

**Statement of
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Director
Congressional Budget Office**

**before the
Committee on Ways and Means
U.S. House of Representatives**

April 19, 1989

NOTICE

**This statement is not available
for public release until it is
delivered at 2:00 p.m. (EDT),
Wednesday, April 19, 1989.**

Mr. Chairman, I appreciate the opportunity to appear today before this Committee to summarize the Congressional Budget Office's (CBO's) work on trends in the level and distribution of income and tax liabilities.¹ My statement addresses three questions:

- o How much have family incomes grown over the past decade and one-half?
- o Has the distribution of income become more or less equal over this period? and
- o What has happened to effective federal tax rates and the distribution of federal taxes in recent years?

Questions such as these appear to be simple and straightforward, but to answer them one must resolve a number of complex conceptual and methodological issues. For example, decisions must be made about how to define and measure income, how to adjust it for inflation, how to make incomes of families of different sizes comparable, and what period of time to examine.

1. Congressional Budget Office publications on these subjects include: *The Changing Distribution of Federal Taxes: 1975-1990* (October 1987); *Trends in Family Income: 1970-1986* (February 1988); and "The Changing Distribution of Federal Taxes: A Closer Look at 1980" (July 1988).

CBO's analysis of income trends and changes in the distribution of income uses the adjusted family income (AFI) measure, which is equal to a family's cash income as reported in the Current Population Survey (CPS), divided by its poverty threshold. Adjusted family income is measured before taxes and excludes, because data are not available, income from capital gains and in-kind income such as health insurance provided by employers or governments.²

Incomes for the entire 1973-1987 period examined here are adjusted for inflation using the methodology on which the Consumer Price Index (CPI) is currently based, often called the CPI-X1.³ The incomes of families of different size are made comparable by dividing each family's income by its poverty threshold. Under this approach, we regard a four-person family with an income of \$34,800 in 1987--or three times the poverty threshold for that size family--as being on a par with a three-person family with an income of \$27,200, which is three times the poverty level for that size family. Single people not living with relatives--unrelated individuals--are treated as one-person families in our analysis of the entire population.⁴

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2. For the analysis of effective tax rates, incomes are adjusted for underreporting on the CPS and the income concept is expanded to include realized capital gains and each family's share of corporate income taxes and the portion of payroll taxes paid by employers.
 3. The official CPI has been based on the CPI-X1 methodology since 1983. The new approach improved the measurement of housing costs.
 4. A related issue is whether to focus on individuals or families. CBO's analysis examines the distribution of income among individuals, although the measure of income used for each person is the adjusted income of his or her family. For simplicity of expression, this testimony generally refers to the incomes of individuals as the income of the type of family in which they live.

In our analysis of trends in income, the years that we examined are 1973, 1979, and 1987.⁵ The years 1973 and 1979 were peaks in the business cycle--years in which incomes reached high points before declining in subsequent downturns--while 1987 is the most recent year during the current expansion for which income data are available. The magnitude of change in income reported here would differ if we had used other years, but the patterns would be essentially the same.⁶

TRENDS IN FAMILY INCOME

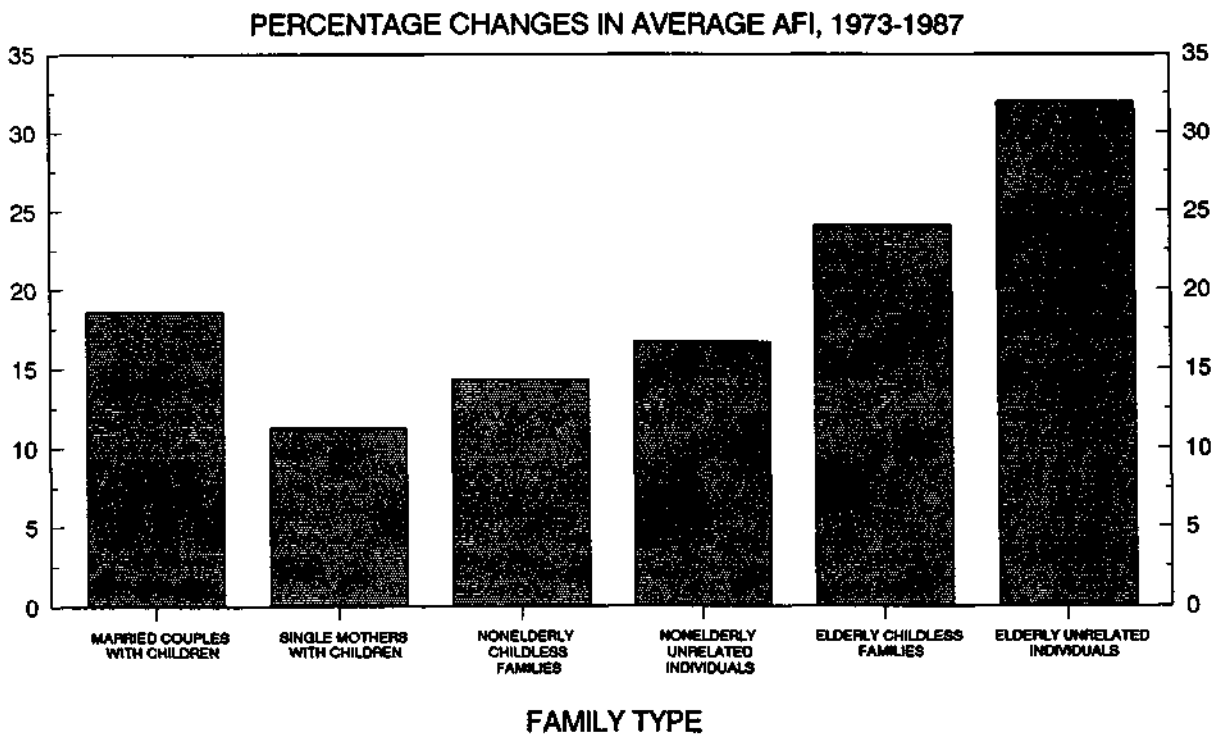
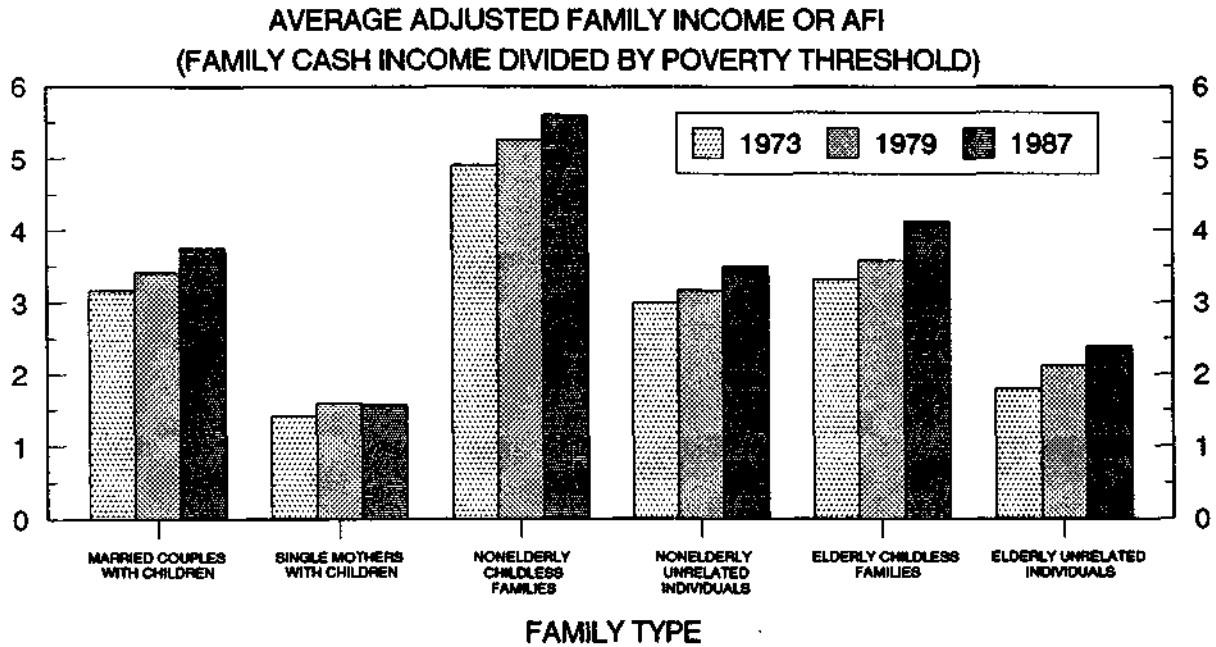
In 1987, average adjusted family income was 17 percent higher than it had been in 1973, reaching about \$41,000, for example, for a four-person family.

Income Trends for Different Types of Families

While all types of families had higher incomes at the end of the period than their counterparts in 1973, gains varied widely among different family types, as Figure 1 shows.⁷ The elderly experienced the greatest increases: childless

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5. The analysis of changes in tax burdens starts in 1977 and includes 1980, 1985, and 1990. CBO has not analyzed effective tax rates for any year before 1977. In its 1987 study of effective tax rates, CBO looked at 1977, 1984, and 1988. At that time, 1984 was the most recent year for which complete tax data were available. 1977 was the year in the late 1970s most similar to 1984 in terms of economic performance, and it ended a period during which there were relatively few major changes in tax policy. The economy was much less healthy in 1980, but that year was later added to the analysis to isolate the effects of major tax legislation in 1981. The estimates have been updated to include 1985, for which data are now available, and 1990, a year when tax reform will be almost fully implemented and when the last scheduled social security payroll tax rate increase will occur.
 6. In particular, the choice of 1979 as the middle year does not affect the pattern of observed changes in adjusted family income. Using 1977 or 1982 instead would, however, shift the share of income change between the two periods.
 7. CBO's comparisons of income show how the incomes of a given type of family in one year match up against the incomes of similar families in another year. This comparison is quite different from comparing the incomes of families in 1973 with the incomes of the same families in later years. Hence, readers should not interpret the findings as indicating how particular families fared during the period.

FIGURE 1. AVERAGE ADJUSTED FAMILY INCOME, 1973, 1979, AND 1987, AND THE CHANGES BETWEEN 1973 AND 1987, BY FAMILY TYPE



SOURCE: Congressional Budget Office tabulations of data from the March 1974, 1980, and 1988 Current Population Surveys.

elderly families in 1987 had adjusted family incomes 24 percent higher than similar families in 1973, while for elderly unrelated individuals the gain was 32 percent. Despite the rapid growth in their income, the latter group was hardly well off: in 1987, the incomes of unrelated individuals age 65 and over averaged about \$12,000.

Married couples with children, unrelated individuals under age 65, and nonelderly families without children were closer to the average; the adjusted incomes for these groups were between 14 percent and 19 percent higher in 1987 than those received by their counterparts in 1973. Single mothers with children, the poorest group in 1973, had the smallest increase in income: compared with similar families in 1973, average income in 1987 was 11 percent higher, or just over \$13,000 for a three-person family.

Factors Contributing to Trends in Income

This growth in family income was the result of the complicated interaction of many factors. One was an increase in labor-force participation: the average number of full-time, full-year workers was higher in every type of nonelderly family in 1987 than in similar families in 1973. Another factor was the rise in earnings of certain types of workers. Among full-time, year-round workers, for example, the real median earned income of women rose 12 percent between 1973 and 1987, although this gain was offset to some extent by the 3 percent decline experienced by men.

Another factor was that families with children shrank in size. The average number of children dropped from nearly 2.5 in 1973 to just over 2 in 1987. Even if such families had no higher real incomes in 1987 than comparable groups in 1973, they would have had a higher standard of living because they had fewer members to support. Finally, elderly families were better off in 1987 than their counterparts in 1973, in part because Social Security payments increased rapidly during the period. Two factors explain this rise: Social Security benefits were indexed to the CPI, which rose faster than the deflator (CPI-X1) used by CBO to adjust family incomes for inflation, and new retirees received larger Social Security payments than their predecessors.

INCOME EQUALITY

When we consider all families and unrelated individuals together, we see that the distribution of income has become more unequal. The average adjusted family income of people in the bottom fifth--or quintile--of the population was 11 percent lower in 1987 than for their counterparts in 1973, while that for the top fifth was 24 percent higher. The 1987 average adjusted income of each of the middle three quintiles was also higher than for comparable groups in 1973, with greater increases for the higher-income quintiles.

Much of this increase in aggregate inequality was related to demographic shifts rather than to growing inequality of income within

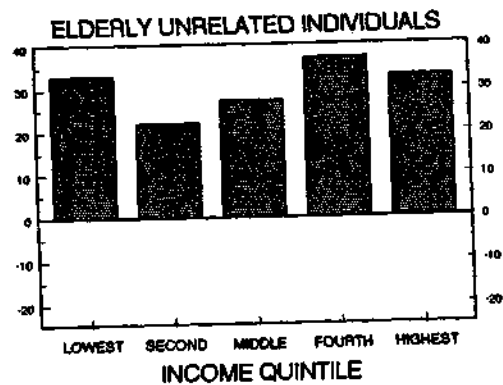
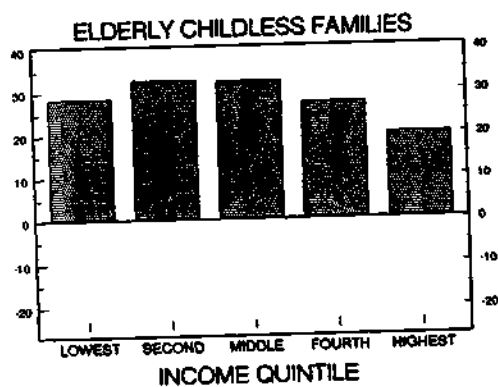
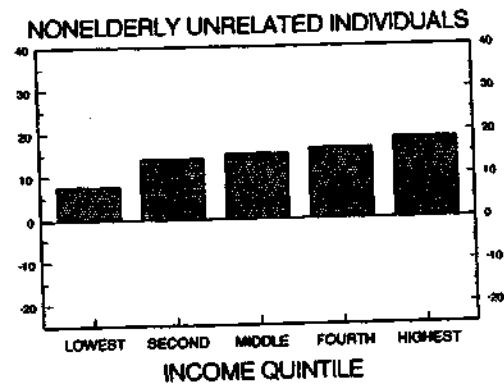
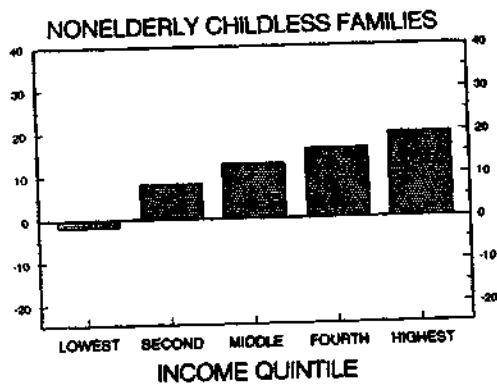
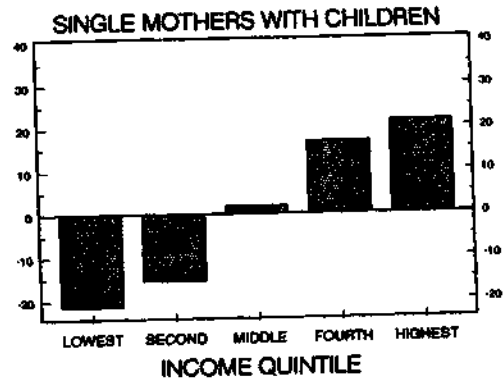
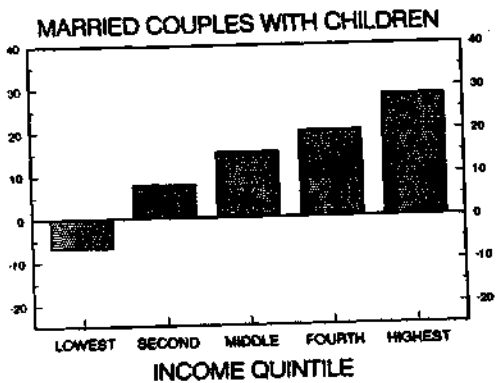
individual demographic groups. A particularly important factor was the growth in the fraction of the population consisting of nonelderly unrelated individuals. This group, which grew from 16 percent to 24 percent of all families over the 1973-1987 period, is overrepresented in the bottom two income quintiles.⁸ Thus, even if there had been no change in the income distribution of each type of family, the growing importance of nonelderly unrelated individuals would have made the aggregate distribution more unequal. Examining what has happened to the distribution of income for different types of families is one way to remove the potentially misleading effects of this demographic change on the distribution of income.

Changes in Equality for Different Types of Families

Inequality of income increased noticeably among three types of families, but changed relatively little for the rest, as shown in Figure 2. In fact, inequality grew much more among families with children than among childless families. Single mothers with children are the most extreme case: the average adjusted income in the top two quintiles was 17 percent and 21 percent higher, respectively, in 1987 than for comparable groups in 1973. On the other hand, people in the two lowest quintiles of single-mother families in 1987 had average family incomes 21 percent and 15 percent lower than their counterparts 14 years earlier. The income distribution for married couples

8. This increase was offset by a decline in the proportion of families consisting of married couples with children—from 34 percent in 1973 to 25 percent in 1987.

FIGURE 2. CHANGES IN AVERAGE ADJUSTED FAMILY INCOME, BY INCOME QUINTILE AND FAMILY TYPE, 1973-1987 (IN PERCENT)



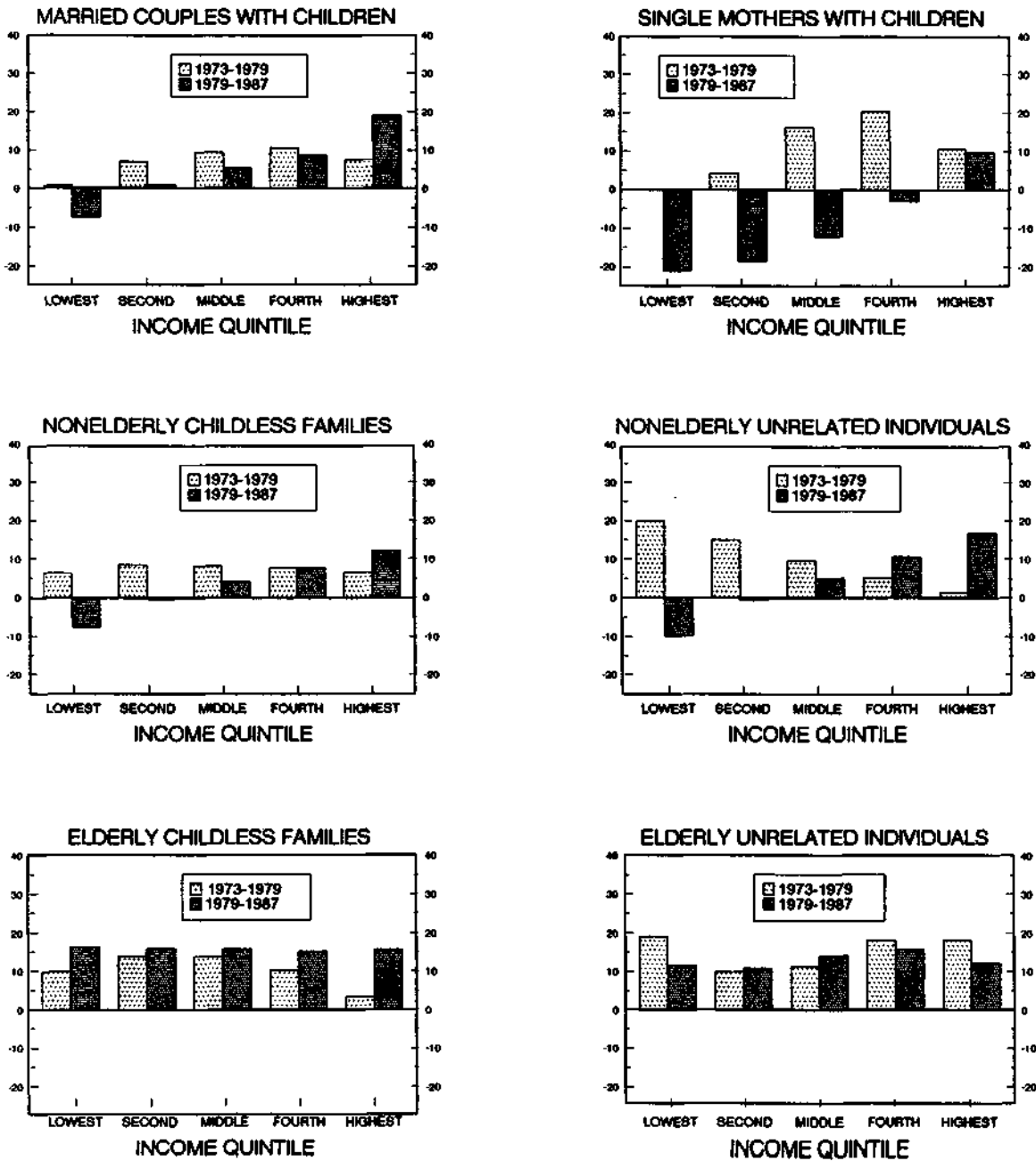
SOURCE: Congressional Budget Office tabulations of data from the March 1974, 1980, and 1988 Current Population Surveys.

with children also became less equal, although differences between 1973 and 1987 were not quite as large as for single mothers. Inequality increased noticeably less among nonelderly childless families and relatively little for nonelderly unrelated individuals.

Income inequality among the elderly changed little over the period. Among childless elderly families, average adjusted incomes for each quintile were between 19 percent and 31 percent greater than incomes of the same quintiles in the earlier year, with the highest-income quintiles having the smallest increase. Average incomes for elderly unrelated individuals in each quintile in 1987 were between 22 percent and 37 percent above the values for the corresponding groups in 1973, with the greatest growth for the bottom quintile and the top two quintiles.

As Figure 3 shows, the increase in income inequality occurred largely between 1979 and 1987. During the 1973-1979 period, there was no consistent pattern among different types of families (see the light bars in Figure 3). Among married couples with children, for example, the lowest quintile lost ground relative to other families, but the other quintiles had about the same gains over their counterparts in 1973. On the other hand, inequality decreased among unrelated individuals under age 65. Only among single-mother families did inequality rise markedly during the period.

FIGURE 3. CHANGES IN AVERAGE ADJUSTED FAMILY INCOME, BY INCOME QUINTILE AND FAMILY TYPE, 1973-1979 AND 1979-1987 (IN PERCENT)



SOURCE: Congressional Budget Office tabulations of data from the March 1974, 1980, and 1988 Current Population Surveys.

Between 1979 and 1987, incomes became more unequal for all types of nonelderly families. Adjusted incomes of families in the bottom quintiles were between 8 percent and 21 percent lower in 1987 than incomes of the corresponding quintiles in 1979. At the same time, the highest quintiles had 1987 incomes that were between 10 percent and 19 percent greater than comparable quintiles eight years earlier (see the dark bars in Figure 3). Except for single mothers, the average incomes of the middle three quintiles of each family type were higher--or only slightly lower--in 1987 than in 1979, with the percentage difference rising with income. For single mothers, these years were particularly bad; average income dropped for every quintile except the highest, and declines were greatest for the lowest quintiles.

In contrast, the adjusted incomes of elderly families continued the pattern visible during the 1973-1979 period. For every quintile of elderly families without children, average income in 1987 was about 15 percent higher than for the corresponding group in 1979, while for elderly unrelated individuals the comparable gains were between 11 percent and 16 percent.

Factors Contributing to Changing Inequality

Many factors contributed to the increased inequality of income and the different patterns of change before and after 1979. For example, the average number of full-time, year-round workers in high-income families grew between 1973 and 1987, while low-income families had little or no change in

their average number of workers. Income growth would, therefore, be expected to be higher for the top quintile.

Younger and older workers also experienced strikingly different changes in their incomes. The median dollar income of full-time, year-round workers remained the same or actually fell in real terms for groups age 35 and under, but rose for older ones. This disparity probably led to increased inequality, since the incomes of younger workers are lower on average than those of older workers. Furthermore, the impact of these larger differences in incomes among age groups has been made worse by the relative growth in the number of younger families.

Educational attainment has also affected the distribution of income, although to what extent is less clear. The disparity in incomes of workers with different amounts of education has grown since the early 1970s, but so too have levels of educational attainment. In 1987, male college graduates working full-time, year-round had average incomes that were 110 percent higher than workers with no high school degree, while in 1973 they were 87 percent higher. Over the same period, comparable values for women increased from 88 percent to 107 percent. On the other hand, between 1973 and 1987, participants in the labor force became more likely to have finished high school or college. The fraction with no high school degree fell from 32 percent in 1973 to 18 percent in 1987, while the fraction with college degrees

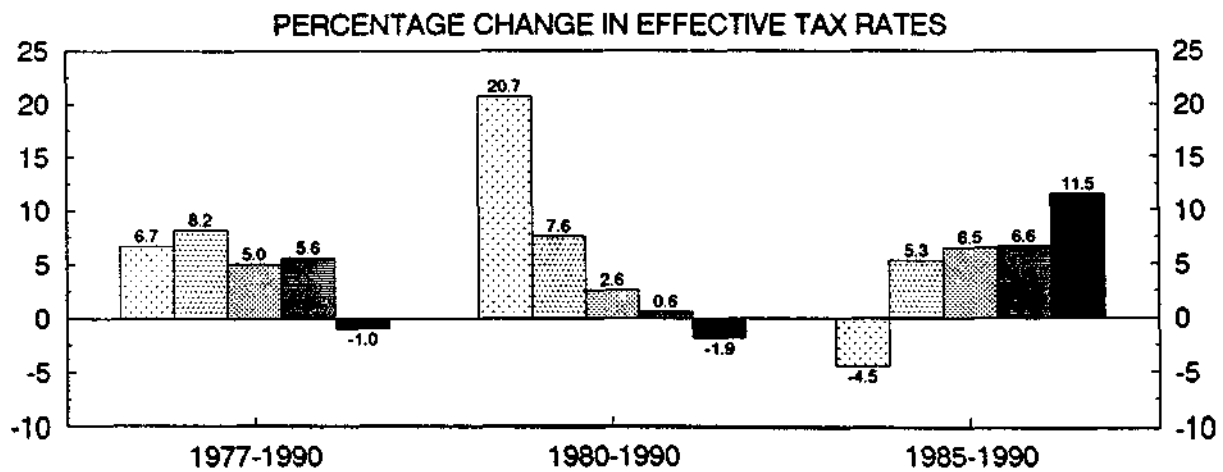
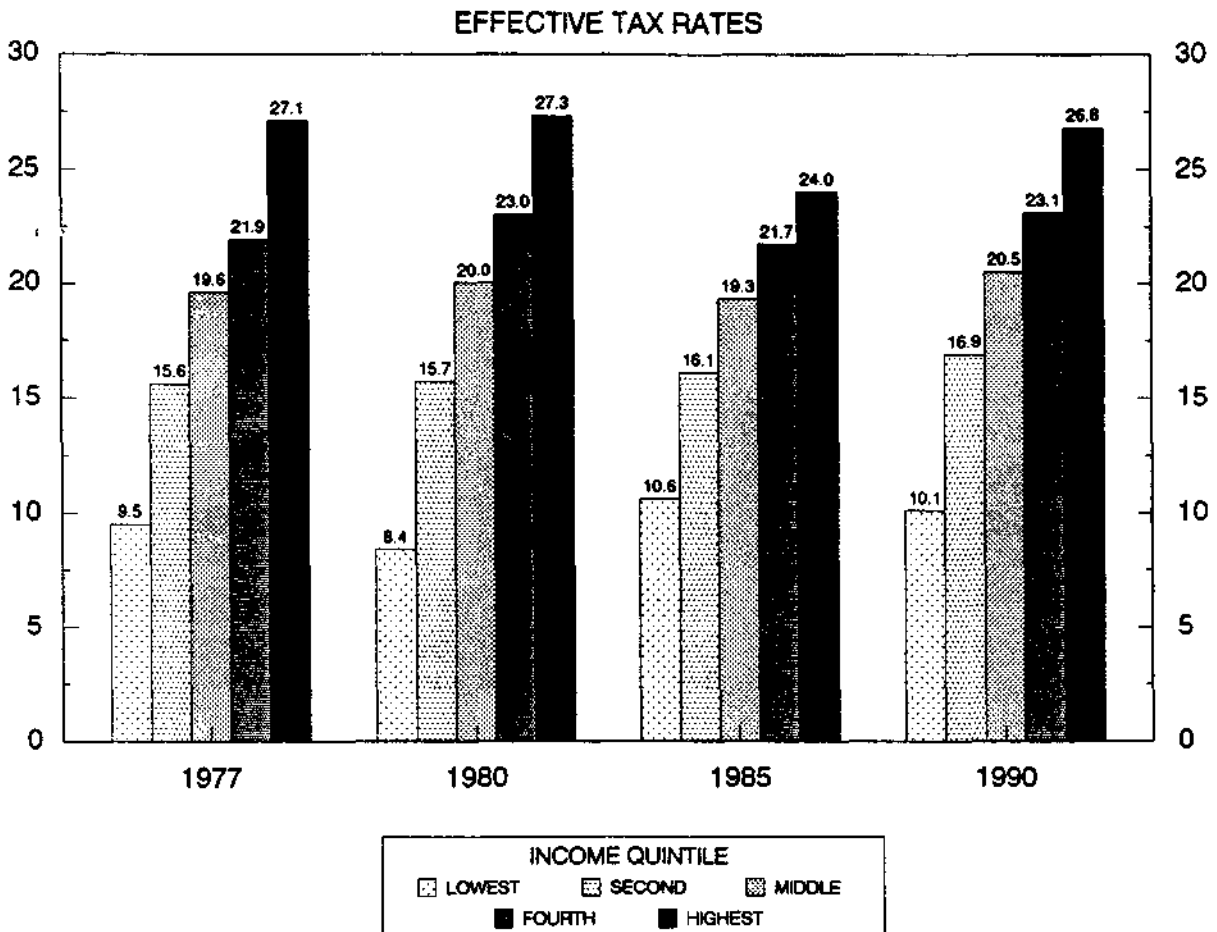
rose from 14 percent to 22 percent. This increase in educational attainment probably offset in part the greater differentials in incomes associated with particular levels of education.

Finally, benefit levels in different transfer programs to help low-income families have changed unevenly since the mid-1970s. Between 1975 and 1987, for example, the maximum benefit in the median state for a three-person family receiving Aid to Families with Dependent Children (AFDC) fell roughly 25 percent in real terms. When combined with an increased dependence on means-tested transfers, this decline in benefit levels helps explain the large drop in the incomes of the poorest quintile of single-mother families. In contrast, federal benefit levels in the Supplemental Security Income (SSI) program increased with the CPI, which rose more quickly than the deflator used to calculate adjusted family incomes. Consequently, many of the poorest elderly and disabled people would have had higher adjusted incomes in 1987 than their counterparts in 1973.

CHANGING PROGRESSIVITY OF THE FEDERAL TAX SYSTEM

Because of changes in the federal tax system, the after-tax distribution of income has become slightly more unequal since the mid-1970s. The top panel of Figure 4 shows effective federal tax rates--the percent of income paid in taxes--for people ranked in quintiles by their adjusted pretax family

FIGURE 4. LEVELS OF AND CHANGES IN EFFECTIVE FEDERAL TAX RATES BY INCOME QUINTILE, 1977, 1980, 1985, AND 1990 (IN PERCENT)



SOURCE: Congressional Budget Office tax models.

income.⁹ These estimated federal tax rates combine the effects of the individual and corporate income taxes, the employee and employer portion of social insurance payroll taxes, and excise taxes other than the windfall profit tax. They also reflect specific assumptions, described in the box on page 16, about which families bear the economic burden of each tax.

In 1990, the effective tax rate for the one-fifth of people in families with the highest incomes will be 26.8 percent, slightly less than it was in 1977 or 1980. The effective tax rates for people in the remaining four quintiles will be higher than they were in either 1977 or 1980.

As a result of these changes in effective tax rates, federal taxes in 1990 will be less progressive than they were in either 1977 or 1980, but more progressive than in 1985.¹⁰ This shift is illustrated in the bottom panel of Figure 4, which shows percentage changes in effective tax rates by quintiles. Among the people in the bottom four-fifths of the income distribution who will face higher tax rates in 1990, the percentage increase is generally greatest

9. For purposes of analyzing the distribution of federal taxes, adjusted pretax income includes all cash income plus realized capital gains and is measured before all federal taxes, including those collected from business but assumed to be borne by families. Thus, adjusted pretax income also includes the corporate income tax and the employer share of payroll taxes. Tax rates for the lowest quintile were calculated excluding families with negative or zero incomes. For consistency with the analysis of trends in family incomes, two changes were made from previously published CBO estimates of effective tax rates. For purposes of grouping families into quintiles, family income is divided by the poverty threshold for the appropriate family size, and quintiles contain equal numbers of people rather than equal numbers of families.

10. The distribution of taxes is classified as progressive if the ratio of taxes to income rises as incomes rise, as regressive if the ratio falls as income rise, or as proportional if the ratio is the same at all income levels.

The Incidence of Federal Taxes

The tax estimates reported in this testimony reflect specific assumptions about who bears the economic burden of particular taxes. The burden of the individual income tax and the portion of the payroll tax collected from employees is attributed to the families who directly pay these taxes. The portion of the payroll taxes collected from employers is assumed to be shifted back onto employees in the form of lower wages. In addition, excise taxes are assumed to be passed forward to individual consumers in higher prices on goods subject to tax.

Finally, although the corporate income tax is collected from corporations, individuals are assumed ultimately to bear its economic burden. Economists disagree about who is affected by the corporate income tax. One theory is that all income from capital is lowered by the amount of the corporate tax. A competing theory is that, because capital can be invested in foreign economies and thus escape the corporate tax in the United States, workers bear the tax's economic burden in the form of lower wages.

In previous published studies of the distribution of taxes, CBO has shown both allocations of the corporate income tax as alternatives. The method of allocation, however, does not affect our main conclusions about how the distribution of the tax burden among income classes has changed over time. Thus, to simplify the presentation in this testimony, half of the corporate income tax is allocated to capital income and half to labor income.

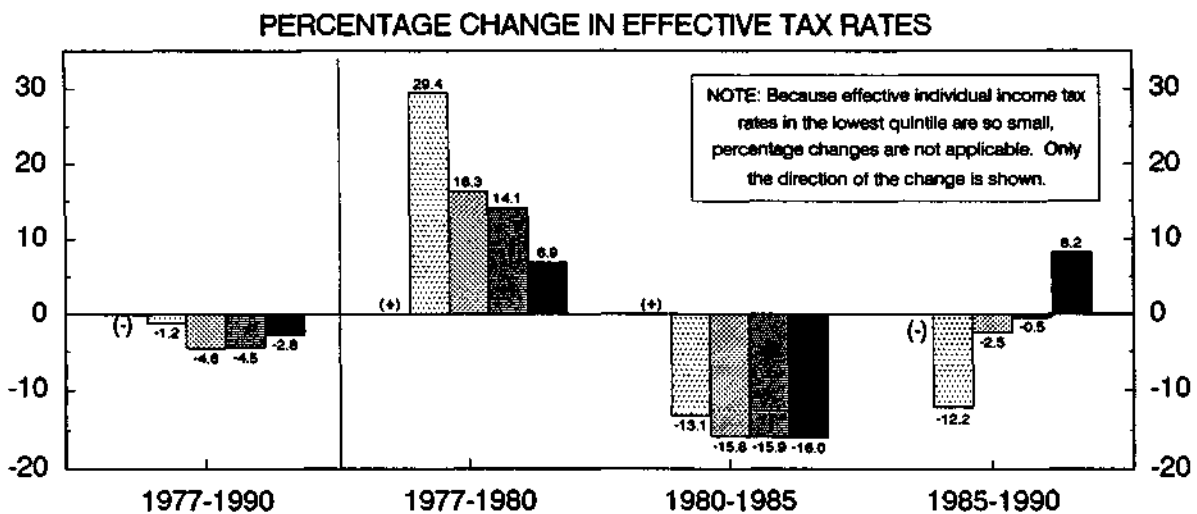
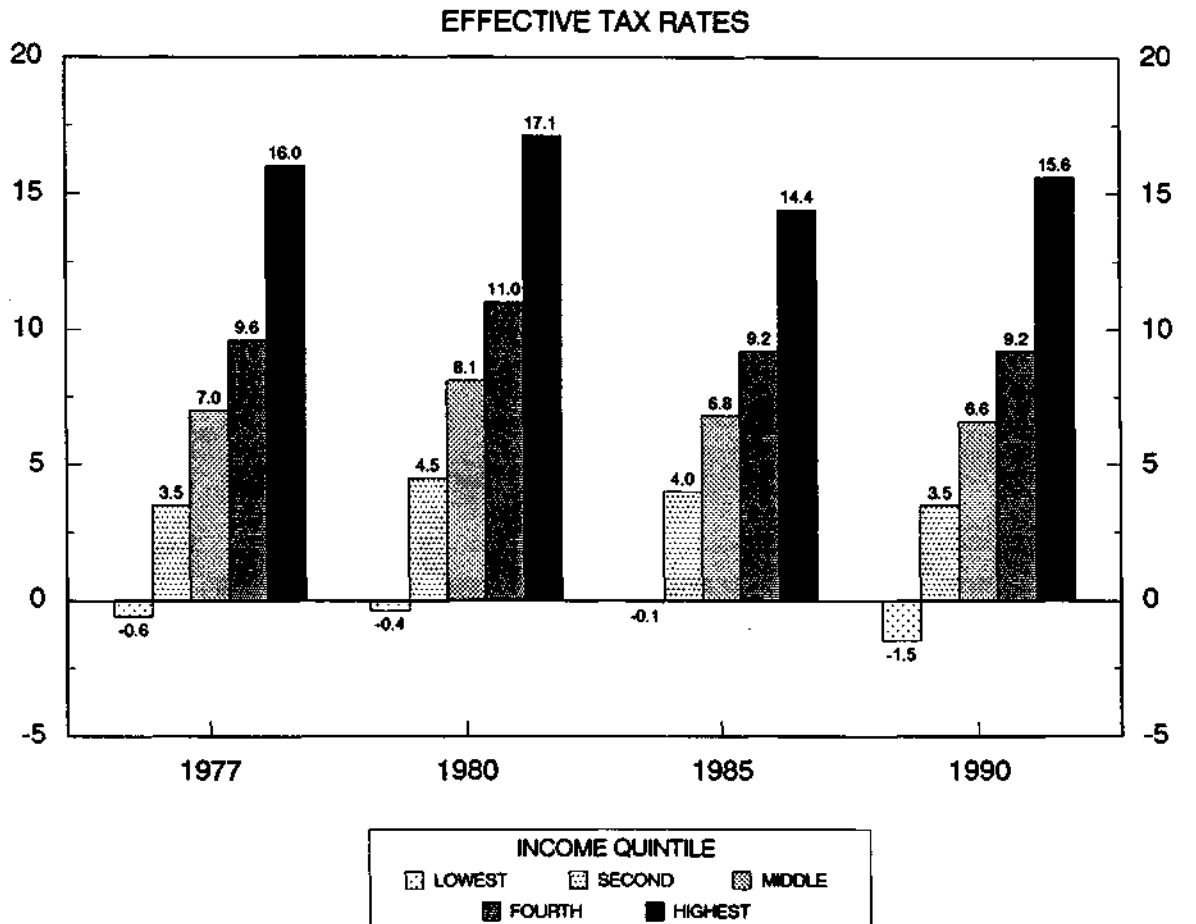
for people with the lowest incomes. Moreover, within the top quintile, which will experience a decrease in effective tax rates, the drop in taxes will be concentrated among people in the top 5 percent. This decline in progressivity relative to 1977 and 1980 occurs even though, as Figure 4 shows, the tax system will be more progressive in 1990 than it was in 1985.

Causes of the Changes in Progressivity

What has caused the tax system to become less progressive than it was a decade ago? The top panel of Figure 5 shows that it is not because the individual income tax has become significantly less progressive. Although substantial changes in the individual income tax took place from 1977 to the present, the net result of these changes is that effective tax rates are projected to be quite similar in 1990 to what they were in 1977. The exception is for people in the lowest quintile, whose effective rate will fall by about one percentage point.

The individual income tax did become less progressive between 1977 and 1985, as the bottom panel of Figure 5 indicates. Between 1977 and 1980, tax rates rose for all groups, since rising incomes pushed taxpayers into higher tax brackets. Low-income people experienced the largest increases in tax rates because they were most affected by the erosion in the real value of the personal exemption and standard deduction. Although the personal exemption, the standard deduction, and the earned income credit were raised in 1978, the increases were too small to offset the effects of rapidly rising nominal incomes and the expiration of the general tax credit. In addition, while the 1978 reduction in the tax on capital gains helped upper-income people, it did little for those at the low end of the income distribution.

FIGURE 5. LEVELS OF AND CHANGES IN EFFECTIVE FEDERAL INDIVIDUAL INCOME TAX RATES BY INCOME QUINTILE, 1977, 1980, 1985, AND 1990 (IN PERCENT)



SOURCE: Congressional Budget Office tax models.

The Economic Recovery Tax Act of 1981 (ERTA) cut the effective tax rates of people in all but the lowest quintile between 1980 and 1985. People in the lowest-income families did not benefit, because personal exemptions, the standard deduction, and the earned income tax credit were not raised again until 1985.

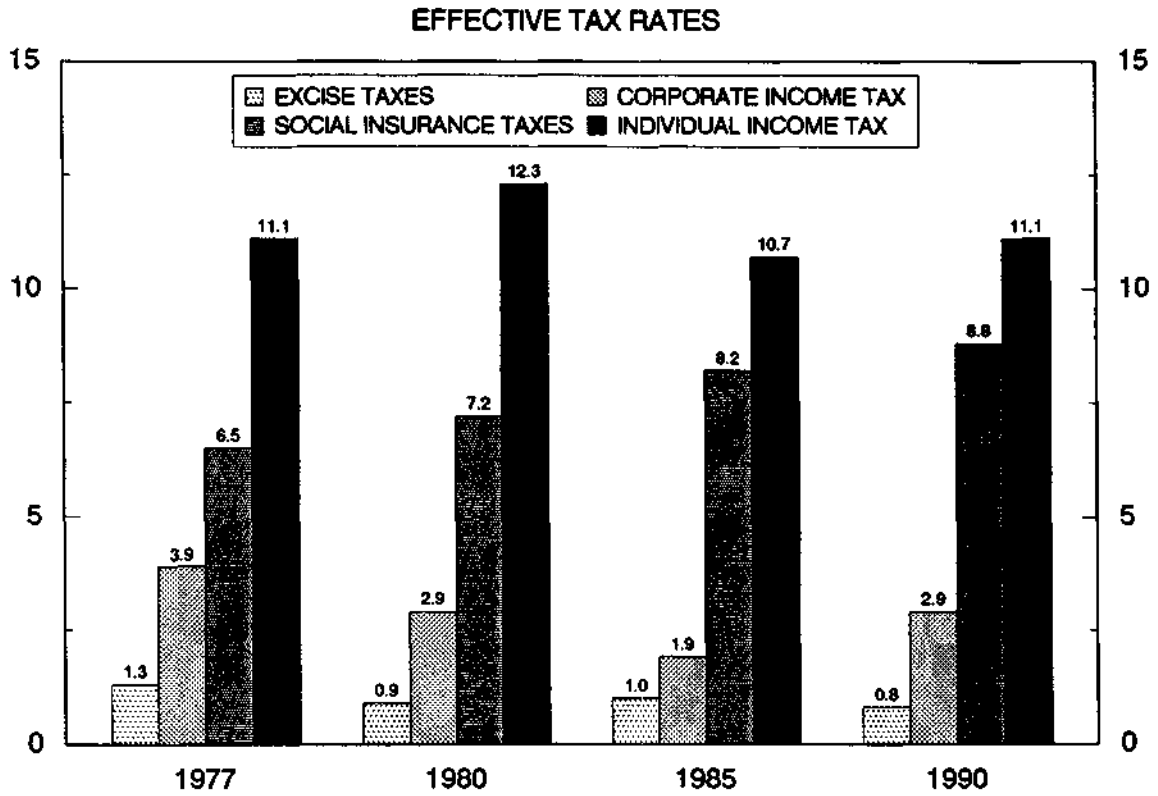
CBO's projections indicate that recent changes in tax law--especially the Tax Reform Act of 1986 (TRA)--will make the individual income tax more progressive in 1990 than it was in 1985, and thus restore 1990 effective tax rates to approximately their 1977 levels. This projected increase in the progressivity of the individual income tax reflects several features of tax reform. Substantial increases in personal exemptions, the standard deduction, and the earned income credit have eliminated income tax liabilities for millions of low-income families. In addition, even though the maximum statutory tax rate was significantly lowered, restrictions on tax preferences and repeal of the capital gains exclusion broadened the base of taxable income enough to increase the average effective rate paid by high-income taxpayers.

The major factor in reducing the progressivity of federal taxes is the increased reliance on social insurance payroll taxes. Because social insurance taxes are levied only on earnings and only on earnings below a maximum amount, they are much less progressive than individual income taxes among the four lowest quintiles, and are regressive in the upper part of the income

distribution. In 1990, payroll taxes will account for a larger fraction of total revenue than they did in either 1977 or 1980. Figure 6 shows total effective tax rates for each of the four taxes. While individual income taxes are projected to remain roughly constant as a share of income, the share of income paid in social insurance taxes is projected to rise from 6.5 percent in 1977 to 8.8 percent in 1990. This 35 percent increase results from the higher Social Security contribution rates enacted in the Social Security Amendments of 1977.

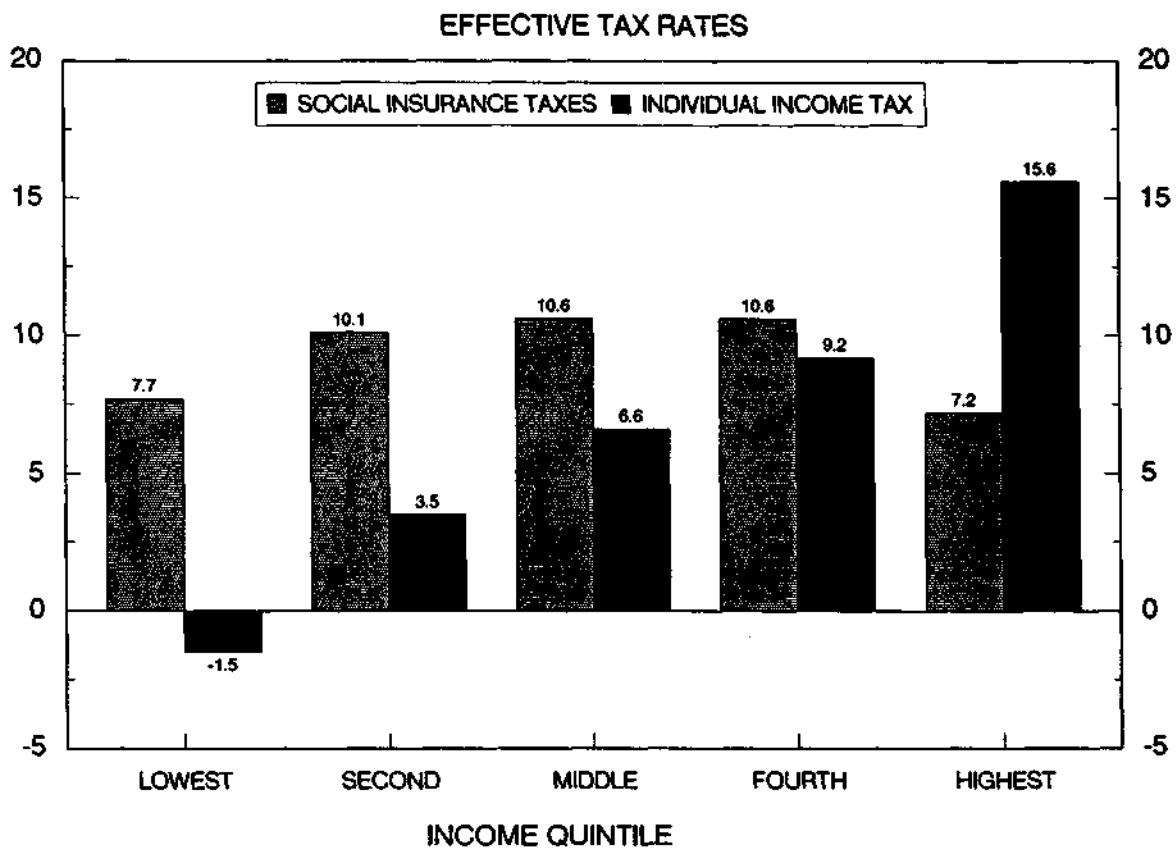
Figure 7 shows how much less progressive social insurance taxes will be than individual income taxes in 1990. Effective income tax rates will rise sharply with income, while social insurance tax rates will rise more slowly and then drop for the 20 percent of people with the highest incomes. This pattern was true for 1977, 1980, and 1985 as well. Figure 7 also shows that, by 1990, people in the bottom 80 percent of the income distribution will pay more in social insurance taxes than in income taxes. By comparison, in 1980, only people in the bottom half of the income distribution paid more in social insurance taxes than in income taxes.

FIGURE 6. EFFECTIVE TAX RATES BY TAX SOURCE, 1977, 1980, 1985, AND 1990 (IN PERCENT)



SOURCE: Congressional Budget Office tax models.

FIGURE 7. EFFECTIVE INDIVIDUAL INCOME AND SOCIAL INSURANCE TAX RATES BY INCOME QUINTILE, 1990 (IN PERCENT)



SOURCE: Congressional Budget Office tax models.

CONCLUSION

During the past decade and one-half, incomes have risen for all types of families. Contributing to this increase were general economic growth and consequently higher earnings, increased participation in the labor force, and smaller families. At the same time, incomes have become more unequal among nonelderly families, particularly since 1979. Likely factors contributing to this growth in inequality include changes in the number of working members in various types of families, the earnings of workers of differing ages, and educational attainment. Moreover, because the share of revenue raised from progressive taxes--mainly the individual income tax--has declined, this pattern of increasing inequality was exacerbated by the federal tax system, which has become somewhat more regressive than it was in the mid-1970s.