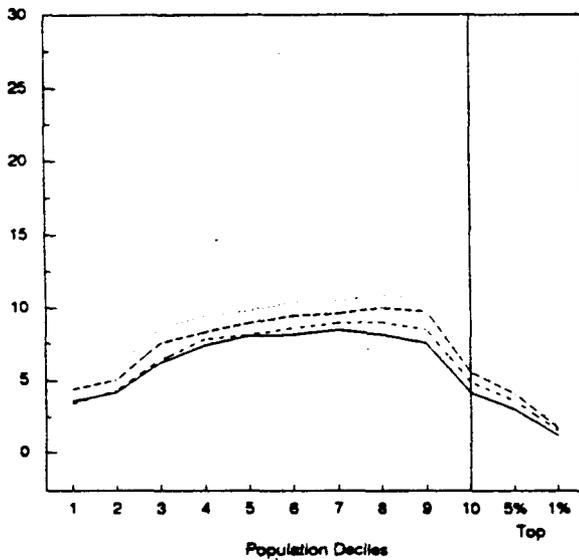
Effective Tax Rates (percent)



SOCIAL INSURANCE TAXES

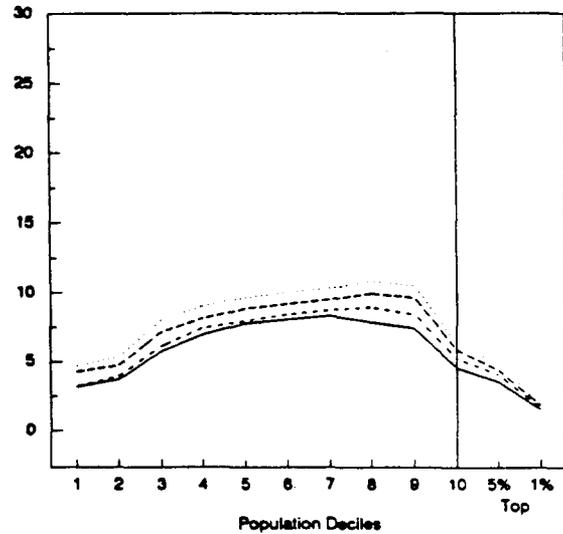
Corporate Taxes Allocated
to Capital Income

Effective Tax Rates (percent)



Corporate Taxes Allocated
to Labor Income

Effective Tax Rates (percent)



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.

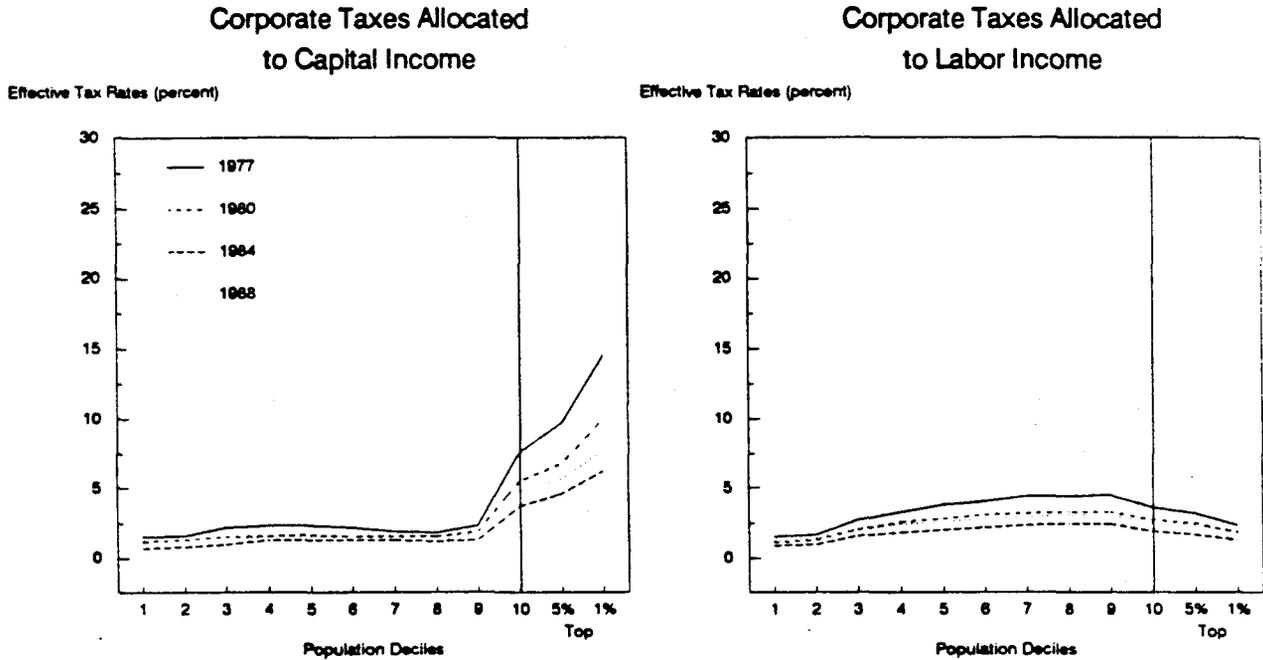
The effective social insurance tax rate rose between 1977 and 1980 in all family income deciles except the lowest. This exception reflected a change in the composition of income for families in the lowest decile as the fraction of income from wages declined. Social insurance tax rates rose further between 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.

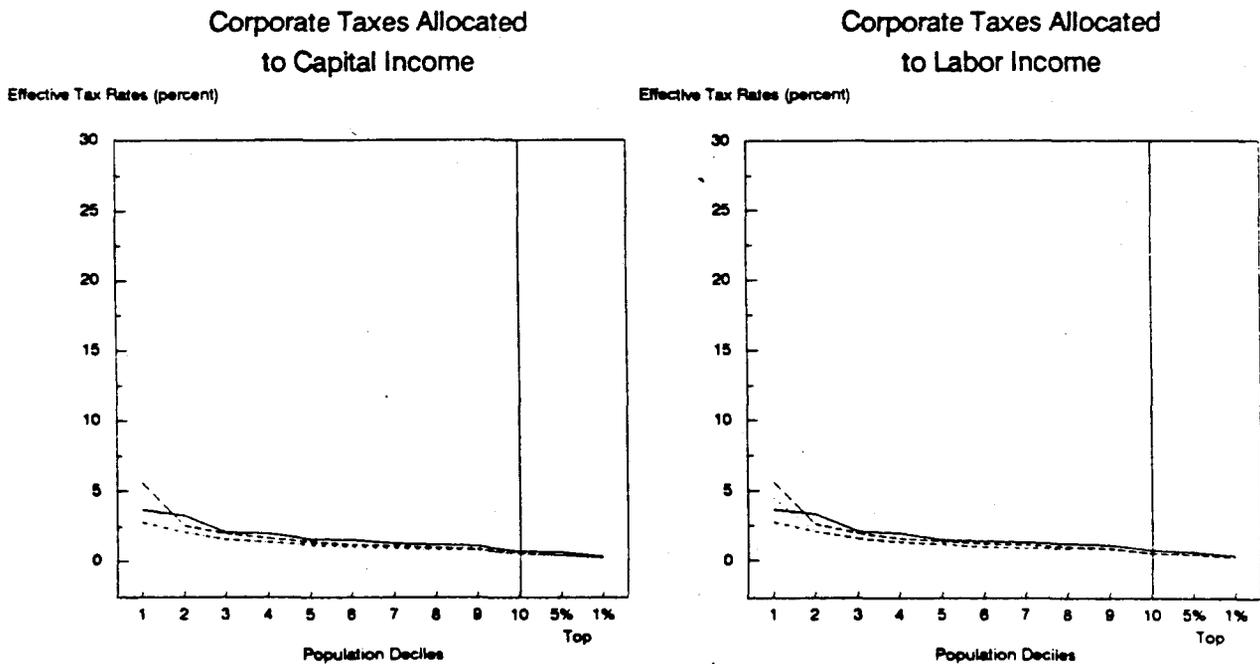
The average effective corporate tax rate for all families is projected to return to nearly its 1980 level by 1988. Because of shifts in the distribution of different types of income, corporate income taxes in 1988 are projected to be

FIGURE 3. EFFECTIVE FEDERAL TAX RATES BY POPULATION DECILE

CORPORATE INCOME TAX



EXCISE 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.

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.

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.

