

Income distribution of older Americans

Although remaining concentrated in lower income groups, elderly households achieved significantly greater equality of income distribution between 1967 and 1997; the gap with the income distribution of nonelderly households narrowed

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Although many older Americans are financially comfortable, with a significant group being well off, the largest share of elderly (defined as persons aged 65 or older) households has low incomes. Income inequality among older households persists despite more than 30 years of growth of income transfer programs designed to reduce poverty and improve the economic status of elderly persons. This gap highlights the importance of analyzing the income distribution of the elderly to determine the nature and extent of any inequalities that appear in it. Although government transfer programs have substantially enhanced the well-being of many of the elderly, numerous older persons continue to suffer low incomes.

Measures of income inequality provide insight into the relative economic positions of households, which are generally reported for the population as a whole. For example, the Bureau of the Census reports a decrease in U.S. household income inequality following World War II, from 1947 to 1968, followed by increased income inequality up to the mid-1990s.¹ This conclusion is reinforced by other studies of income inequality.² For the elderly in particular, the income distribution through the 1980s remained more unequal than that of the nonelderly.³ Daniel B. Radner finds that income inequality declined for the elderly and rose for the nonelderly from 1967 to 1992. However, his findings are unclear, because “taking account of taxes and noncash income could, in actuality, affect the results of the comparisons

made. Unfortunately, income data that cover taxes and noncash income do not exist for the full time period covered by this article.”⁴ The same argument applies to the analysis set forth herein.

Differential patterns of change in household money income distributions for different age groups during the 1990s require an expansion of previous analyses. A clue to changes in the distributions of income can be gleaned from a brief review of changes in median income by age group. While median income for the group aged 45 to 54 years increased 22 percent from 1967 to 1977, it rose only 7 percent during the next decade and actually declined 1 percent from 1987 to 1997.⁵ For the group at preretirement age (55 to 64 years), median income increased 18 percent, 7 percent, and 6 percent during the same three decades. For elderly households (65 years and older), median income grew by almost a third (32 percent) from 1967 to 1977 and a further 27 percent from 1977 to 1987, but only 2 percent the following decade.⁶ As will be shown later, these changes in median income correspond closely to shifts in the distribution of income. Notably, the trend of relatively higher increases in median income slows during the 1990s. Interestingly, for that decade only, growth in median income for households aged 55 to 64 years is greater than that for households aged 45 to 54 and that for households aged 65 and older.

The sections that follow present an analysis of the relative income distributions of elderly households over the three decades from 1967 to 1997,

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compared with income distributions of nonelderly households during the same three decades. Relative changes over time in the inequality of the distribution of income are determined and compared by age group. This information is critical to a consideration of the relative well-being of different age groups.

Economics and income inequality

The distribution of income and the extent of inequality are determined by several factors, including the functioning of the market system, a person's experiences in the labor market, government policies, household choices, and economic opportunities. While many of these factors are beyond the purview of the household, individual households make personal decisions that also determine the extent of inequality.

Economic theory seeks to explain how household decisionmaking influences inequality. Addressing life-stage decisionmaking and income and expenditure patterns, the traditional economic theory of households embodies the expectation that elderly households generally have lower incomes than nonelderly households. Consumer theory recognizes that income and, therefore, consumption and saving decisions vary over the life cycle. The classical theory of income that underlies consumption and saving behavior is grounded in two complementary economic theories: the "life cycle hypothesis"⁷ and the "permanent-income hypothesis."⁸ These theories are widely used to explain how changes in expected income over the lifetime of the household determine expenditure and saving patterns over time. Both approaches indicate that as households age, they are likely to experience declining income.

The life cycle hypothesis posits that consumers attempt to maintain a relatively stable consumption level through their lifetime by saving during their maximum earning years and dissaving during retirement, when income is reduced.⁹ The related permanent-income hypothesis suggests that consumers adjust their spending levels to their perceived level of future income.¹⁰ Thus, the underlying economic theory predicts that rational elderly consumers would tend to disregard reductions in current income in order to maintain previous living standards. Both of these theories predict that older households, expecting to receive relatively lower incomes, would tend to dissave by spending more than their current reduced incomes.

These two basic economic theories of income and consumption seek to describe household behavior in relation to a changing level of one's household income over the life cycle. But the theories do not predict either equality or inequality in the distribution of income for households of various types, nor do they predict the *effects* of inequality on households.

More recent theories of household economic behavior¹¹ indicate the role and consequences of household decision-

making that affects both the income distribution and the degree of income inequality. Gary Becker, for example, develops a theory of family behavior that is intended to shed light on equality and the economic rise and fall of families. He posits that adult human capital, a major determinant of income, is in turn determined by endowments inherited from parents and by parental and public expenditures on children's development. Further, parents who are relatively richer are able to have both higher consumption and greater investments in their children, with less dependence on borrowing to finance the children's education and with less concern that the children's inheritances might be reduced. Therefore, Becker concludes, "The direct relation between the incomes of parents and children is likely to be concave rather than linear."¹²

Susan E. Mayer terms Becker's theory of family behavior the "investment theory" of the way parents' income affects children's life chances. She emphasizes the relationship between the economic achievements of parents and children, which results from both inherited endowments and parental investment in their children. She further suggests that these relationships engender higher rates of success for children raised in affluent families. Mayer also articulates a "role-model theory" that seeks to explain intergenerational trends in inequality. The theory emphasizes that both the family's income level and its relative position in the income distribution influence children's later positions in the income distribution.¹³ This notion suggests that disadvantaged children are less likely to move up in the income distribution.

In contrast to Becker's perspective and similar to Mayer's view, Robert Frank's "positional consumption theory" concludes that, in addition to the absolute level of income, the household's relative position in the distribution of income is a critical factor for decisionmaking. Frank posits that households at the lower end of the income distribution have greater difficulty achieving community consumption standards, which affects their quality of life.¹⁴

Other researchers—most notably, Radner, in his analyses for the Social Security Administration—emphasize the importance of the distribution of income and of inequality.¹⁵ This research needs updating and further consideration in the context of the theories of family behavior, intergenerational investment and role modeling, and positional consumption. In particular, as the oldest baby boomers enter preretirement age groups,¹⁶ it is important to compare their income distribution with that of the elderly.

One would expect that if elderly households are concentrated at lower income levels, with a more limited number at higher income levels, then their income distribution would be relatively less equal than that of all households or of nonelderly households, similar to previously documented trends. However, it is also expected that, during the 1990s, the evolu-

ing market system, changes in labor market experiences, recent government policies, and alterations of household structures will generate changes in the degree of income inequality among older persons and also between older and working-age persons. Accordingly, patterns seen today may not extend into the future, and Social Security and Medicare, as well as other transfer programs, must ultimately reflect the new distributions.

Methods

Data. The database utilized in this article comprises published grouped data from the U.S. Bureau of the Census Current Population Survey (CPS) on money income of households in the United States. Following Radner, the article uses cash income before taxes¹⁷ of household units, classified by the age of the householder.¹⁸ Approximately 50,000 households are interviewed monthly in the CPS sample, but only the March interview includes supplementary questions about money income.¹⁹

The data presented are for the years 1967, 1977, 1987, and 1997 from the March supplement to the CPS and additional Census Bureau publications on income.²⁰ The 4 years selected for analysis represent comparable periods in terms of macroeconomic activity: each falls during an extended period of growth and prosperity and is at least several years past the previous recession. Thus, the years of data analyzed are not differentially affected by macroeconomic conditions. The data for the years 1977, 1987, and 1997 are now available online.²¹

The CPS income data are for money income from all sources and combine money earnings (wage and salary income) with income other than earnings (the sum of money income from all sources except wages and salaries). The official Census Bureau definition of income is money income excluding capital gains before taxes.²²

Several format changes were introduced into the CPS data over the three-decade period under consideration. The 1967 data were in a slightly different format from that for subsequent years, making it necessary to account for rounding error in that year's data. The CPS sample was redesigned several times to improve the quality and accuracy of the data and to reflect rising income levels in the Nation. The level of the lowest income group and the intervals between the groups increased over time. For example, the minimum income group, under \$1,000 in 1967, was under \$2,500 by 1987. The open-ended highest income group also increased over time, from \$50,000 in 1967 to \$100,000 in 1997. The number of income groups defined increased over time as well, from 18 in the 1967 data set, to 21 in 1977 and 1987, and 41 in the 1997 database. These changes were accounted for in compiling the income and household quintiles used in this article, so that the comparability of the Lorenz curves and Gini coefficients

that were calculated remained unaffected.

For each of the 4 years examined, CPS-published grouped data, rather than microdata sets, were used. This choice was based on work by statisticians Mike Fuller and Ed Welniak, who concluded that analyses using grouped data sets closely approximate the results of analyses of microdata.²³ Because the CPS microdatabases are extremely large, it is often more efficient for researchers to employ grouped data, from which research results of comparable reliability are obtainable.²⁴

Methodology. The distribution of income describes the relative shares of total income received by different population groups. The income distribution and the extent of inequality in it can be determined with the use of two standard economic measures: Lorenz curves and Gini coefficients.

A Lorenz curve is a geometric representation of the income distribution—a plot of the share of total money income received by the defined population category against shares of households in that category. Usually, the shares represented are quintiles (20-percent groupings) of income on the vertical axis and quintiles of households on the horizontal axis. The Lorenz curve depicts the cumulative percentage of income received against the cumulative percentage of households receiving it. Thus, a (straight-line) 45-degree Lorenz curve would represent an equal distribution of income, with 20 percent of households receiving 20 percent of income, 40 percent of households receiving 40 percent of income, and so forth. This line of equal income distribution is used as a standard against which the Lorenz curve of the actual distribution of income is compared to analyze the degree of inequality of income distribution.

An income distribution for one population group is found to be more equal than that for another if the Lorenz curve for the first population lies above the Lorenz curve for the second without intersecting it anywhere. Similarly, the income distribution for one population group is found to be less equal than that for another if the Lorenz curve for the first population lies below the Lorenz curve for the second without intersecting it anywhere. But if two Lorenz curves intersect, then the comparison is deemed ambiguous.²⁵

The extent of inequality of an actual income distribution can be measured by a Gini index or coefficient (designated G , where $0 \leq G \leq 1$). The Gini coefficient compares the area between the 45-degree line of perfectly equal income distribution and the Lorenz curve of the actual income distribution in question. A Gini ratio with a value of zero indicates perfect equality of income distribution, with the actual curve coinciding with the 45-degree line. In contrast, a Gini ratio with a value of unity indicates perfect inequality. Thus, the larger the Gini coefficient (or the closer it is to its maximum value of unity), the greater is the degree of inequality in the actual distribution of income. Put another way, the more bowed out a Lorenz curve

is from the line of income equality, the less equal is the distribution of income it represents; and the closer the Lorenz curve is to the 45-degree line, the more equal is the income distribution represented.²⁶

Because of the choice of data set used, some further refinements were required. To calculate the Gini coefficient using grouped CPS data, the mean income for each of the 40 \$2,500-interval income levels was multiplied by the number of households in that group. However, this standard procedure requires that the upper limit of the open-ended \$100,000-plus income group be determined. Accordingly, the open-ended highest income group for both elderly and nonelderly households for each of the 4 years of data studied was top coded. Thus, an upper boundary was defined for the top income group: twice the upper limit of the next-to-last income group.²⁷ This procedure has been demonstrated to closely approximate alternative approaches for grouped income data.²⁸

Alternative approaches were tested and found wanting in that inconsistent effects would have biased the comparative findings for all years except 1997, which had a much larger number of income groups. The alternative approach of supplying an overall mean and letting the aggregate income of the open-ended category default to the remainder was used to determine the household and income quintiles for 1997.²⁹

To calculate income and household groups by quintiles in order to develop the Lorenz curves, data were regrouped for each year. As noted earlier, the number of database income groups increased over the period of the study, from 18 in the 1967 CPS data to 21 in each of 1977 and 1987 and to 41 in 1997.

For each of the 4 years examined, the cumulative share of the age group by income category was determined, and the data were regrouped into quintiles.

Table 1 presents the compiled regrouped CPS data in the form needed to develop comparative Lorenz curves and to calculate the associated Gini coefficients. The table shows the percentage share of money income for households, by income quintile, for elderly (aged 65 years and older) and nonelderly households for the 4 years examined. The table also shows the same data for middle-aged households (aged 55 to 64 years) and for further disaggregated elderly age groups (65 to 69 years, 70 to 74 years, and 75 years and older) for 1997, as well as the Gini coefficients for these age groups for each period.

Table 2 presents the Gini coefficients of the inequality of income distribution, by age group, for 1997. The 1997 values and standard errors are compiled and published in the CPS data, but those for the earlier years were not available. Hence, upper and lower limits were calculated in order to test the significant differences between Ginis for different age groups. These significant differences (at the 0.10 level) in the equality of income distribution between households are presented in the lower portion of the table.³⁰

One caveat in the interpretation of findings from the data in table 2 is that comparisons of the effects of income and income inequality on household or individual well-being depend upon household size. Thus, analyses of well-being often utilize equivalence scales to adjust household or family income for differences in family size. Rubin and Nieswiadomy, for example, report that married-couple households require

Table 1. Percentage share of money income for households, by income quintile and age group, 1967, 1977, 1987, and 1997

Year	Age of householder	Income group					Gini coefficient
		Lowest fifth	Second fifth	Third fifth	Fourth fifth	Highest fifth	
1967	Under 65	5.4	12.0	17.0	23.0	42.5	0.366
	65 and older	3.8	7.5	12.0	21.2	55.8	.561
1977	Under 65	4.9	11.4	17.6	23.6	43.1	.358
	65 and older	5.4	8.7	13.6	21.4	51.0	.438
1987	Under 65	4.1	10.5	16.7	21.8	47.0	.395
	65 and older	4.7	7.2	14.1	22.0	52.0	.448
1997	Under 65	3.9	10.1	16.2	24.0	45.9	.426
	45-54	4.0	10.1	16.0	23.3	46.6	.409
	55-64	3.2	8.5	14.5	22.4	51.5	.464
	65 and older	4.5	8.6	13.5	21.4	52.0	.478
	65-69	3.8	8.3	13.7	21.4	52.8	.478
	70-74	4.7	9.1	14.0	21.2	51.1	.455
	75 and older	5.1	8.1	13.1	20.3	52.6	.466

SOURCE: Compiled from the following U.S. Bureau of the Census publications: *Consumer Income*, publication no. P60-57, 1968, tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60-117, 1978, tables 13, 35; *Money Income of House-*

holds, Families, and Persons in the United States, Current Population Reports, publication no. P60-162, 1989, tables 8, 29; and Current Population Reports, March Supplement, 1998, table 15.

Table 2. Gini coefficients of the inequality of income distribution, by age group, 1997

Measure	Age group						
	Under 65	65 and older	45-54	55-64	65-69	70-74	75 and older
Gini coefficient	0.426	0.478	0.409	0.464	0.478	0.455	0.466
Standard error .....	.004	.010	.008	.011	.017	.019	.014
Upper limit .....	.433	.494	.423	.482	.506	.486	.490
Lower limit .....	.419	.462	.395	.446	.450	.424	.442
Age group	Under 65	45-54	55-64	65 and older	65-69	70-74	75 and older
Under 65 .....	...	+	-	-	-	0	-
45-54 .....	...	...	-	-	-	-	-
55-64 .....	...	...	...	0	0	0	0
65 and older .....	...	...	...	...	0	0	0
65-69 .....	...	...	...	...	...	0	0
70-74 .....	...	...	...	...	...	...	0
75 and older .....	...	...	...	...	...	...	...

NOTE: All tests carried out at 0.10 significance level. Plus sign indicates row age group has larger Gini value. Minus sign indicates column age group has larger Gini value. Zero indicates no significant difference in Gini values.

SOURCE: U.S. Bureau of the Census, Current Population Reports, March Supplement, 1998, table 15.

income that is 37 percent higher than single-person households to achieve the same level of well-being.³¹

In comparing income inequality between elderly and nonelderly households, consideration may be given to the fact that many elderly households are single-person or married-couple households and nonelderly households tend to have a larger average size. Similarly, family size among the elderly has declined during the last 40 years, resulting in increasing numbers of single elderly, most of whom are women. If this decrease in average elderly household size is ignored, care must be taken not to assume that a change in inequality equates to a change in well-being.

The analysis presented in this article does not use equivalence scales to adjust for differences in household size because, as noted earlier, the data that are utilized are published grouped CPS data. Absent the use of microdata, it is not possible to use equivalence scales to adjust for household size.

Research questions

The study presented addresses the broad question, “What changes have occurred over time in the comparative income distributions and in the inequality of income distributions of elderly and nonelderly households?” To answer this question, it is necessary to ask and answer four other questions: (1) What is the 1997 income distribution of elderly households? (2) How has the income distribution of elderly households changed over the three decades from 1967 to 1997? (3) How has the degree of inequality of income distribution of elderly households changed over the same three decades? and (4) How does the income distribution of elderly households compare with that of nonelderly households?

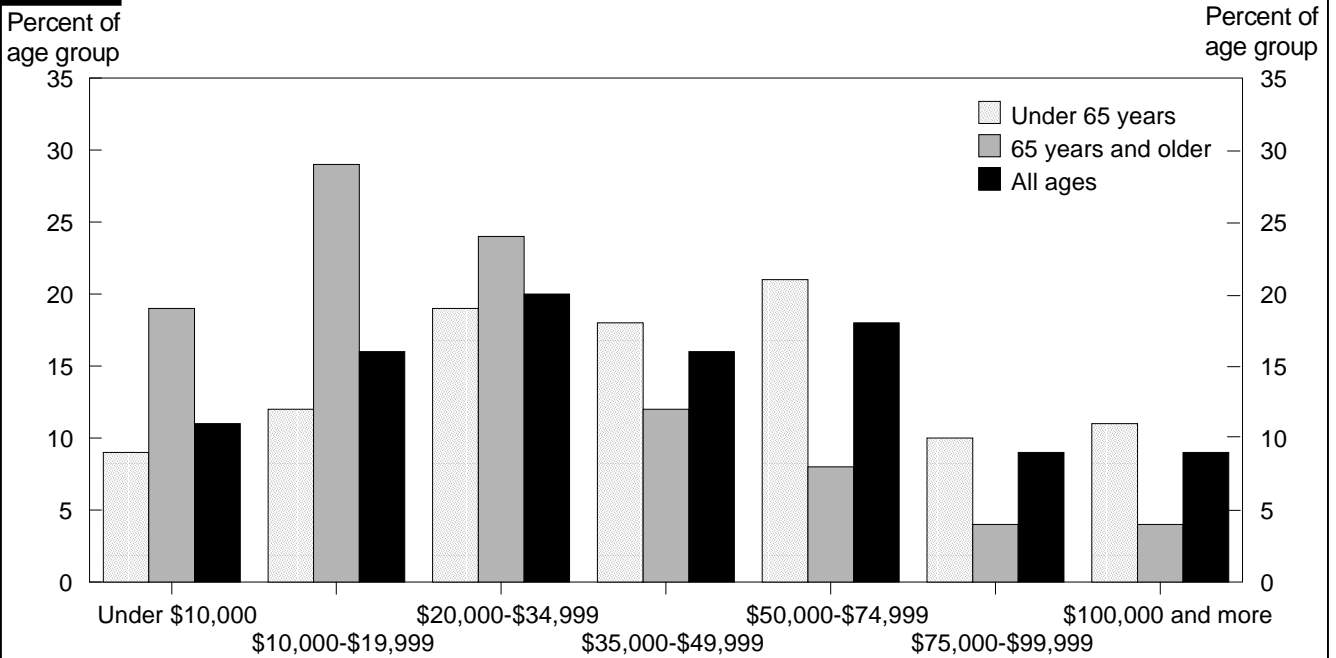
Results

1997 income distribution of elderly households. Chart 1 presents the 1997 money income distribution of U.S. households, by age group, comparing all households with those under age 65 and those aged 65 and older. As the life cycle hypothesis suggests, the data reveal the concentration of elderly households in lower income groups relative to households in their preretirement, prime earning years and to the total population. Approximately three-fourths of older households have annual incomes below \$35,000. Almost 30 percent of households aged 65 and older have incomes in the range from \$10,000 to \$20,000, whereas only 12 percent of households under age 65 and 15 percent of all households are in this poverty or near-poverty range. In contrast, about 60 percent (the middle three quintiles) of nonelderly households have incomes between \$20,000 and \$75,000, with the largest concentration of nonelderly households (more than 20 percent) in the \$50,000-to-\$75,000 income group.³²

Another way of viewing the differential income distribution of elderly and nonelderly households is to compare the share of households in each income quintile by age group, as seen in chart 2. In 1997, the percentage of elderly households in the lowest income quintile was twice as great as the percentage of nonelderly households in the same quintile, while fewer elderly households were in the two highest income quintiles than nonelderly households were in the highest quintile.

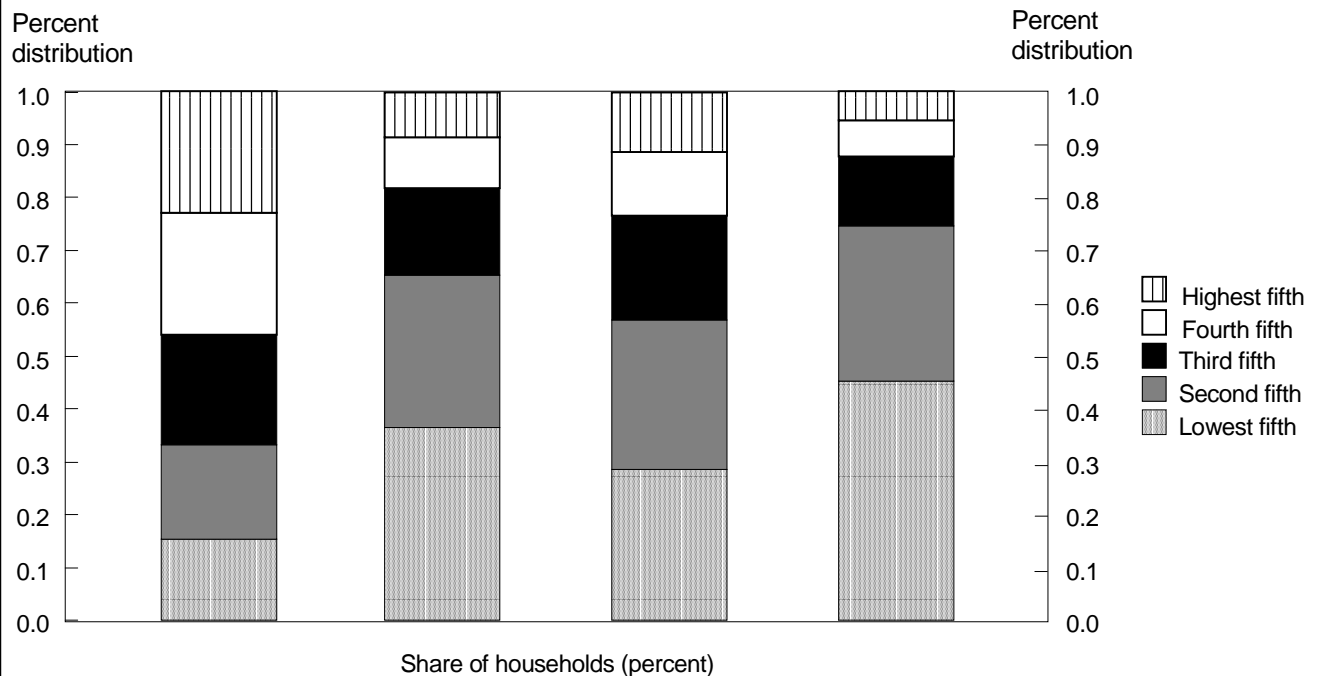
It is important to note that, because the data are not adjusted for family size, the findings reported in chart 2 may overestimate the extent of relative inequality between elderly and nonelderly. The chart indicates that the elderly are twice as likely as the nonelderly to be in the bottom quintile of the

Chart 1. Household income distribution, by age group and total population, 1997



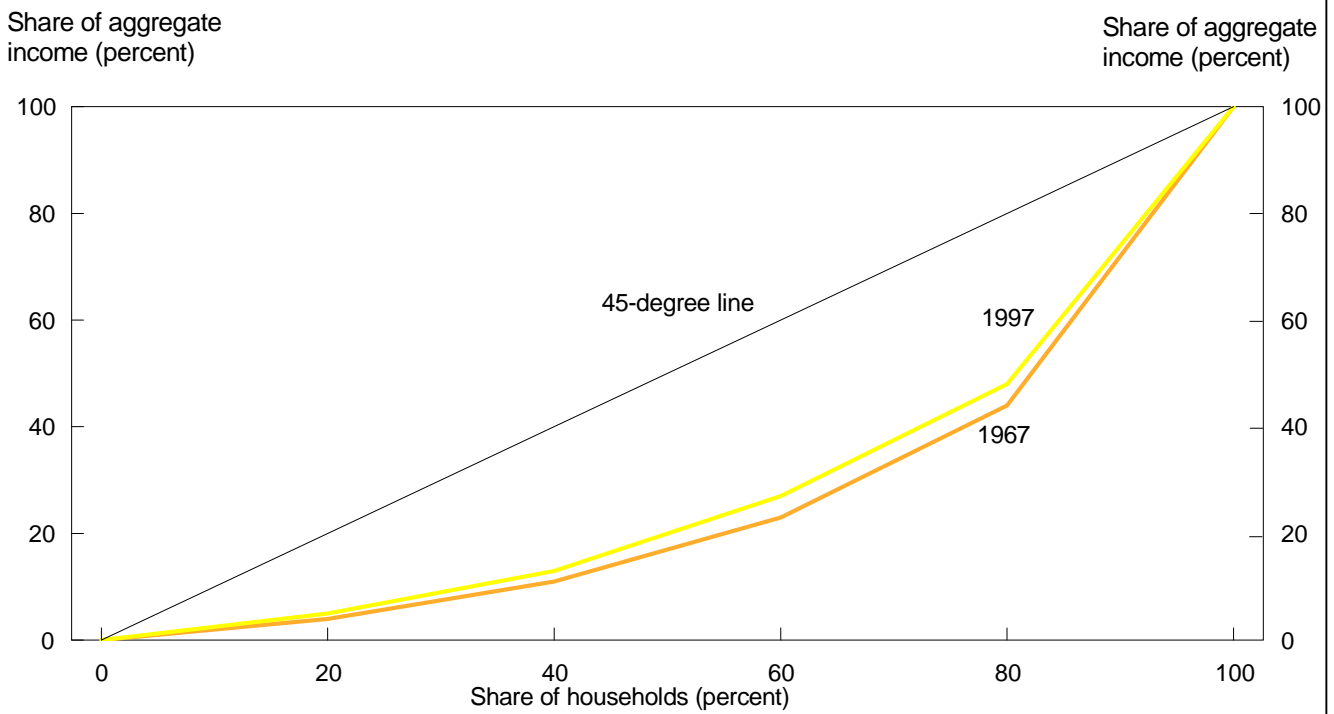
SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

Chart 2. Percent distribution of households within income quintile, by age group, 1997



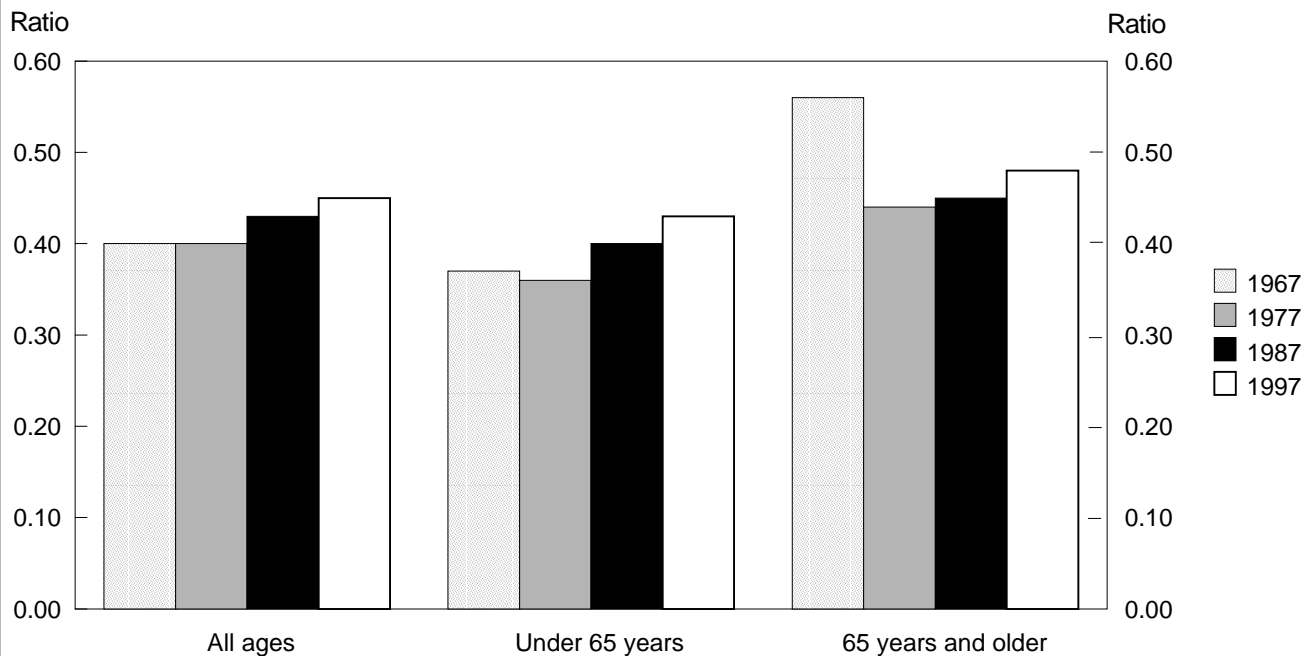
SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table 15.

Chart 3. Change in income distribution of elderly U.S. households aged 65 and older, 1997



SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

Chart 4. Gini coefficient, by age groups, 1967, 1977, 1987, and 1997



SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

income distribution. When researchers have used income adjusted by the poverty threshold to adjust for family size, the elderly are seen to be only 1.25 times more likely than the nonelderly to be in the bottom quintile of the income distribution.

When the older population is further disaggregated, distinct income distribution differentials appear between those aged 65 to 74 and those aged 75 and older. Nearly half of all households in the latter category were in the lowest income quintile, compared with less than 30 percent of households aged 65 to 74. And more than twice as many households in the 65–74 age group were in the two highest income quintiles, compared with those aged 75 and older.³³ However, when the Gini coefficients for the 1997 income distribution are compared for the 65–69, 70–74, and 75-and-older age groups (see table 2), differences in the inequality of the income distributions of these groups turn out not to be significant.

Change in income distribution of elderly households over time. Chart 3 presents Lorenz curves comparing the income distributions of households with a householder aged 65 and older in 1967 and 1997. Over the three decades between those years, the Lorenz curve of the elderly household income distribution shifted inward, closer to the line of equal distribution

of income. This shift clearly indicates that elderly households have achieved greater equality of income. However, the Lorenz curves for 1977, 1987, and 1997 are so close that it is impossible to distinguish them on one graph for comparison. The close comparability of elderly income distributions for these periods can be seen in the data presented in table 1.

Inequality of income distribution of elderly households. The degree of inequality of the income distribution of all elderly households changed significantly from 1967 to 1997. As shown by the Gini coefficients in table 1 and chart 4, in 1967–97, the largest change in the income distribution of older households occurred between 1967 and 1977. During that decade, the income distribution became significantly more equal for households aged 65 and older.

After 1977, the distribution of income for older households became slightly less equal in 1987 and again in 1997. This finding highlights the critical importance of the period analyzed. Looking at changes in equality of the income distribution only from 1977 to 1997 would present a much different picture than that found in this article. While the data from 1967 to 1997 reveal significant *decreases* in inequality, the data from 1977 to 1997 indicate slightly *increased* inequality. A similar pattern exists in households younger than 65. These findings

Chart 5. Comparison of U. S. elderly household income distributions, by age group, 1997

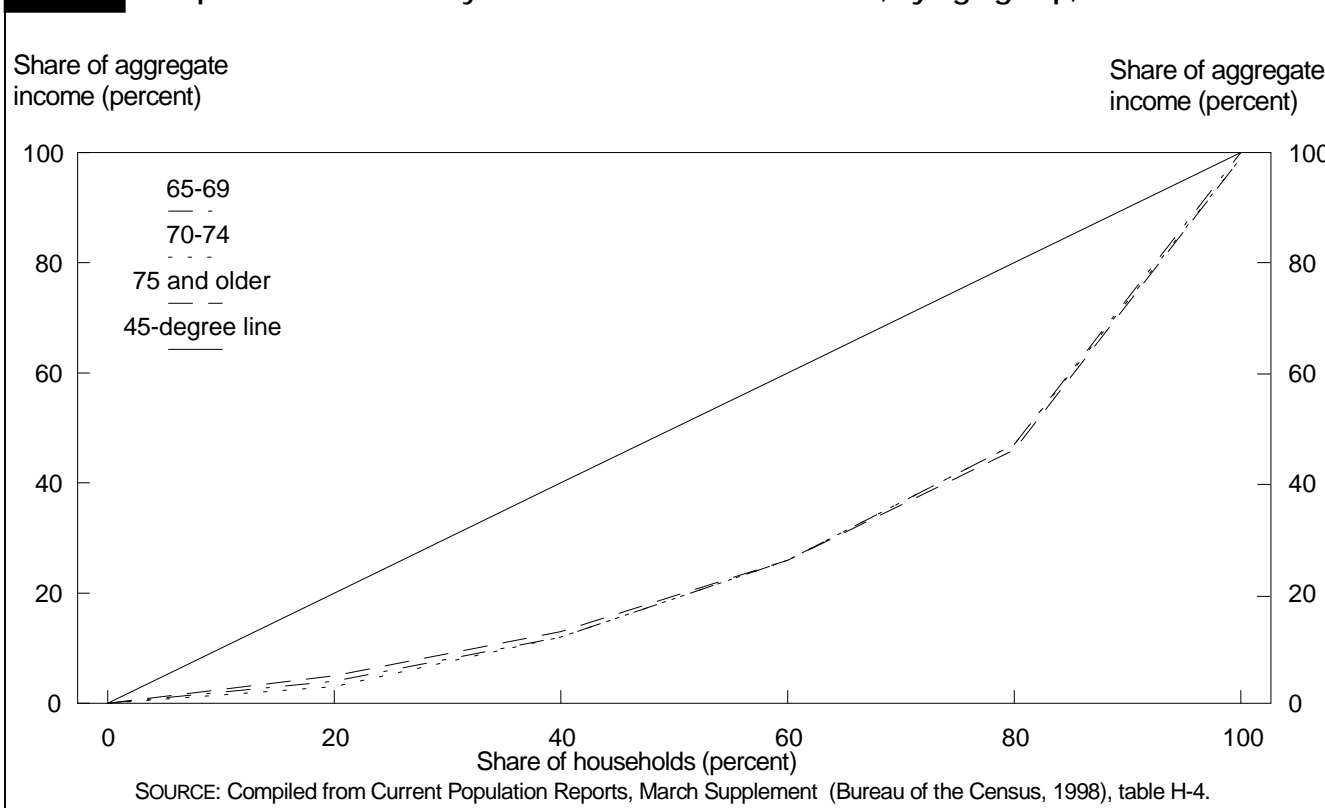
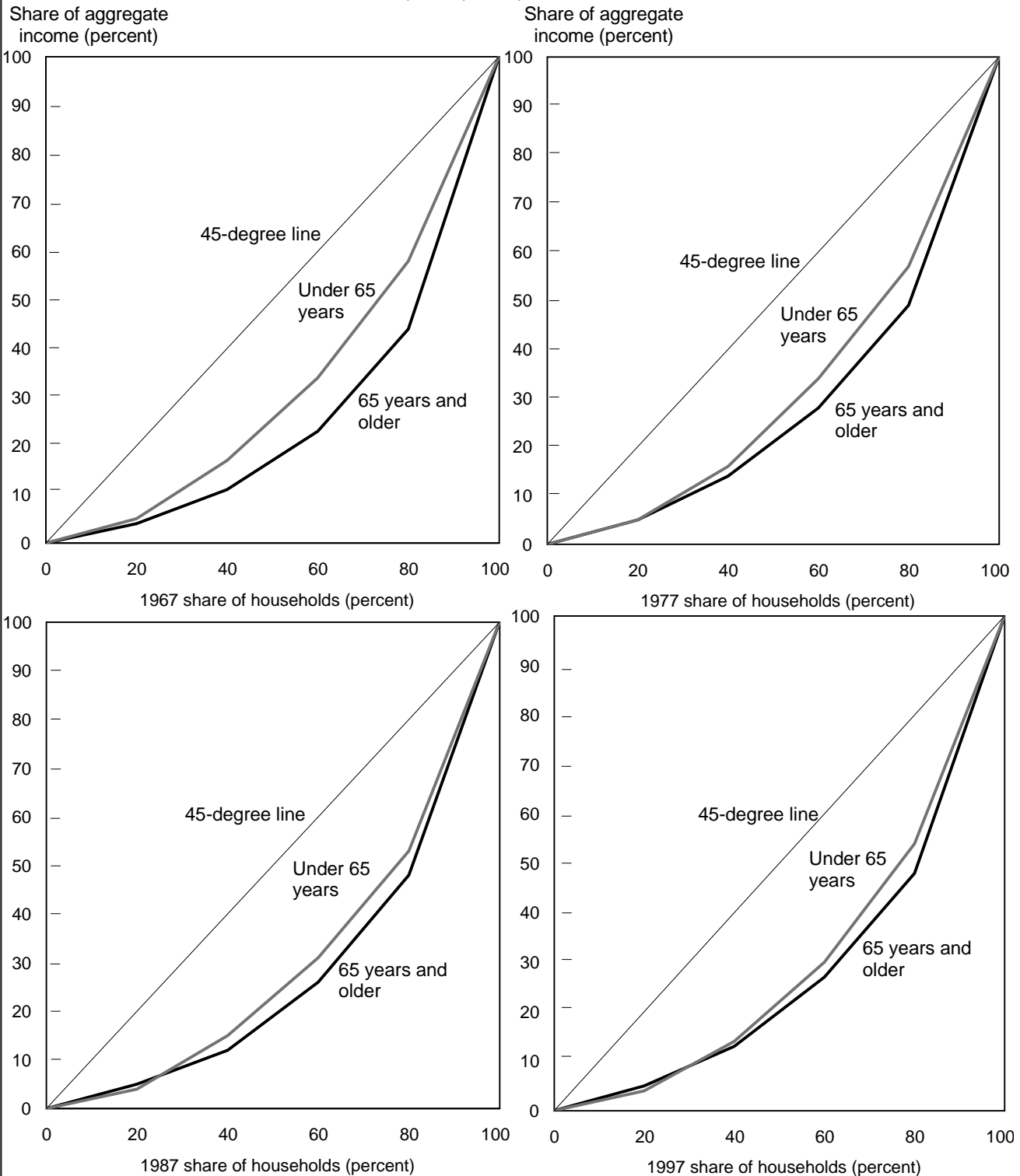
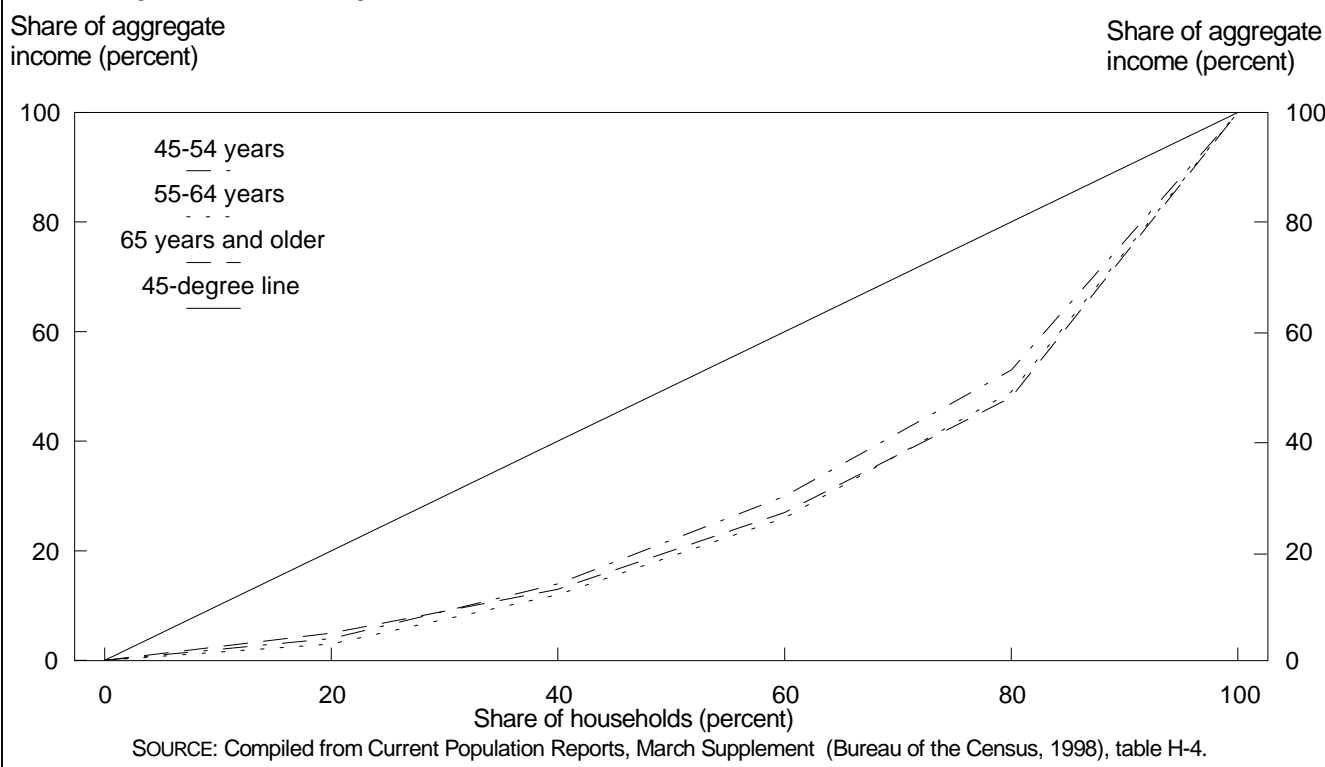


Chart 6. Comparison of U.S. elderly (aged 65 years and older) and nonelderly (under 65 years) household income distribution, 1967, 1987, and 1997



SOURCE: Compiled from the following U.S. Bureau of the Census publications: *Consumer Income*, publication no. P60-57, 1968, tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60-117, tables 13, 35; *Money Income of Households, Families, and Persons in the United States*, Current Population Reports, publication no. P60-162, 1989, tables 8, 29; and Current Population Reports, March Supplement, 1998, table 15.

Chart 7. Comparison of U.S. elderly (aged 65 years and older) and middle-aged (45-54 years and 55-64 years) household income distributions, 1997



show the importance of disaggregating the data by age group. When all age groups are aggregated, the data indicate increased inequality throughout the 1967–97 period; this is revealed *not* to be the case, however, when the age groups are disaggregated.

When older households are disaggregated by age group, the data indicate relatively small differences in the groups’ income distributions. Chart 5 compares the 1997 income distributions of households aged 65 to 69 years, 70 to 74 years, and 75 years and older. The distributions are barely distinguishable, demonstrating the similarity of inequality of income distributions among these age groups. This finding is reinforced by the Gini coefficients listed in tables 1 and 2. In particular, table 2 shows no significant differences in the inequality of income distribution among elderly age groups, as measured by their Gini coefficients.

Comparison of income distribution of elderly and nonelderly households. In chart 6, the income distribution of elderly households is compared with that of nonelderly households, for each of the 4 years studied. The Lorenz curves reveal that the distribution of income of elderly households approached that of nonelderly households more closely in 1977 than in 1967, and the gap continued to narrow in each succeeding decade. These

shifts can also be detected in the data in table 1, but the Lorenz curves present a visual image of the closing income distribution gap between the two groups. Over time, the decreasing gap corresponds with Gini coefficients that are converging.

Another perspective on the comparison of the income distributions of elderly with nonelderly households and with all U.S. households over time is seen in chart 4. Over the three decades since 1967, elderly households have larger Gini coefficients than nonelderly households, indicating a greater degree of inequality; however, the differences in the Ginis are quite small and are not significant. Since 1977, the Gini coefficients for all households, households under age 65, and those aged 65 and older have increased slightly and by about the same order of magnitude. This parallel movement reinforces the finding that both elderly and nonelderly households sustained slight declines in equality of their income distributions over the past two decades.

We can also compare the degree of inequality of income distributions by calculating ratios of Gini coefficients between nonelderly and elderly households. A value of 1.00 indicates the same degree of inequality of income distribution for the two groups, whereas a value less than unity indicates a greater degree of inequality for the elderly. The ratio was 0.762 in 1967, increased to 0.845 in 1977 and to 0.904 in 1987, and then de-

creased slightly to 0.883 in 1997. This movement provides further corroboration of the finding that the relative inequality of elderly and nonelderly income distributions declined between 1967 and 1987, but increased very slightly from 1987 to 1997.

It is particularly important to compare the income distribution of 65-and-older households with those of the preretirement (45 to 54 years) and middle-aged (55 to 64 years) groups, because such an analysis may shed light on expectations concerning the income distributions of future cohorts of older Americans. Chart 7 shows the 1997 Lorenz curves for the three groups. Households aged 45 to 54, the first wave of the baby-boom generation to reach middle age, have a more equal distribution of income than either of the two older groups. (See also table 2.) This preretirement group has the most equal distribution of income in 1997, compared with the distributions of the other age groups in the same year. In addition, the preretirement group's Gini index is significantly different from those of all older age groups. This finding may reflect the larger share of income generated from current earnings (wages and salaries) for the group than is generated for older households, which receive larger shares of income from wealth, assets, or pensions, all of which are highly unequally distributed. In addition, the finding may reflect differences in the demographic composition of the age groups, due to the shorter life expectancy of black males.

In contrast to the age 45–54 group, equality of the income distribution for the 55–64 group is not significantly different from that for older age groups. (See table 2.) Overall, the income distribution of the group aged 55 to 64 years is significantly more unequal (or less equal) than that of the group of 45- to 54-year-olds. But it is significantly more equal (or less unequal) than the income distribution of all other age groups, except the age 70–74 group, with which a comparison reveals no significant difference.

THE STUDY SET FORTH IN THIS ARTICLE used CPS data spanning three decades to analyze the income distributions of Americans in three age groups: 65 years and older, 55 to 64

years, and 45 to 54 years. Detailed knowledge of the income distribution and the extent of inequality in it contributes to our understanding of the economic well-being of groups within our society. Frank's positional income theory suggests that, as the distribution of income of the elderly became somewhat less equal since 1977, the lower income elderly faced a greater difficulty maintaining their standards of consumption and a high quality of life. Further, from 1987 to 1997, the degree of inequality increased over that from 1977 to 1987, possibly indicating a declining ability of lower income elderly persons to maintain their standard of living relative to the higher income elderly.

A particular problem for impoverished elderly households is their inability to change their low income status. The elderly are considerably less likely to move out of poverty than are nonelderly adults: the exit rates of the two groups were 14 percent and 25 percent, respectively.³³ This gap reflects the relative stability of elderly incomes during the past two decades. Thus, over a short period, the degree of inequality in the income distribution of the elderly is unlikely to shift substantially. However, over longer periods of decades, the differing economic statuses of the various groups, all becoming older and some proceeding into retirement, may alter the relative economic situation of the elderly.

The results of this study reveal that, over the past three decades, the Lorenz curve of elderly household income distribution has shifted inward, closer to the line of equal distribution of income. While this shift clearly indicates that elderly households have achieved greater equality of income distribution, close to three-quarters of elderly households have annual income levels below \$35,000, and almost half of households aged 75 and older are in the lowest income quintile.

The concentration of older households in lower income groups relative to households in their preretirement, prime earning years and relative to the total population is clear. Households aged 45 to 54 have the most equal distribution of 1997 income, and their Gini index is significantly different from those for all older age groups. This state of affairs may presage shifts in the distribution of income and degree of inequality for future cohorts of elderly or retirees. □

Notes

¹ Daniel H. Weinberg, *A Brief Look at Postwar U.S. Income Inequality*, Current Population Reports, Publication No. P60–191 (Bureau of the Census, June 1996).

² See Nan L. Maxwell, "Demographic and Economic Determinants of United States Income Inequality," *Social Science Quarterly*, summer 1989, pp. 245–63; and Teresa Amott, "Re-slicing the Pie: Government Policy and Income Inequality," *Dollars & Sense*, May 1989, pp. 10–11.

³ See Michael D. Hurd, "Research on the Elderly: Economic Status, Retirement, and Consumption and Saving," *Journal of Economic Literature*, June 1990, pp. 565–637; and Stephen Crystal and Dennis Shea, "The Economic Well-Being of the Elderly," *Review of Income and*

Wealth, September 1990, pp. 227–47.

⁴ Daniel E. Radner, "Incomes of the Elderly and Nonelderly, 1967–1992," *Social Security Bulletin*, winter 1995, pp. 82–97.

⁵ All median-income figures used in this article are in constant 1998 dollars.

⁶ *Historical Income Tables*, table H–15, "Age of Householder—Households by Median and Mean Income: 1967 to 1998," on the Internet at the Census Bureau home page, <http://www.census.gov/hhes/income/histinc/h10.htm>.

⁷ Albert Ando and Franco Modigliani, "The Life Cycle Hypothesis of Saving: Aggregate Implication and Tests," *American Economic Re-*

view, March 1963, pp. 55–84.

⁸ Milton Friedman, *A Theory of Consumption Function* (Princeton, NJ, Princeton University Press, 1957).

⁹ See Ando and Modigliani, “Life Cycle Hypothesis of Saving.”

¹⁰ See Friedman, *Theory of Consumption Function*.

¹¹ See Gary Becker, *A Treatise on the Family* (Cambridge, MA, Harvard University Press, 1991); Robert Frank, *Microeconomics and Behavior* (New York, McGraw-Hill, 1997); and Susan E. Mayer, “Trends in the Economic Well-being and Life Chances of America’s Children,” Chapter 4 in Greg J. Duncan and Jeanne Brooks-Gunn (eds.), *Consequences of Growing Up Poor* (New York, Russell Sage Foundation, 1997).

¹² See Becker, *Treatise on the Family*, p. 251.

¹³ See Mayer, *Economic Well-being and Life Chances*.

¹⁴ See Frank, *Microeconomics and Behavior*.

¹⁵ See Daniel B. Radner, “Money Incomes of Aged and Nonaged Family Units, 1967–1984,” *Social Security Bulletin*, August 1987, pp. 9–28; “Changes in the Incomes of Age Groups, 1984–1989,” *Social Security Bulletin*, December 1991, pp. 2–18; “An Assessment of the Economic Status of the Aged,” *Studies in Income Distribution*, Publication No. 13–11776(16) (Social Security Administration, May 1993); and *Incomes of the Elderly and Nonelderly*.

¹⁶ Daniel B. Radner, “The Retirement Prospects for the Baby Boom Generation,” *Social Security Bulletin*, January 1998, pp. 3–19.

¹⁷ See Radner, “Economic Status of the Aged”; and *Incomes of the Elderly and Nonelderly*.

¹⁸ Since 1979, the term *householder* has been used in lieu of *head of household*. The householder is defined as the individual responding to the survey, who can be either spouse in a married-couple household. Therefore, classifying the household as elderly depends on the age of whichever spouse is the respondent.

¹⁹ *Money Income in the United States: 1997*, Current Population Reports, publication no. P60–200 (Bureau of the Census, 1998).

²⁰ *Consumer Income*, publication no. P60–57 (Bureau of the Census, 1968), tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60–117 (Bureau of the Census, 1978), tables 13, 35; *Money Income of Households, Families, and Persons in the United States*, Current Population Reports, publication no. P60–162 (Bureau of the Census, 1989), tables 8, 29; *Consumer Income*, Current Population Reports, publication no. P60–57 (Bureau of the Census, 1998), table 1, p. 2; *Measuring 50 Years of Economic Change Using the March Current Population Survey*, Current Population Reports, publication no. P60–203 (Bureau of the Census, 1998), appendix, table C–19, pp. 35–41.

²¹ See *Selected Characteristics by Quintile: March 1997*, Current Population Survey, Annual Demographic Survey, March Supplement (Bureau of the Census, 1997), table 3, on the Internet at http://ferret.bls.census.gov/macro/031997/quint/3_000.htm; Current Pop-

ulation Reports, March Supplement, table H–4 (Bureau of the Census, 1998), on the Internet at http://ferret.bls.census.gov/macro/031998/hhinc/4_001.htm; and Current Population Reports, March Supplement, table 15 (Bureau of the Census, 1998), on the Internet at http://ferret.bls.census.gov/macro/031998/quint/15_000.htm.

²² See *Money Income in the United States: 1997*. In the current article, the Lorenz curve distributions of income include only cash income (money income and cash assistance) and do not encompass the value of in-kind subsidies, such as food stamps, subsidized housing, medicare, and medicaid. Future research could extend the results obtained herein by comparing the distributions of cash income and total cash plus in-kind income. If the total value of all subsidies (cash plus in-kind) were included in the analysis of income distribution, then inequality of the distribution of income would be reduced for all groups, but particularly for older Americans, who benefit from medicare and other subsidies. Therefore, caution must be exercised in attempting to extend the aforesaid conclusions on income distribution and the inequality of income distribution to a consideration of relative standards of living.

²³ See Mike Fuller, “The Estimation of Gini Coefficients from Grouped Data, Upper and Lower Bounds,” *Economics Letters*, vol. 3, no. 2, 1979, pp. 187–92; and Ed Welniak, *Calculating Indexes of Income Concentration (GINI’s) from Grouped Data: An Empirical Study* (Bureau of the Census, memo, June 10, 1998).

²⁴ Welniak, *Calculating Indexes of Income Concentration*.

²⁵ Radner, *Money Incomes of Aged and Nonaged*.

²⁶ See John A. Bishop, Subhabrata Chakraborti, and Paul D. Thistle, “Relative Deprivation and Economic Welfare: A Statistical Investigation with Gini-Based Welfare Indices,” *Scandinavian Journal of Economics*, vol. 93, no. 3, 1991, pp. 421–37; B. Milanovic, “A Simple Way to Calculate the Gini Coefficient, and Some Implications,” *Economics Letters*, vol. 56, no. 1, 1997, pp. 45–49.

²⁷ See J. J. Thompson, *The Journalist and the Gini Coefficient: A Statistical Approach to Covering Income Inequality*, master’s thesis, School of Journalism and Mass Communications, University of North Carolina, 1995; J. J. Thompson, “A Tool for Measuring Income Inequality,” *Nieman Reports*, spring 1997, pp. 42–44, on the Internet at <http://web3.searchbank.com/infotrac/session/708/269/367525w7/18!xrn>; and Welniak.

²⁸ Welniak, *Calculating Indexes of Income Concentration*.

²⁹ Welniak, *Calculating Indexes of Income Concentration*.

³⁰ See Bishop, Chakraborti, and Thistle, “Relative Deprivation and Economic Welfare.”

³¹ Rose M. Rubin and Michael L. Nieswiadomy, *Expenditures of Older Americans* (Westport, CT, Praeger Publishers, 1997), p. 60.

³² Current Population Reports, March supplement, 1998, table H–4.

³³ Current Population Reports, March Supplement, 1998, table 15.

³⁴ Rubin and Nieswiadomy, *Expenditures of Older Americans*, p. 77.