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THE ECONOMIC RESOURCES OF THE ELDERLY

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Abstract

Estimating the elderly's relative economic well-being is of considerable policy importance, but poses several technical problems. In this article a methodology for such comparison is proposed and results from its application are presented. We argue that intergenerational comparisons of Census income data need to take account of household size, underreporting of unearned income in Census data, and the annuitized value of assets. When household income is adjusted for these factors, the elderly's economic well-being averages 124 percent of the well-being of persons age 64 and under and 183 percent of the figure for children under age 6. Economic inequality is found to be greater among the elderly than at any other age.

THE ECONOMIC RESOURCES OF THE ELDERLY: A COMPREHENSIVE INCOME APPROACH

I. Introduction

During the last two decades, income transfer programs aimed at improving the economic circumstances of the elderly have experienced substantial expansion. The mean real size of the monthly Social Security retirement benefit paid to retired workers increased by 47 percent between 1970 and 1985 (U.S. Bureau of the Census, 1986a). Tax-advantaged private pension systems have expanded rapidly. By 1980, 21 percent of aged households received some private pension income, up from 12 percent in 1967 (Upp, 1983). Despite the extensive and growing cost of public and private benefits for the aged, however, there has been no consensus on a "measuring stick" with which to assess progress in improving the elderly's economic circumstances.

Comparing economic resources across age groups is by no means a straightforward task. Typically, such comparisons utilize income data from the March Supplement to the Current Population Survey (CPS), and are based on the household or family income concept. Despite well-known problems with these data, they dominate public discussion of well-being. As one cogent observer noted, "the mass media faithfully report [changes in real family income] as an indication of how much the average American family's material standard of living rose or fell..." (Jencks, 1987).

In their raw form, however, these income series fail to provide a satisfactory basis for appraising the relative economic well-being of the aged, for several reasons. First is the problem of adjusting appropriately for household size. Comparisons between the income of the aged and non-aged are often made by directly contrasting household income, without correcting for differences in household size. For 1987, such a comparison shows that the mean household income of households headed by an elderly person, at $20,333, was only 63 percent of the all-persons figure (U.S. Bureau of the Census, 1989).

This fails to take account, however, of the difference in household size between the elderly and non-elderly. In 1987, for example, the mean household size of households headed by an elderly person was 2.20 persons as opposed to an all-ages figure of 3.40 (U.S. Bureau of the Census, 1989). A simple way of adjusting for household size, used by the Census Bureau in some tables, is to present household income on a per-capita basis, but this approach does not take account of household "economies of scale". Our approach, discussed further below, involves the use of welfare ratios based on income as a proportion of the poverty line for the household's size.

Two other sources of bias involve more difficult problems and are adjusted for less frequently. The first of these is the well-documented problem of underreporting of income, particularly unearned income, in Census surveys (Radner, 1982; Jencks, 1987). Since wages and salaries, which are well-reported, make up most of the non-elderly's income, comparisons among many subgroups of the population are not severely affected by this problem. The difficulty is, however, much more severe for comparisons involving the retirement-age population which relies much more heavily on unearned income. Comparison of aggregate Census-based estimates for such income sources as public and private pensions, interest, and dividends to independently derived and more reliable national accounts data indicates that unearned income types are underreported by amounts typically ranging from 20 to 50 percent (Radner, 1982). For example, private pension income for 1987 was estimated to be underreported by 37%, interest income by 55%, and dividend income by 55% (U.S. Bureau of the Census, 1989). By comparison, reporting of wage and salary income is much more complete, typically 95 percent or more of independent estimates (Bureau of the Census, 1989).

Finally, economic resources include assets as well as income. Few comparisons of economic status by age have incorporated asset measures, in part because of the limitations of available data sources. In particular, the CPS, which has been the principal data series used for estimates of income of groups within the population, does not provide asset information. Analyses incorporating wealth variables have typically relied on more

specialized data sets such as the Consumer Expenditure Survey (Danziger et al., 1984a), the Retirement History Survey (Hurd and Shoven, 1985) or surveys conducted by the Federal Reserve (Weisbrod and Hansen, 1968). Few of these data sets, however, sample a large cross-section of the population, as the CPS does. Recently, however, the advent of the Census' Survey of Income and Program Participation (SIPP) has made possible concurrent analysis of asset and income data in census-based data sets.

A large share of the elderly's resources is in the form of assets, including home equity. Projector and Weiss (1969) point out that the young, who have fewer assets, also have greater future earning and saving potential. However, our effort here is to develop a measure of current economic resources, not expectancies of the individual as to his well-being at a future stage. In this context, ignoring the important contribution of assets to economic well-being would be unreasonable. Ownership of stocks or other assets represents command over resources just as current income does. As Burkhauser et al (1985) have noted, two persons with the same realized income but different wealth holdings command different potential consumption bundles; thus, a single-year realized income measure of well-being is misleading. This is a particularly significant issue in analyses involving the elderly population, given the increasing importance of assets in their economic situation (Upp, 1983). Incorporating the annuitized value of assets into a comprehensive measure of economic well-being, as we elect to do, adds significant information to that provided by a single year's realized income, particularly if conservative assumptions are utilized as discussed further below.

Ownership of a home wholly or primarily debt-free represents a less liquid resource than does ownership of financial assets, but home equity also provides current economic benefit, since it reduces what would otherwise be required out of current income for rent or mortgage payments. Further, home equity has become an increasingly fungible resource that can be tapped by a diversity of mechanisms such as equity lines of credit. As with other assets, home equity has become an increasingly important element of economic well-being for the elderly population, given the high rate of paid-off ownership of homes

among the elderly. Data from the Social Security Administration's Retirement History Survey showed that in 1979 71 percent of the respondents owned their homes, with 83 percent of this group owning their home outright and another 6 percent owing less than $5,000 (Springer, 1985). During the 1970s and 1980s, increasing real prices of homes forced a sharp increase in the housing expenditures of recent entrants to the housing market, notably younger families, while shifting wealth towards those more established in that market, notably those in their middle years and older. While in 1950 a home buyer could make the monthly payment on a median priced home using 14 percent of median gross monthly pay, by 1984 the typical home buyer had to spend 44 percent of gross pay to finance the typical home (Levy, 1987). While home equity is not fully available as an economic resource, to ignore it in intergenerational comparisons would be to disregard a crucial source of economic well-being and a substitute for the largest single claim on income in the typical home budget. We describe below our approach to home equity, perhaps the most controversial element of our adjusted income concept, which entails annuitizing a portion of this resource.

The three adjustments we make to income -- household composition, underreporting, and assets -- have all been utilized in some form in past work, though seldom have all three been used concurrently. In one of the more comprehensive attempts to assess the comparative well-being of the elderly, for example, Danziger at al. (1984a and 1984b) adjusted current income of households for taxes, services of durable assets and household size. They concluded (Danziger et al., 1984b) that "...the economic status of the elderly was on average quite similar to that of the nonelderly in 1973. If this study could be replicated using current data, we would expect to find that the elderly are even better-off now relative to the nonelderly." Considering the importance of the question, it is remarkable how little systematic work has been done to apply this general approach to more recent data.

Particularly scarce have been careful and systematic efforts to use comprehensive income measures to assess the distribution of resources within the elderly population. The

research on this issue, as with size of income, has been marked by a failure to adjust the raw data. These adjustments can have a major effect on estimates of both the trend and level of inequality (Taussig, 1976).

Hurd and Shoven (1985) have argued that inequality diminishes as persons age. Working with data from the Social Security Administration's Retirement History Survey, they argue that "[during the ten years of the survey] real income of the lower tail of the distribution has increased. This is due to the sharp increase in SSI, Medicare, and Social Security for this population..." (Hurd and Shoven, 1985). However, they did not present comprehensive measures of inequality, such as the Gini index or the percent of income held by quintiles, in their tables. Furthermore, while Hurd and Shoven made extensive use of the wealth data in the survey, they did not make any adjustment for underreporting.

Fuchs (1984) states, along similar lines, that "...income is more **equally** distributed after age 65 than before that age." (Emphasis in original). He concludes: "The principal reason for the narrowing of inequality after age 65 is that Social Security benefits become more important and labor income less important, and the former is distributed much more equally than the latter." However, private pensions and property income, which play a major and growing role among the elderly's income sources, are distributed highly unequally (Crystal, 1984), and constitute a source of increased inequality after age 65 (Lazear and Rosen, 1987); these sources are also among the most underreported.

Use of SIPP, our data source, offers new opportunities to examine resources in the form of stocks (assets) as well as flows (income). Given its recency and greater detail on unearned income, SIPP, with our concurrent adjustments, provides an opportunity both to improve and to update earlier estimates of the size and distribution of the elderly's economic resources through the use of adjusted income measures.

It is important to note what our measure is and is not intended to represent. It serves as an estimate of current resources available to meet economic needs. It is not intended to incorporate differences in assumed needs at different points in the life cycle, nor to account for differences in income potential at a future point in the life cycle. If

research shows that the elderly have greater resources than another age group, we may believe that this is justifiable in the sense that the elderly have greater needs or that this is expected in light of their position in the life cycle (Palmer, Smeeding, and Jencks, 1988). While the issue of needs is complex, we would argue precisely that in order to relate resources held to needs at particular stages of the life cycle, we must first assess the current resources available to each age group.

II. Methods

The data used in this study are from the preliminary longitudinal data file of the Census Bureau's Survey of Income and Program Participation.[1] The survey period extends from the summer of 1983 to the winter of 1984. The income figure used is income of the household in which the individual lives, collected during the first twelve months of SIPP, and the asset figure is the household net worth collected in the winter of 1984.

This use of the "household income of persons" concept differs from the income concept used in much previous work, in which income of households headed by persons age 65 and older has often been compared to that of households headed by younger persons. Our approach assumes that the well-being of the population of persons age 65 and older is the true subject of interest, rather than that of households headed by persons over age 65 -- the latter include many non-elderly persons but do not include those of the elderly who live in households headed by non-elderly persons. The use of the "household income of persons" concept allows us to group persons by their own age rather than by the

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[1]Details on the data are available from the Census Bureau. These data were released by the Census Bureau for research to improve understanding and analysis of SIPP data. The data on the file are preliminary and should be analyzed and interpreted with caution. At the time the file was created, the Census Bureau was still exploring certain unresolved technical and methodological issues associated with the creation of this longitudinal data set. The Census Bureau does not approve or endorse the use of these data for official estimates.

age of head of householder. This technique also recognizes the sharing of resources among household members.

A. Adjustment for Household Size and Composition

Using household income of individuals requires that some adjustment be made for the size and composition of the household. A variety of methods have been utilized for such adjustment, including welfare ratio-based approaches to adjust income for household size and composition (Danziger et al., 1984a and 1984b; Moon, 1977; Smeeding, 1977). There is, however, no firm consensus as to the best equivalence scale to use to adjust income for the size of the unit studied.

A common approach is to look at per capita household income, which implies that a two person household requires twice the resources of a one person household to reach the same level of welfare. This per capita adjustment is extreme in the sense that it fails to account for the economies of scale that exist in running the larger household. An alternative extreme would be not to adjust the figures at all on the assumption that individuals rationally choose the organization of the household. Between these two extremes there is a wide range of alternatives.

One method commonly used is to adjust by the Orshansky poverty level scales, essentially evaluating each household's income as a ratio to the poverty threshhold for a household of that size. This approach has much to recommend it. The Orshansky scales have been used in the most comprehensive prior studies on the relative status of the elderly, thus allowing ease of comparison to previous work (Moon, 1977; Radner, 1986). While the Orshansky adjustments are steeper than those used in some other approaches, previous studies indicate that this generally does not lead to significantly different results for the relative status of the elderly. Thus, for example, Danziger et al (1984a) showed that the differences between the Orshansky scale and a constant utility scale are minor. They concluded that the two scales "...lead to quite similar results for the relative economic status of the elderly."

Since the SIPP data were collected across two years, the Orshansky scales for 1983 and 1984 were weighted by the proportion of the SIPP sample that came from each year. These weighted scales were used to adjust money income for household size and composition.

B. Adjustment for Underreporting

Our approach to underreporting follows the general lines described by Radner (1982) and Budd, Radner and Hinrichs (1973). These papers demonstrated the importance of such adjustments for cross-age comparisons, since income sources characteristic of the retired are underreported to a very different extent than those characteristic of persons of working age. Radner (1986), utilizing a dataset that matched the CPS with IRS data and Social Security Administration information on actual pension payments, proposed inflation of unearned income to equality with independently derived, more reliable estimates as a means of adjustment for underreporting. Using adjustment ratios estimated from the 1972 Match File, he showed that the ratio of elderly to non-elderly median household incomes was 53 percent with no adjustment while it was 71 percent after adjusting for household size only and 85 percent after adjustment for underreporting only.

Budd, Radner and Hinrichs (1973) showed the importance of making the underreporting adjustment for inequality estimates using 1964 data from several sources. They showed that income sources that tend to be most underreported are disproportionately received by those in both tails of the income distribution; this implies that use of unadjusted data may underrepresent the actual extent of inequality. They reported that raw inequality estimates for the entire population underestimate the share of income of the lowest quintile by 13 percent and the share of income held by the highest quintile by 6 percent.

Another important prior study made use of data from the 1968 and 1972 CPS, adjusted for underreporting, taxes, family size and non-cash benefits (Smeeding, 1977).

This study found that the adjustment for underreporting increased measures of inequality by as much as 18 percent, while the other adjustments reduced measured inequality below the CPS reported estimate. The most important adjustments in terms of their effect on distribution were the underreporting adjustments for earnings, property and transfer income.

The underreporting of money income is a result both of non-reporting of receipt of various income sources and underreporting of amounts received. To address this problem, we inflated the income sources for each household and/or imputed receipt of an income source to a household. The methodology consists of three steps: (1) finding an independent estimate of the aggregate total and/or number of recipients for a given income source; (2) adjusting this independent estimate so that it coincides with the population base reflected in the Census sample; and (3) using these independent adjusted figures to impute the total to respondents. Reported amounts received for each income source were adjusted by an inflation ratio reflecting the estimated degree of underreporting. For income sources for which independent estimates of numbers of recipients of an income source were available, imputation of receipt was first made to a sufficient number of nonrespondents to match the control total and then amounts were inflated by the estimated amount of remaining "unaccounted for" income.

Independent estimates of recipients and amounts for some income sources are contained in Appendix D of each of the Current Population Reports in Series P-70 (the SIPP reports). From the many income sources collected in SIPP, we selected 10 which we believed had reliable control estimates. These income sources were wage and salary income, Social Security and railroad retirement income, all pension income sources, dividends, interest, SSI, AFDC, and veteran's payments. Together these represent approximately 85% of total income in the SIPP sample.

Receipt of income for SSI, AFDC and veteran's payments was imputed until the survey number of recipients equaled the independent estimate. Essentially, this method involved categorizing individuals by income and demographic characteristics, then

inflating the number of recipients in each categorical cell proportionally by imputation of income receipt. Within each cell, a number of persons without income receipt equal to the estimated number of "missing" recipients were randomly matched to persons in that cell with receipt and assigned that person's income amount. Income amounts were then inflated until the aggregate amounts agreed with independent control totals. The other income sources were inflated without imputation since reliable independent estimates of number of recipients were unavailable and since in many cases estimates of recipiency coincided or nearly coincided with independent estimates.[2]

A special, downward adjustment was made in the independent estimates for income and dividends. Since property income is very concentrated, underreporting adjustments must be made conservatively. Imputing the full independent estimate would require the imputation of large amounts of such income to only a few individuals.

To circumvent these problems we combined information from several sources. Initial independent estimates of aggregate property income were taken from the National Income accounts, adjusting for population coverage. Because a significant part of total property income is concentrated among a few very high-income individuals who are likely to be underrepresented in the SIPP sample, some of the difference between the SIPP aggregate and the independent estimate is likely to be due to sampling error rather than non-sampling error. A study by Avery and Elliehausen (1986) showed that the high-income frame in the Survey of Consumer Finances, approximately representing individuals from the top 1 percent of the income distribution, held about 15% of the aggregate interest-bearing assets (checking and savings accounts, CDs, money market accounts, bonds and other miscellaneous assets) and more than 40% of corporate equity. Statistics of Income data (Weber, 1988) for 1987 show that persons with incomes greater than

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[2]The authors wish to thank Denton Vaughan for his suggestions and observations on the performance of SIPP with respect to pension income. SIPP estimates of public pension recipients appear to be within 4 percent of independent estimates. It is likely that SIPP does nearly as well with private pensions, though reliable independent estimates of private pension recipients are unavailable.

$100,000 receive 27% of all dividend income, 12% of taxable interest and 35% of nontaxable interest. To adjust for this concentration of property and property income we assumed that 15 percent of interest and dividend income was received by high income individuals not included in the SIPP sample, in accordance with the estimate of the liquid assets held by the wealthy in the SCF;[3] as a conservative strategy, we elected not to adjust for this portion of the estimated underreporting. Thus, the initial National Income account estimates of dividend and interest income were reduced by 15 percent prior to any inflation in reported income amounts in the survey. The adjustment for underreporting of these income sources was then made by inflating individual amounts until the survey aggregate equaled the new, lower, independent estimate. This adjustment is quite conservative in the sense that the data are implicitly adjusted to represent not the total population, but rather the population less a proportion of high-income persons assumed to be underrepresented in the survey. It does, however, avoid problems of statistical instability that would arise by imputing large amounts of underreported property income to only a few cases in the sample.

Another novelty in our adjustment concerns the inflation process. For inflating property income amounts we used age-specific inflation ratios. A recent exact match between IRS and CPS data has shown that underreporting of these amounts varies by income, marital status, age, and imputation status (Internal Revenue Service, 1988). The study found that underreporting is somewhat larger among the elderly than among the nonelderly. We were able to obtain working tables derived during this study showing the inflation ratios for interest income based on age and imputation status.[4]

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[3]The exact adjustment ratio was .845 which is the proportion of liquid assets held by persons in the base sample SCF. We considered this figure an acceptable estimator for the proportion of dividend income unreported due to undersampling of high-income individuals and therefore used it as our deflator for the independent estimate of dividend income.

[4]The authors would like to thank Chuck Nelson of the IRS for providing these tables. Naturally, he bears no responsibility for any errors made in the use of these tables.

Briefly, our procedure here was to divide individuals into four classes, by age (under and over age 65) and imputation status (income reported or imputed). A separate inflation factor for cases in each cell was computed according to the following formula:

$$W_{ry}(T_{ry}) + W_{ro}(T_{ro}) + W_{iy}(T_{iy}) + W_{io}(T_{io}) = I$$

Where:

T = the aggregate amount of income for this source reported by the group
W = the group inflation factor
r,i = indices for imputation or report of income receipt
y,o = indices for age group (y = under age 65, o = 65 or older)
I = the independent control aggregate amount for the income source

And:

$$W_{ro} = 1.08(W_{ry})$$
$$W_{iy} = 1.55(W_{ry})$$
$$W_{io} = 1.79(W_{ry})^{5}$$

This approach allocates the overall adjustment to the four groups in proportion to the relative extent of underreporting by that group in the exact match study. The effect of the adjustment is quite similar to that of computing a single inflation ratio, but adds the refinement of utilizing information on age-specific rates of underreporting. It is worth noting that generally, the exact match study confirmed the findings on underreporting derived from comparisons with independent estimates. Steurle (1985) has reviewed the validity of exact matches with tax returns, noting that though there is some bias to underreport for tax purposes, tax returns appear to capture property income much more completely than do survey data.

C. Adjustment for Asset Resources

The final adjustment to produce a full income measure is the adjustment for asset resources. Recent research on the aged strongly emphasizes the importance of assets among the elderly's economic resources (Upp, 1983; Torrey and Taeuber, 1986).

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[5]These ratios are derived from tables based on the CPS-IRS match. The tables show, for instance, that for non-imputed interest income the ratio of mean CPS reported interest to mean IRS reported interest for a tax filer under age 65 was 79 percent. For a filer over age 65 the same ratio was 73 percent. Thus, filers over age 65 who report interest to CPS underestimate it by 8 percent more than do non-elderly reporters (.79/.73 = 1.08).

Weisbrod and Hansen (1968) showed that adjustment for net worth can increase overall median family income by 8.7 to 13.3 percent depending on the assumptions made.

The work of Moon (1977), among others, has supported the importance of such adjustments and noted their substantial impact on estimates of income distribution among the elderly. Using data from the Survey of Economic Opportunity, Moon computed distributions for several measures of economic welfare, adjusting current money income for other income, assets, government programs, taxes and intrafamily transfers, as well as household composition. She found that the Gini coefficient differed by as much as 16 percent across the various measures of economic welfare.

In our approach, we first adjust reported amounts of home equity, interest bearing assets, and corporate equities by an inflation factor developed by comparison to independent estimates of the aggregates. (The inflation factor is actually negative for home equity since home value is one asset which respondents tend to over-estimate).[6] Then, we treat all the financial assets and 70% of the home equity as an annuity that can be added to income to provide a measure of the economic well-being of the person. Property income amounts are subtracted prior to adding the annuity to avoid double counting.

This method of incorporating the asset data follows the line of development of Murray (1964), Weisbrod and Hansen (1968) and Moon (1977). This line of research argues that the best way of handling the asset amount is to treat it as if it were an annuity that paid a constant amount over the remaining lifetime. This is not to recommend that any household choose this option nor is it an indication that any particular household has that option; however, it is a simple and acceptable way of handling these important data.

The annuity value for the household is a function of the amount of net worth held, the life expectancy of the household and the rate of interest. If we denote net worth as N, the interest rate as r, and life expectancy as t, the formula for the annuity value, A, is:

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[6]Financial assets, like income, are subject to the underreporting problem. Our procedure for adjusting these data was very similar to the property income amounts.

$$A = N(r/(1-(1+r)-t))$$

The life expectancy for each individual is taken from the life expectancy tables of the National Center for Health Statistics (1982). We assume that the full annuity will be received over each individual's lifetime.

The second choice to be made is that of the interest rate involved in the calculations. Weisbrod and Hansen (1968) used interest rates of 4 and 10 percent in their calculations. They made no attempt to justify this choice, but relied on the presentation of the two results to provide an estimate of the sensitivity of their results. Moon (1977) argued that the interest rate should reflect the real rate of return that the aged could earn on the assets. She concluded that a rate of 2 percent represents the low return an aged person could expect on an annuity. This paper follows her approach and uses a real interest rate of 2 percent. It is important to note that usage of higher interest rates (which have generally prevailed during the 1980s) would lead to even larger gains for elderly households who, on average, have greater net worth.

The last choice to be made is how to include the relatively illiquid asset of home equity. One approach is to treat it as any other asset, since older people can and sometimes do "trade down" to less expensive housing (a special tax exemption for the elderly allows them to do so once in a lifetime without capital gains taxation); since the use of the home provides benefit; and since an increasing variety of financial instruments allow the home equity to be tapped. A second approach is to compute the rental equivalence of the value of home equity. This is the method used in the National Income and Product Accounts. A third method is to include only a portion of home equity in the annuity calculation.

While there is no consensus over which method is best, home equity is too important to ignore. Radner (1985) showed that in 1979 32 percent of the net worth of elderly households was in home equity with a mean amount of $25,110. In 1984, 73 percent of elderly households owned a home compared to 62 percent of the nonelderly.

The mean amount of home equity for elderly households was $54,667 (U.S. Bureau of the Census, 1986b). Weisbrod and Hansen (1968) commented on the failure of financial institutions to tap these annuity markets. Subsequently, options for tapping home equity have multiplied. The exact amount of equity that can be converted through the various financial instruments offered depends, of course, on the particular circumstance of the household. We assume that 70 percent of home equity can reasonably be treated as though it were a fungible asset. This is in the range allowed by many instruments. In addition to this practical justification, Moon (1977) has shown that including 70 percent of home equity in an annuity is a conservative estimate of the flow of rental services that the home provides for the elderly owner, given reasonable assumptions about interest rates, life expectancy and the age of the home.

D. Adjustments Not Made

Our three types of adjustment to income, of course, do not exhaust the factors which bear on economic well-being. In-kind benefits, tax burden, and leisure are among the additional adjustments for which a case could be made. Our measure does not take account of these factors both for theoretical and practical reasons.

Although SIPP collected data on taxes, initial results cast some doubt about the reliability of the estimates. Taxation is difficult to accurately simulate, and the tax burden of the elderly has been somewhat unstable over time, having been affected by several recent changes in tax law; survey data on the effects of these changes will not be available for some time.

The effects of in-kind benefits are even more difficult to estimate. Those that are the most important in the elderly population involve coverage for medical services. If onw credits the elderly for such services, does one debit them for their poorer health status and consequent need for the services (cf. Meyer and Moon, 1988)? Further, the method of attribution is problematic. Attributing per-capita governmental Medicare outlays to each elderly person would much overstate their contribution to the economic well-being of most

beneficiaries, while attempting to attribute actual expenditures would have the paradoxical effect of making the sickest elderly appear the best-off. Finally, with respect to the problem of leisure, constructing a valuation for leisure time is problematic both theoretically and practically, particularly one which is valid across stages of the lifecourse.

The decision not to adjust for these three factors is in each case a conservative decision in the sense that their inclusion would further increase the apparent well-being of the average older person relative to the non-elderly. Thus, the estimates we present reflect a conservative estimate of the resources of the elderly. The elderly, since a large portion of their income is in untaxed sources, do not pay as high a proportion of their total income in taxes as the nonelderly (Smeeding, 1977). Adjustment for in-kind benefits such as Medicare would further increase the estimated economic well-being of the elderly, and the same is true of adjustment for leisure time.

III. Results

A. The Comparative Well-Being of the Elderly

In the Tables Income 1 is unadjusted current household money income during the first twelve months of SIPP. Income 2 adjusts this figure for demographic composition using the Orshansky scales. Income 3 is current household money income adjusted for underreporting and household size and composition. Income 4 is current money household income plus the asset annuity less property income, adjusted for underreporting and household size.

Table 1 shows the household income of individuals for the elderly (65+) and the nonelderly (0-64). Table 2 breaks the income figures down by detailed age groups. The income figures are presented first unadjusted and then successively adjusted for household composition, underreporting and assets. The third column of Table 1 shows the ratio of income of individuals age 65 and older to those ages 0 to 64. Thus, the raw data show that the unadjusted income of the elderly is 65 percent that of the nonelderly.

When this figure is adjusted, however, this apparent disadvantage of the elderly disappears. When adjusted for the smaller elderly household, the ratio increases to almost 94 percent. When the adjustment for underreporting is taken into account, this ratio increases still further to nearly 103 percent. Finally, adjusting for the contribution of assets to the full economic well-being of the elderly increases the ratio to 124 percent; thus, the elderly are estimated by this methodology to be significantly better off on average than the nonelderly. Figure 1 shows the unadjusted and adjusted income figures by age group, as well as the mean income for all persons. It is important to note that the improvement from the unadjusted data is common to both the "young-old" (those age 65 to 74) and the "old-old", those over age 75. Even the oldest elderly are estimated to have a mean adjusted income 18 percent higher than the all-ages mean. The declines in household income after retirement age that appear dramatic using unadjusted data are significantly reduced when the data are adjusted. The unadjusted income decline from the 55 to 64 age group to the 65 to 74 age group is 28 percent. Using the adjusted data, this decline is only 6.5 percent. Also, while the decline in income from the young-old (55-64) to the old-old (75+) is 22 percent using the unadjusted data, it is only 3 percent using the adjusted data.

Table 2 also shows the radical effect of adjustment on estimates of the economic position of children and the elderly, the two dependent life stages. Using unadjusted data children rank fifth and seventh among the nine age groups. The unadjusted mean income for children age 7 to 17 is actually greater than the all ages mean. The two elderly age groups rank last using the unadjusted data; the average elderly person over age 75 has household income that is only 58 percent of the all ages mean.

After adjustment, however, the elderly rank third and fourth among the nine age groups, while the children have fallen to the bottom. While we must remind ourselves of the differing positions in the life cycle and the different needs of these groups, the difference is startling. The average person over age 65 has 83 percent greater economic resources than the average child under age 6.

B. Inequality Among the Elderly

While the adjusted income of the elderly compares quite favorably to those of the nonelderly, this does not imply that the problem of economic distress among the elderly has been eliminated by the large increases in benefit programs of the past two decades. Our analysis indicates that resources among the elderly are distributed even more unequally than among the rest of the population.

Table 3 indicates the increase in inequality after 65 by showing two common measures of income distribution--the Gini coefficient and the income shares by population quintile--for the age groups using the fully adjusted income measure. The data suggest that transfer payments and other benefits for the elderly have not, as argued by Fuchs and others, resulted in a reduction of inequality after age 65. After adjustments are made, the degree of inequality remains significantly greater among the elderly than among the nonelderly. In fact, the SIPP data indicate that inequality is greater among the elderly than the non-elderly even before adjustment.

Particularly striking is the concentration of resources in the top quintile. At ages 65-74, this quintile commands a higher share (45.5%) of their age-group's total economic resources than is the case at any earlier age. By age 75+, this quintile commands even more -- nearly half (46.7%) of the total.

The relatively small share received by the worst-off 40 percent, the two lower quintiles, is also striking. At ages 35 to 44 these two quintiles share 18.4 percent of the resources, but by age 75+ their share diminishes to 14.9 percent.

As a single measure of inequality, we computed within-age-group Gini coefficients (Table 3). This method too shows greater inequality after age 65 than at any other age. The Gini coefficient is lowest -- indicating greatest income equality -- in the prime-age groups whose economic well-being comes principally from the labor market. Thus, while the Gini coefficient is .341 at ages 35-44, it reaches .415 by age 75+, implying a much more unequal distribution. This is an unexpected result if, with Fuchs, one assumed that a

diminished role for earned income and an increased role for benefits after retirement age implies lower inequality.

Table 4 shows adjusted income for several demographic groups across ages as a ratio of the all-ages mean. Use of our measure of economic well-being demonstrates sharper contrasts in well-being as a function of race and gender than are demonstrated by more conventional income measures. Further, these intergroup differences increase after retirement age. At age 35-44, for example, women's economic resources are 93% as great as men's, but by age 75+ they are only 82% as great. Similarly, at age 35-44 the economic resources of blacks average 68% those of whites, but at age 75+ they are only 54% as great. As compared with the use of conventional household or family income measures, our method reveals more of the real economic differences by race by taking account of household composition and asset differences. Elderly blacks tend to live in larger households, thus having to spend their somewhat smaller income on more individuals. Elderly blacks also have few assets, and little income from pensions or property. Thus, the underreporting and assets adjustments have less effect than for whites.

IV. Discussion

Examination of the distributions of adjusted income helps to explain the paradox of increased inequality at a life stage during which benefit payments play such an important role. The income share of the lowest quintile after retirement age is roughly comparable to that at other ages. However, the middle narrows after age 65. The second and third quintiles command 25% after age 75 as compared with 30% in each of the age brackets between ages 25 and 54. These individuals -- the "tweeners", as Smeeding (1986) has labeled them -- are neither "poor" in terms of the official poverty line nor really "comfortably off".

At the same time, the data suggest the emergence of a prosperous group of retirees in the upper part of the distribution. These represent a cohort which, to a greater extent

than those examined in earlier studies, benefited from the post-World War II growth of private and public-employee pension systems, as well as from the increases of the 1970s in real estate values, increases in the real value of Social Security pensions, and other developments in retirement income systems.

These comparisons of inequality at different ages are based, of course, on cross-sectional rather than longitudinal data (which would need to extend over many decades to provide a true picture of patterns in inequality for a cohort over its life span). While the experience of different cohorts has been different, it is unlikely that the U-shaped distribution we report of economic inequality over time is an artifact of the use of cross-sectional data. There is no evidence that one cohort has greater inequality than another throughout its life course. Radner (1986) did not find any substantial cohort effects on poverty rates from 1967 to 1983. Studies of the trend in inequality, such as that of Levy (1987), show no tendency for inequality to be higher from one birth cohort to the next.

The perception by most Americans of what it means to be elderly continues to identify old age with financial deprivation, and to see privation as being typical of this stage of life. Nearly 30 percent of the individuals age 45 to 54 in a 1988 Transamerica survey believed that their income sources at retirement would not be enough to meet their daily needs (Transamerica, 1988). A 1981 Harris survey showed that 65 percent of the public believed that "not having enough money to live on" was a very serious problem for most people over age 65 (Harris, 1981). Yet the elderly themselves, while sharing a negative assessment of the circumstances of "most" elderly, typically had a much more positive assessment of their own economic circumstances, with only 15 percent seeing income inadequacy as a very serious problem for themselves personally. In the 1988 Transamerica survey, similarly, only 12 percent of the elderly reported that their income was not enough to meet their daily needs (Transamerica, 1988).

It is also interesting to note that the elderly view the income distribution as more unequal than do young people. One recent study showed that persons age 60 and older believed that 23 percent of the population could be called "rich", while persons age 30 to

39 believed that this "rich" group comprised only 16.5 percent of the population. The elderly also assumed that a higher proportion were "poor" than did younger adults, while perceiving that the middle class is smaller (Kleugel and Smith, 1986). This perception may have something to do with their experience of economic realities within their own age group, or may be the result of other factors.

While our analysis is cross-sectional rather than longitudinal in design, the results are consistent with a model which might be described as the "dimorphic life course". This model assumes that economic heterogeneity tends to increase throughout the life course, as the results of economic and investment events cumulate. The greatest returns to education, for example, are likely to be accrued not immediately but over the course of a career, while the earning power of less-educated individuals peaks earlier.

Cumulative effects associated with the operation of the labor market are, we would argue, perpetuated and magnified by the structure of retirement income systems. One leg of the support system, property income and assets, held or received primarily by high-income individuals, are the fastest growing source of retirement income, rising from 18 percent of total income for the aged to 22 percent from 1976 to 1980 (Upp, 1983). While Social Security is a relatively universal system and does include some redistributional elements, benefit levels are based on pre-retirement earnings. Private and public-employee pension systems account for an increasing share of total retirement income. In contrast to Social Security, these systems are far from universal and their benefits tend to be received predominantly by higher-income, long-tenure employees working for large organizations; women and minorities are much less likely than men and whites to receive such benefits (Crystal, 1984). In the current study, only 2% of private pension benefits were received by individuals in the lowest 20% of total economic well-being.

Thus, while Social Security probably does exercise some leveling effect (it is distributed less unequally than total income), these equalizing effects are outweighed by those of pension and property income. On balance, the income sources which replace

wage and salary income as the principal income sources after age 65 are apparently even more unequally distributed than is employment income.

The tendency for Census income statistics to be presented principally in terms of unadjusted family or household income has affected both perception and policy (Jencks, 1987). While any given approach to adjustment is inevitably controversial, the widespread use of unadjusted figures with minimal qualification or interpretation reflects a false "neutrality". Appraising the impact of transfer and other benefit programs in combination with private-sector, tax-advantaged retirement plans requires that we be able to intelligibly interpret the extent and distribution of economic resources and economic distress among the elderly. These and other data on the disparate nature of the elderly's economic circumstances argue against "one-size-fits-all" public policies which implicitly consider the elderly as a homogeneous group of poor individuals.

As our analysis indicates, the appropriate comparison of economic welfare across age groups is a much less straightforward exercise than is often assumed; results vary substantially depending on the way in which raw Census data are utilized. The adjustments we have suggested as most appropriate -- those for household size, underreporting, and assets -- when taken together result in substantially higher estimates of the elderly's economic resources than is true when the data are unadjusted. Methodologically, we would argue that adjustments of this kind are of great importance in evaluating issues of generational equity and the cumulative impact of transfer programs and retirement income systems. Substantively, the analysis supports the view that taken together, our system of retirement income systems and old-age benefits results in perpetuation and even magnification of the economic inequalities that result from labor market forces during the years of labor force participation.

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TABLE 1
Mean Adjusted Income of Elderly and Nonelderly

	AGE GROUP 0-64	65+	RATIO
Income Concept:			
INCOME 1	$29,581	$19,278	65.2%
	$108	$243	
INCOME 2	$21,274	$19,976	93.9%
	$80	$238	
INCOME 3	$22,780	$23,410	102.8%
	$87	$315	
INCOME 4	$23,109	$28,637	123.9%
	$89	$427	

Numbers below means are standard errors
Source:Author's calculations from SIPP

TABLE 2
Mean Adjusted Income By Age Groups

	AGE GROUP								
	0-6	7-17	18-24	25-34	35-44	45-54	55-64	65-74	75+
Income Concept:									
INCOME 1	$24,262	$28,953	$29,410	$27,165	$32,964	$35,390	$29,679	$21,128	$16,350
	$269	$234	$347	$207	$273	$359	$347	$326	$347
RATIO*	85.6%	102.1%	103.8%	95.8%	116.3%	124.9%	104.7%	74.5%	57.7%
INCOME 4	$15,649	$18,015	$21,335	$22,438	$25,438	$30,922	$31,028	$28,990	$28,078
	$174	$143	$239	$176	$218	$303	$370	$590	$582
RATIO*	65.8%	75.8%	89.7%	94.4%	107.0%	130.1%	130.5%	122.0%	118.1%

Numbers below means are standard errors
*: Ratio to total population mean
Source:Authors' calculations from SIPP

TABLE 3
Ginis and Income Shares of Quintiles By Age Group

	AGE GROUP								
	0-6	7-17	18-24	25-34	35-44	45-54	55-64	65-74	75+
GINI	0.374	0.367	0.382	0.346	0.341	0.356	0.377	0.393	0.415
Income Share of Quintile:									
LOWEST	4.6%	5.0%	4.5%	5.8%	5.9%	5.4%	5.4%	5.7%	5.3%
SECOND	11.4%	11.5%	11.0%	12.3%	12.5%	12.2%	11.4%	11.1%	9.6%
THIRD	17.3%	17.5%	17.4%	17.5%	17.5%	17.5%	16.6%	15.8%	15.4%
FOURTH	24.6%	24.5%	24.5%	24.0%	23.8%	23.7%	23.2%	21.9%	23.0%
HIGHEST	42.0%	41.6%	42.6%	40.4%	40.2%	41.2%	43.4%	45.5%	46.7%

Source:Authors' calculations from SIPP

TABLE 4

Fully Adjusted Income as Proportion of All Ages Mean By Age, Race, Sex, and Education

	AGE GROUP								
	0-6	7-17	18-24	25-34	35-44	45-54	55-64	65-74	75+
Group:									
WHITE	71%	81%	96%	99%	111%	136%	136%	128%	122%
BLACK	40%	46%	54%	62%	76%	79%	77%	62%	66%
HISPANIC	45%	46%	66%	72%	72%	74%	78%	75%	------
BLACK/WHITE	0.57	0.57	0.57	0.63	0.68	0.58	0.57	0.49	0.54
MALE	65%	78%	95%	99%	111%	133%	142%	135%	133%
FEMALE	66%	74%	85%	90%	103%	127%	120%	112%	109%
FEMALE/MALE	1.01	0.95	0.89	0.91	0.93	0.95	0.84	0.83	0.82
ELEM	----------		52%	53%	53%	71%	77%	81%	93%
HIGH SCHOOL	----------		80%	77%	90%	120%	117%	117%	120%
COLLEGE	----------		111%	118%	132%	171%	194%	196%	176%
ELEM/COLLEGE			0.47	0.45	0.40	0.41	0.39	0.41	0.53

Source:Authors' calculations from SIPP

-----:Insufficient data

Data for whites includes Hispanic whites

Figure 1
Household Income of Individuals

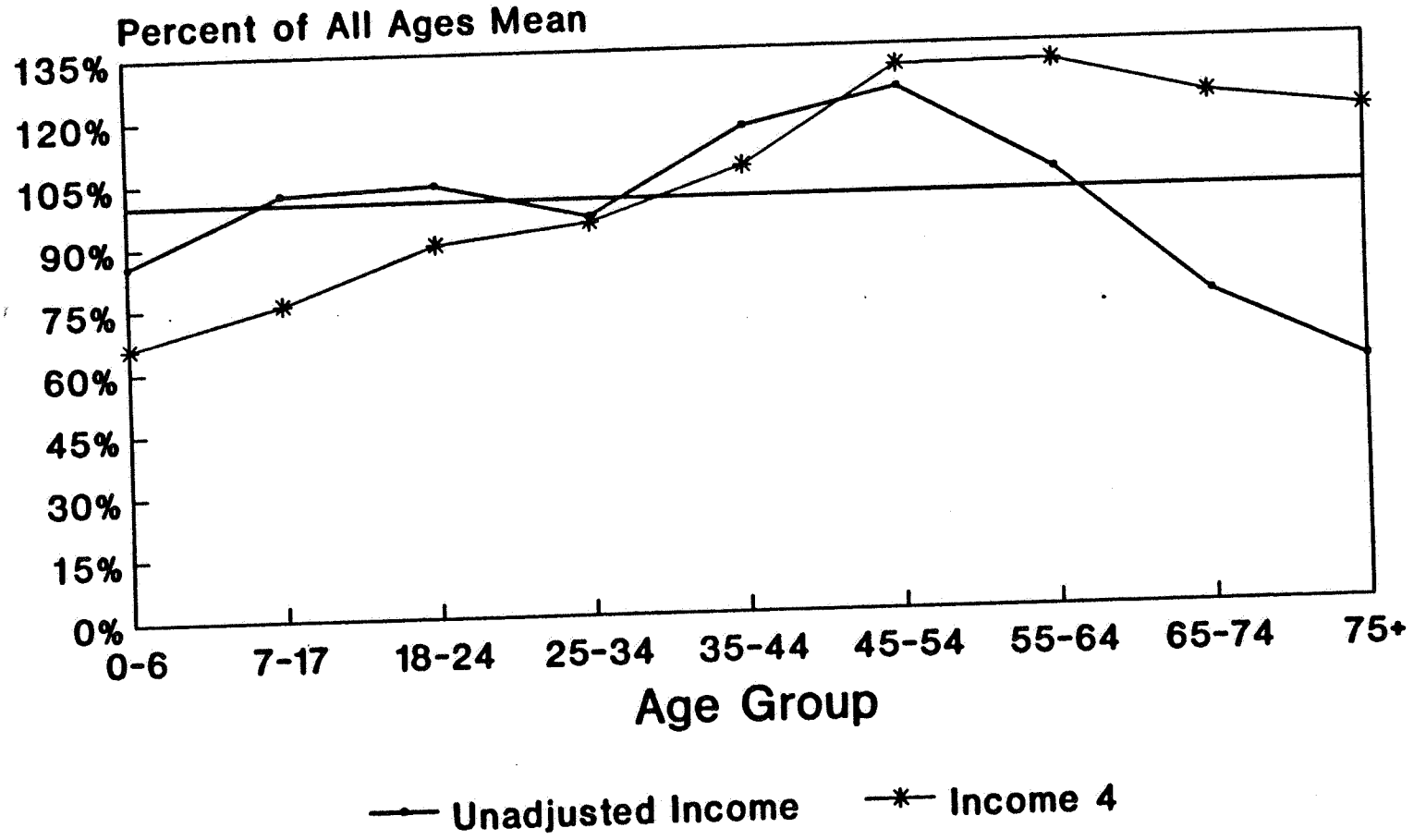

Figure 2
Gini Ratio Of Individuals

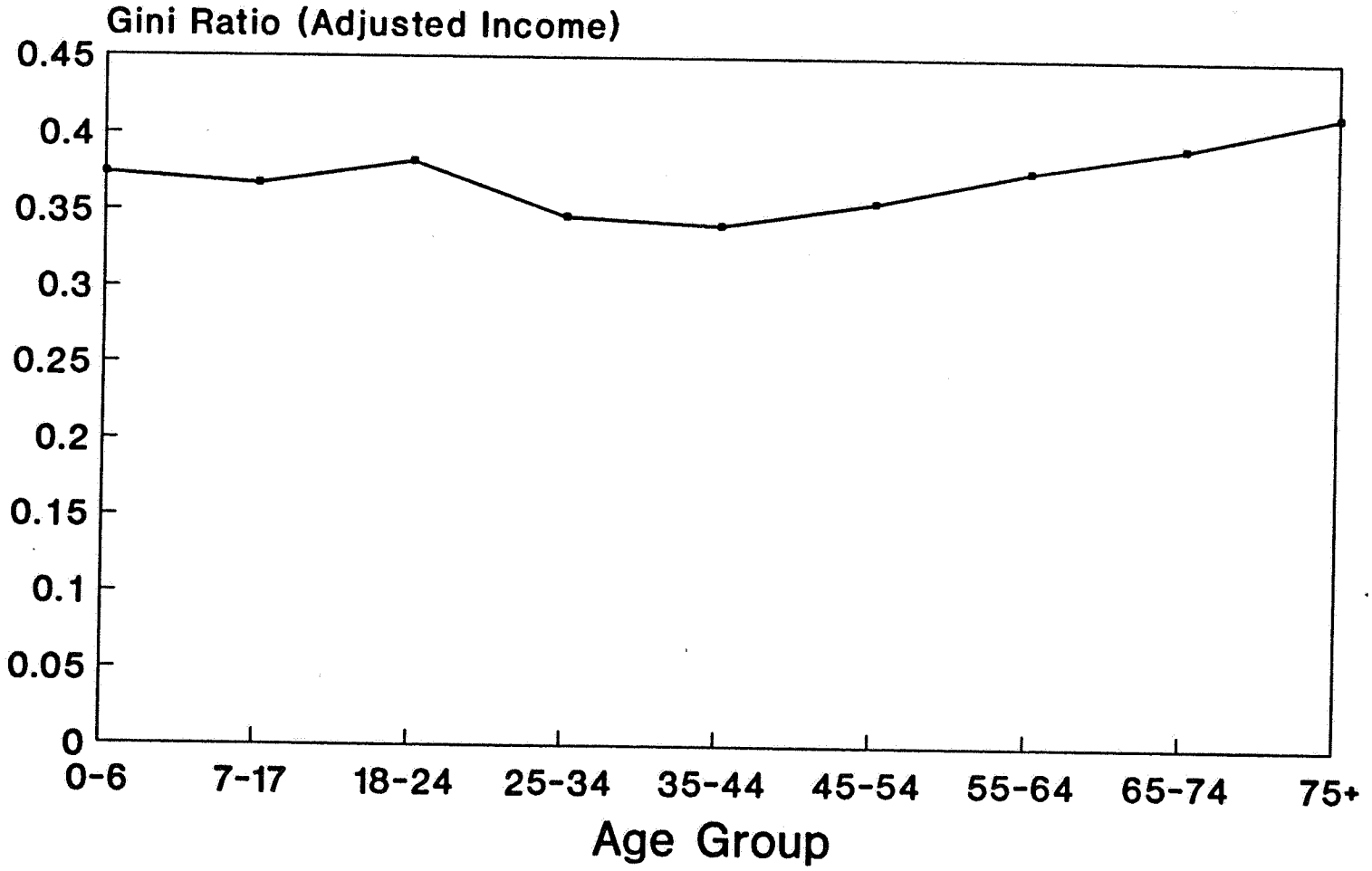
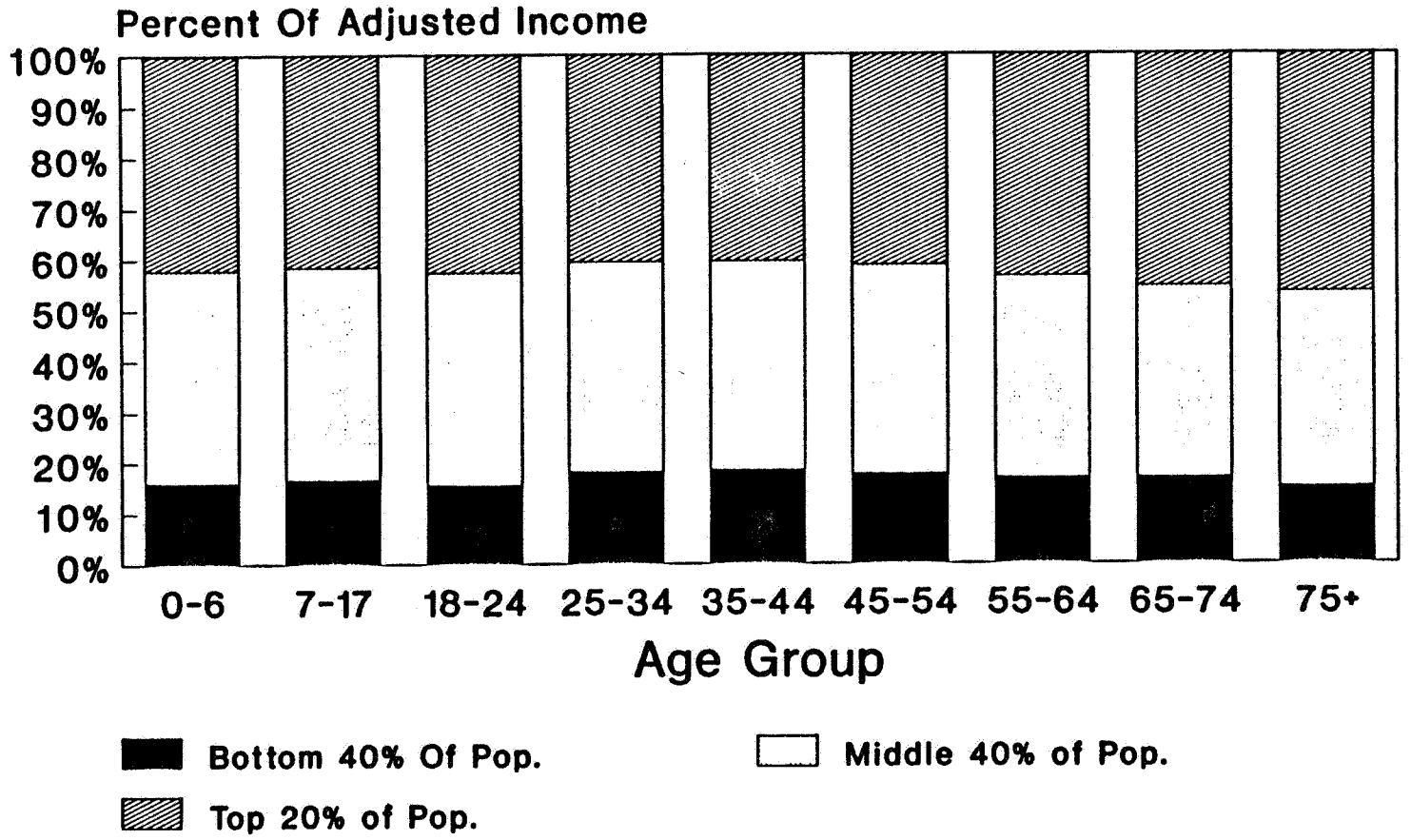
Figure 3
Income Share Of Population