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The Haves and Have-Nots: A Study of Income Inequality

The dispersion of income among individuals in society—the gap between the haves and the have-nots—has interested people for centuries. Because 1992 is an election year, and because many people believe that the equality of the income distribution is tightly linked to fairness, recent trends in income distribution have been the focus of much attention. To paraphrase a common refrain, “The rich have gotten richer, the poor have gotten poorer, and the middle class has all but disappeared.”

An examination of the income distribution in the United States since World War II does, in fact, reveal recent trends toward greater inequality. After World War II, the

gap between the haves and the have-nots—the degree of income inequality—became more narrow until about 1970, when it began the increase that has continued into the 1990s. By one measure, the distribution of income is more unequal now than at any time since World War II. Trends in the age distribution of the population and the female labor force participation rate, plus long-term trends in the income inequality measure itself, account for most of the variation in income inequality. Attempts to close the gap in income distribution through increases in transfer payments such as Unemployment Insurance Benefits appear to result in only temporary reductions in inequalities in the distribution of factor payments.

Equity Versus Equality in the Measurement of Income

The trend toward greater income inequality, although alarming on face value, requires further analysis. Equity and equality are not synonymous. For example, few Americans would consider it fair if everyone, high school drop-outs and college graduates alike, earned exactly the same wage, or if individuals who chose to work two jobs earned no more than individuals who seldom worked. Yet, both situations would

result in an equal distribution of income across individuals in society. Therefore, in this article the term *income inequality* refers to a statistical value, a simple measure of the distance from income equality, and should not be taken as a measure of economic fairness in the United States.

Income, in this analysis, is defined as wages and salaries, returns to land (such as rent) and returns to capital (such as interest and dividends) for all households that include at least one full-time employee.¹ This income measure objectively represents the value of the economy's productive assets, or the ownership of resources in the market. This measure also enables one to look at the income distribution *before* the redistributive efforts of tax-and-transfer programs, which is beneficial because data on income after taxes and transfers are not readily available, and because this measure reflects the market-driven distribution of income.²

Chart 1 shows the distribution of income for U.S. households in 1989. For example, roughly 14 percent of the households earned an income of \$10,000 or less,

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16 percent earned between \$10,000 and \$20,000, and 17 percent earned between \$20,000 and \$30,000. Only 3 percent of the households earned more than \$100,000. Most of the population, approximately 75 percent, earned less than \$50,000 per year.

Economists use a statistical tool called the Gini coefficient to describe the distribution of income and how that distribution changes over time. (For a more detailed explanation, see the box titled "Deriving the Gini Coefficient.") As the Gini coefficient increases, the distribution of income becomes less equal.

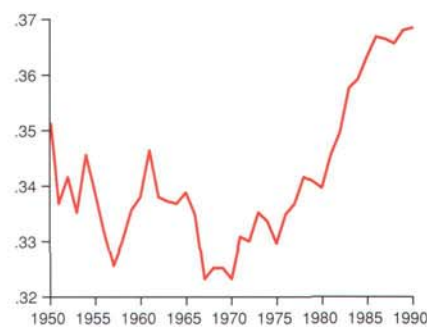
Chart 2 shows the U.S. Gini coefficients for households over the 40 years from 1950 to 1990.³ The slight downward trend from 1950 to about 1969 suggests that the income distribution was becoming more equal during that time. Since 1969, however, the income inequality measure has been rising noticeably. In other words, income inequality has been increasing over the past two decades.

Chart 3 shows how the share of income received by each quintile of the population changed between 1970 and 1989. The share of income received by the lowest-paid quintile (quintile 1) fell 1 percentage point

between 1970 and 1989. The lower middle class (quintile 2), lost a 1.7-percent share of income. Similarly, the share earned by the middle class (quintile 3) fell 1.3 percent. Meanwhile, the second highest-paid quintile, which roughly corresponds to the upper-middle class, was hardly affected during the past two decades in terms of income share. Finally, the share of total income received by the top-earning 20 percent of workers (quintile 5), gained about 4 percentage points of income between 1970 and 1989. As such, the evidence indicates that income share shifted away from the three lowest-earning quintiles (1–3) toward the highest-earning quintile (5), while the upper-middle class (quintile 4) was essentially unaffected.

Although the poor are poorer in relative terms, they are richer in absolute terms. Real income has increased for all household categories. Chart 4 illustrates that after adjusting for inflation, the average income earned by each of the five quintiles rose between 1970 and 1989. Thus, one can best characterize the past 20 years as a period in which the poor got somewhat richer, while the rich got much richer.

Chart 2
Gini Coefficient, 1950–90



Possible Influences on the Income Distribution

Changing demographics is a common and plausible explanation for changes in the distribution of income. For example, as individuals age they accumulate both assets and valuable work experience. Those accumulated assets generate a flow of interest, dividends and rental income that younger people simply do not have. Further, the increased experience yields wages that are higher than the earnings of younger, less-experienced workers. Therefore, when the proportion of younger workers increases enormously, as in the United States when the baby boom generation began working in the late 1960s and early 1970s, the proportion of workers who earn relatively low wages and have little or no nonwage income increases, and the income distribution appears less equal. Other changing demographic factors that also can affect income and, therefore, the distribution of income, include the proportion of women or minorities in the labor force and society's general level of education.

Changes in the underlying characteristics of the labor force are not the only possible sources of changes in the income distribution. Three macroeconomic factors that might also have affected the income distribution between 1950 and 1989 are fluctuations in economic growth, inflation and fiscal policy actions.

During periods of relatively rapid

Chart 1
Distribution of Income in 1989

Percent of population

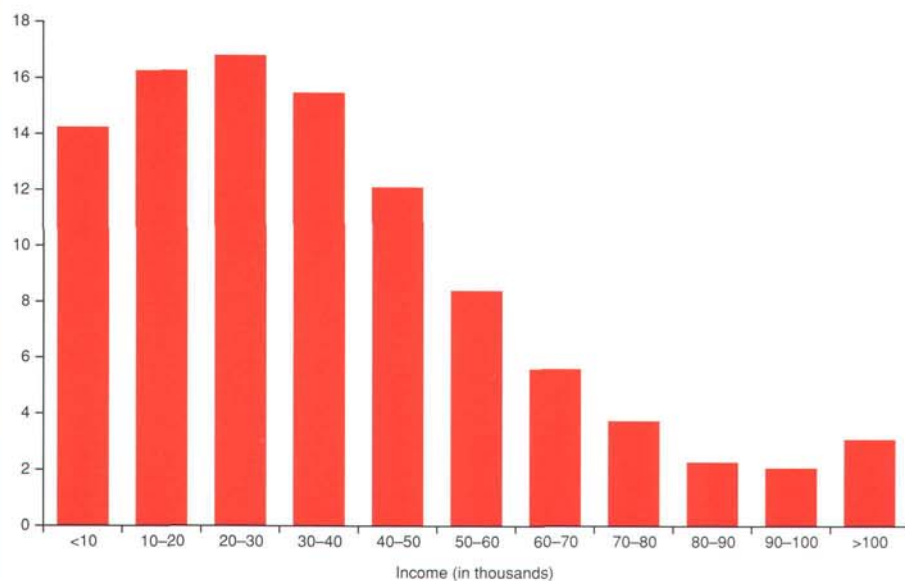
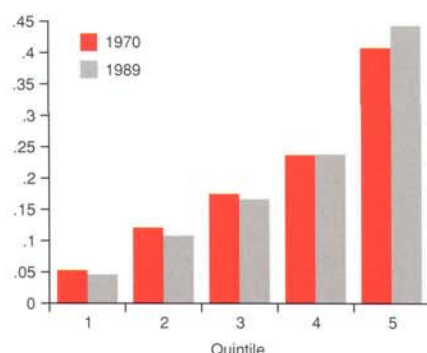


Chart 3
Income Shares for Each Population Quintile

Percent of total income



economic growth, as in the 1980s, the incomes of the rich and the poor may diverge. Also, unanticipated increases in inflation transfer income from lenders to borrowers, or typically, from the rich to the middle-income classes. Therefore, the unanticipated declines in inflation during the 1980s would have had similar effects in the opposite direction. Finally, fiscal policy—taxes and government transfers—could have affected labor-leisure trade-offs. For example, an increase in transfer payments could discourage labor force participation in poorly paid jobs. As low-wage workers drop out of the labor force, the distribution of income would appear more equal because there would be less dispersion in the incomes of remaining workers.

Table 1 shows the degree to which variation in the income inequality measure, or the Gini coefficient, results from population characteristics and from fluctuations in economic growth, inflation and fiscal policy.⁴

More than 40 percent of the variation in the Gini coefficient can be attributed to past variation in the Gini coefficient itself. In other words, there is substantial inertia in patterns of income distribution.

Changing demographics account for 45 percent of the variation in the Gini coefficient. Changes in the proportion of people in the 25- to 54-year-old age group account for 25 percent of the variation in the Gini coefficient. As the proportion of people in this age group increased, the income distribution became less equal. Changes in the female labor force participation rate account for about 16 percent of the variation. Interestingly, the increases in labor force participation by women appear to have made the distribution of income more equal. Education accounts for almost 4 percent of the variation in the income distribution over time. As the proportion of high school graduates increased, the income distribution became more equal.

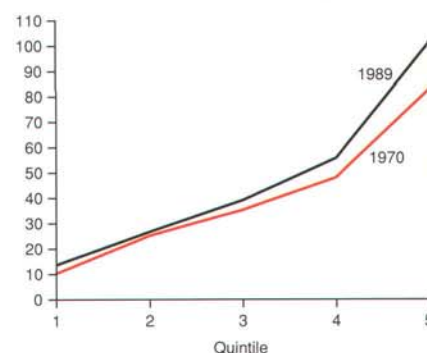
Only 12 percent of the variation in the distribution of income can be attributed to macroeconomic fluctuations and fiscal policy. Increases in inflation and transfer payments appear to temporarily reduce income inequality, while output growth has virtually no effect on income inequality.

Conclusions

The evidence suggests that the distribution of income in the U.S. widened during the 1980s and is now more disperse than at any time since

Chart 4
Average Real Household Income by Quintile

Thousands of 1989 dollars



World War II. However, 88 percent of the changes in income inequality can be attributed to inertia and demographic factors over which policy-makers have little control, such as the large number of baby boomers and women entering the labor force during the postwar period. Fiscal policy, in the form of increased transfer payments, appears to reduce income inequality only temporarily.

Based on these findings, income inequality may decline in the 1990s—or at least stop growing—as the population ages and the middle class becomes more and more dominated by the large baby boom generation.

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Table 1
Proportion of the Variation in the Gini Coefficient
Explained by Various Factors, 1950–90

Factor	Proportion Explained by This Factor (Percent)
Gini Coefficient	43.1
Percent in 25–54 Age Group	24.7
Female Labor Force Participation	16.3
Inflation	8.2
Education	3.9
Transfer Payment	3.1
Output Growth	.7

¹ Note that noncash items (such as employee benefits, job security and other employee services) are not included in this definition of income. Even though these items have become increasingly important in the market and would change the income distribution, they are difficult to measure and can be valued differently by the recipients.

² Of course, governmental rules can influence this pretax and pretransfer outcome.

³ The authors wish to thank Daniel J. Slotje for providing the 1990 value of the Gini coefficient.

⁴ Fiscal policy is measured as transfer payments to individuals.

Deriving the Gini Coefficient

The distribution of income can be characterized using a Lorenz curve (*Chart A*) or a graph that represents the degree of inequality in the distribution of income. Here, the horizontal axis indicates the cumulative percentage of income recipients, and the vertical axis indicates the cumulative share of total income received by all households in 1989. The income recipients are ranked from lowest to highest earners. Point C in this chart, for example, indicates that the lowest-paid 20 percent of households received roughly 4 percent of the economy's total income. Point D indicates that the lowest-earning 40 percent of households (the poorest 20 percent of households plus the second-poorest 20 percent of households) got roughly 15 percent of total income. Chart A also plots a 45-degree line that represents income equality. If everyone received the same income, then the lowest-paid 40 percent of the population would receive fully 40 percent of the total income, and the Lorenz curve would lie on the 45-degree line.

The salmon-colored area, A, represents the degree of income inequality that is present. To enhance the information in the chart, a statistical measure known as the *Gini coefficient* numerically describes the degree of income inequality. The Gini coefficient is the ratio of area A to the total area under the perfect equality line, A + B. If income is equally distributed among all the people in the population, area A shrinks to nothing, and the Gini coefficient is equal to zero. If income is concentrated in only one person, area B shrinks to nothing and the Gini coefficient equals 1. An increasing value of the Gini coefficient indicates that income is distributed less equally among the population.

To see how changes in the distribution of income can affect the Gini coefficient for the United States, consider the following hypothetical redistribution of income in Chart B. The actual distribution of income for 1989 is represented by the Lorenz curve, labeled I. Now, alter income as follows: the lowest-paid 20 percent of the households increase their income by 30 percent; the second lowest-paid 20 percent of the households increase their income by 10 percent; the next highest-paid 40 percent of the population's income does not change; and the highest-paid 20 percent of the population decreases its income by 5½ percent, which finances the gains of the two lowest income categories. The Lorenz curve denoted II would represent the income distribution after this hypothetical redistribution scheme was enacted.

This example has been manipulated so that both total and average income are unchanged. Still, this dramatic change in the distribution of income resulted in an apparently minor visual difference in the Lorenz curves. Numerically, the Gini coefficient for this hypothetical economy only fell from 0.368 to 0.338. Thus, fairly large changes in the distribution of income can show up as small changes in the Lorenz curve and the Gini coefficient.

Chart A
An Unequal Distribution Case

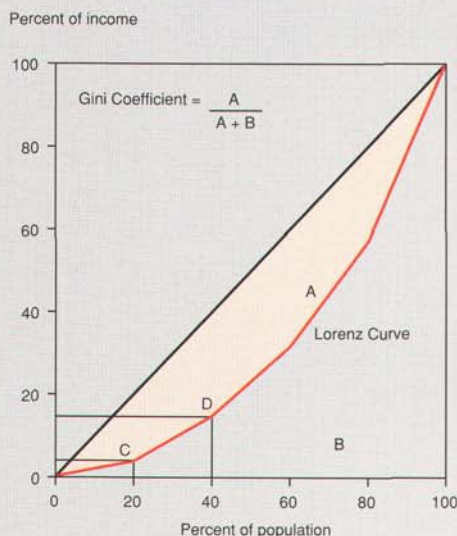


Chart B
Redistribution of Current Income,
an Example Using the Lorenz Curve

