Economic Well-Being of the Old Old: Family Unit Income and Household Wealth

*by Daniel B. Radner**

This article examines the family income and the household wealth and income of old old persons. Subgroups of the old old are compared and the old old are compared with the young old. When the old old group is separated into three subgroups—widows living alone, other females, and males—the economic status of widows living alone is substantially below that of the other two subgroups. This difference is found when income, wealth, and combined income-wealth measures are used. When the old old group is compared with the young old group, the economic status of the old old is substantially lower for all measures examined. When the three subgroups within both the old old and young old groups are compared, the economic status of each subgroup is lower for the old old for most measures. Income data from the March 1991 Current Population Survey and wealth and income data from the 1984 Survey of Income and Program Participation are used.

*Division of Economic Research, Office of Research and Statistics, Social Security Administration.

The older portion of the aged population has been growing in importance for some time as it increases in absolute and relative size. This article examines the economic status of the "old old," as that group is referred to here. Other terms, such as "oldest old," have also been used (for example, Atkins 1992; Taeuber and Rosenwaike 1992).

Economic status is measured here using income, wealth, and a combined income-wealth measure. The family unit income of old old persons, adjusted for differences in family size, is the measure used in the detailed income estimates.[1] The household wealth of old old persons, adjusted for differences in household size, is the measure used in the wealth estimates. The income-wealth measure uses the household income and wealth of old old persons, adjusted for differences in household size.

The old old group ordinarily is defined solely on the basis of age, and several different age cutoffs have been used in the literature. Two cutoffs are used in this article, aged 85 or older and aged 80 or older, depending on the data used. Where sample sizes are relatively large, such as for the detailed income estimates shown, the aged 85 or older cutoff is used. Where sample sizes are smaller, such as for the wealth estimates shown, the aged 80 or older cutoff is used. Many of the comparisons presented are between the old old and the young old (defined here as aged 65-69). Persons in institutions are not included in the estimates shown here.

Several researchers have examined the economic status of the old old in recent years. Atkins (1992) assessed the level and composition of the income of the old old using data for the mid-1980's from the Current Population Survey (CPS). He found that, relative to the young old, the old old were concentrated at lower income levels. Social Security benefits and property income were more important for the old old than for the young old, and earnings were far less important for the old old. He also examined the effects of assets and taxes on the status of the old old and discussed the consumption of that group.

Longino (1988) examined the demographic and socioeconomic characteristics of persons aged 85 or older using data from the 1980 Decennial Census. His focus was on estimates by State. For example, poverty rates varied from 9.6 percent (California) to 30.8 percent (Mississippi).

Although she did not focus on the old old, Grad (1992) showed estimates of the level and composition of income for units aged 85 or older (and for subgroups of that age group) using data for 1990 from the March 1991 CPS. Old old units had lower median incomes and higher poverty rates than young old units.

Radner (1992) showed some income estimates from the March 1991 CPS for family units with householders aged 85 or older, as well as for other age groups, including the nonaged. In 1990, old old units had a median income, adjusted for unit size and age, that was 53 percent of the median for all units. Persons aged 85 or older had a higher poverty rate than all other detailed age groups except children under 10 years of age.

As in other subgroups of the aged, the old old are characterized by diversity in economic circumstances. Some of the old old are what we ordinarily consider rich, while many others are poor. This diversity should be kept in mind as the discussion progresses. Much of the analysis presented here is in terms of medians, although income quintiles and the lower part of the distribution are discussed.

Economic well-being can be measured in several ways. Current well-being is examined here. There is no attempt to analyze the same person's earlier status or to analyze how persons arrived at their current status. In this article, resources adjusted for needs are used to measure economic well-being.

The concepts of resources used here are income, wealth, and a combined income-wealth measure. It is sometimes stated that, although the median income of the old old is low, they have assets, particularly home equity, that make their situation relatively better. Estimates of wealth and a combined income-wealth measure are used to examine this issue.

Annual cash income before taxes is the definition of income used. The detailed income data, which are for calendar year 1990, are from the March 1991 CPS. The income amount used for each person is the total income for the family unit to which the person belongs. Thus, the income amount used for an old old person reflects any income received by related persons (including nonaged persons) with whom he or she lives. Important implications of counting income in this manner are discussed later. The CPS income data are adjusted for size of family unit using an equivalence scale derived from the poverty thresholds for 1990.

Two principal definitions of wealth are used, net worth and financial assets. In this article, there is no interest in the upper tail of the wealth distribution or in the measurement of inequality in the distribution of wealth. Instead, the emphasis is on the wealth held by persons who are not extremely wealthy, and on wealth as one type of economic resource.

The wealth data are from wave 4 of the 1984 panel of the Survey of Income and Program Participation (SIPP). Although the sample from the 1984 SIPP panel is relatively small, that SIPP panel was the best data source available. A combined income-wealth measure was used to examine units with both low income and low wealth. Both the income and wealth data used in this measure are from wave 4 of the 1984 SIPP.

In the SIPP estimates shown here, the wealth amount assigned to each person is the total wealth of all members of the household to which the person belongs. The income amount assigned is the income of all household members. (This treatment differs from the way in which CPS incomes were calculated; the CPS method is based on family units, rather than on households.) The SIPP wealth and income data are adjusted for household size using an equivalence scale derived from the 1984 poverty thresholds.

In this article, it is assumed that all members of a multiperson unit (that is, a family in the case of the CPS and a household in the case of SIPP) have equal access to the resources of that unit. That assumption might not be valid in some cases. For example, an old old person living with her son might not have equal accesss to the income and wealth of the family unit or household. In that case, the estimate of the person's economic status used here is not likely to be accurate. The implications of this assumption are discussed later.

Who Are the Old Old?

As noted above, two definitions of the old old are used in this article. When income data from the CPS were examined, the group was defined as persons aged 85 or older. That group consisted of 1,506 person observations in the March 1991 CPS file. When wealth and income data from the SIPP were examined, the group was defined as persons aged 80 or older. That group consisted of 1,141 person observations in wave 4 of the 1984 SIPP. The lower age cutoff was used with SIPP because of SIPP's smaller sample size.

The composition of the old old is shown for both age cutoffs using CPS demographic data in table 1. It should be noted that the CPS (and SIPP) estimates are limited to the noninstitutional population. A substantial proportion of the group aged 85 or older is excluded because of this limitation. An estimate of the entire population aged 85 or older for July 1, 1989, shows 3.0 million persons (Bureau of the Census 1990), rather than the 2.1 million persons (for March 1989) shown in the CPS file.

For both definitions of the old old, females constituted about two-thirds of the group. Both old old groups can be separated into three subgroups of roughly equal size: Widows living alone (that is, in a one-person household), all other females, and males. Estimates for those three subgroups are shown in most of the analysis presented later. This classification is only one of many possible useful breakdowns. Males and females are shown separately because those groups show important differences in economic status. There is also great interest in the status of widows in the old old group; an important subgroup consists of widows who live alone.[2]

Compared with widows who live alone, the other female and male subgroups are much less homogeneous, as is evident from table 1. Differences in the compositions of the three subgroups are discussed below.

There are some differences between the groups formed by the two definitions of old old. The group aged 85 or older contained a lower percentage of married persons, both female and male, and a higher percentage of widowed persons, both female and male, than the group aged 80 or older.

These old old groups are also compared with the young old (aged 65-69) and with the aged as a whole (aged 65 or older) in table 1. The old old contained a higher proportion of females and widowed persons, both female and male, than did the young old or the aged as a whole. Widows living alone constituted only 10 percent of the group aged 65-69 and 20 percent of the aged group as a whole. The old old contained a much lower proportion of married persons than did the young old or the aged as a whole.

Economic Resources of the Old Old

In this section, economic well-being is examined using three types of data. First, estimates based on 1990 income data are presented. Those estimates include median income, the distribution of family units among income quintiles, the composition of total income, and poverty rates. Second, estimates based on 1984 wealth data are shown. Median wealth and the composition of net worth are examined. Finally, an income-wealth measure based on 1984 data is used. The percentage of each group that has both low income and low wealth is examined.

Income

Data from the CPS are used for the detailed income estimates shown here. The person is used as the unit of analysis and the family unit (family or unrelated individual) is used as the income recipient unit. In the estimates, each person is counted once (using the appropriate sample weight) and the characteristics used to classify the person are his or her characteristics. For each person, the income amount used is the income of the family unit to which the person belongs. (The amounts discussed here are before adjustment for differential needs; that adjustment is discussed later.) The issues involved in these choices are very complex and cannot be addressed fully here. A brief discussion of the reasons for and implications of these choices, however, is useful.

The person is used as the unit of analysis because that is the simplest way in which all old old persons in the sample can be analyzed. Some other studies have used different units of analysis. For many of her estimates, Grad (1992) used married couples (usually classified by the age of the husband) and nonmarried persons. Some wives who were old old would not be classified in the old old group using that method. Radner (1992) used family units classified by the age of the householder (head) as the unit of analysis in most of his estimates. That method excludes from the old old group any old old person living in a family that has a householder who is not old old.[3]

An important technical choice that had to be made was the definition of the income recipient unit. This choice is particularly important for the old old, since a relatively high percentage of that age group lives with persons other than their spouse (for example, with their child). When examining income (for example, using the CPS), the persons whose income is summed to obtain the income assigned to the old old person must be specified. The narrowest definition includes only the old old person's income, regardless of living arrangements or sharing of expenses. The broadest definition includes the incomes of all persons in the household in which the old old person lives. (A household consists of all persons, related or unrelated, living together in a dwelling unit.) The narrowest definition understates the extent of income sharing that occurs, while the broadest definition overstates it.

In this article, for the CPS income estimates, the incomes of all members of the family unit to which the old old person belongs are summed. If the person is an unrelated individual (that is, lives alone or only with one or more nonrelatives), then only the person's income is counted. If the person belongs to a family (that is, two or more related persons who live together), then the incomes of all members of that family

Table 1.—Percentage composition of the old old and young old, noninstitutional population, 1991

Characteristic of person	Age of person			
	85 or older	80 or older	65–69	65 or older
Total	100	100	100	100
Female	67	65	55	58
Married	6	11	32	24
Widowed	55	48	15	28
Living alone	35	33	10	20
Living with others	20	15	5	8
Other	5	6	7	7
Male	33	35	45	42
Married	17	22	37	31
Widowed	15	11	3	6
Living alone	8	7	2	4
Living with others	7	4	1	2
Other	1	2	5	4
Number of persons (in millions)	2.4	6.0	10.1	30.1

Source: Tabulations from the March 1991 Current Population Survey.

are summed and that sum is assigned to that old old person (and to every other person in the family). This method implicitly assumes that all members of a family share equally in that family's income. (More precisely, it is assumed that income adjusted for needs is the same for all members; see below). On average, old old persons in families probably have less than equal access to the family's income. Thus, this method probably tends to produce some overstatement of the economic status of old old persons, but the size and importance of any overstatement is not known.

In addition to the issue of income sharing, differences in needs produce further complications. An old old person who has less than equal access to the family's cash income might be receiving, for example, free room and board. In that case her economic status might be higher than when only access to cash income is considered. Her need for cash income would generally be less than her need if she had to pay for room and board (for example, if she lived alone). Considering only the old old person's access to cash income and not taking account of differences in needs produces an inaccurate picture (an underestimate) of economic well-being in this case.[4]

For the purposes of this article, the more comprehensive method of summing the incomes of all family members was chosen. That method is consistent with the method used in the calculation of the official poverty rates for persons that are shown later.

Income is defined as cash income before taxes. Total income can be separated into five income types: (1) Earnings (wages and net income from self-employment); (2) Social Security (OASDI) benefits; (3) property income (primarily interest, dividends, and rent); (4) pensions and annuities (retirement, survivor, and disability income other than Social Security); and (5) other income (all other regularly received income types, including Supplemental Security Income).[5]

Noncash income is excluded, in part due to the controversial nature of the available estimates and in part due to the lack of information on valuation in the data. Taxes are not taken into account because the data do not include information on tax liabilities.

The income data in the CPS are known to suffer from response error, which results in underreporting of total income (for example, Radner 1983). Underreporting has been found to be substantial for the aged, but it is not clear whether underreporting is higher for particular subgroups of the old old or higher for the old old than for the young old, the groups compared in this article.

Income is adjusted for differential needs associated with differences in size of unit in the estimates shown in this article. The equivalence scale used to adjust CPS income was based on the official weighted average poverty thresholds (Bureau of the Census 1991b). In the scale used here, differences in thresholds by age of householder (that is, household head) that are present in the official thresholds were not used; the all ages weighted average thresholds were used in the scale. The age differentials were not used because they are controversial and because their absence simplifies the analysis. In this article, the presence or absence of the age differential has little effect because only aged persons are discussed here.[6] Scale values differ by size of family unit. A one-person unit was used as the base for the equivalence scale.[7] The income of the family unit was divided by the appropriate scale value to obtain adjusted income.

Median income.—Median family unit income of persons aged 85 or older (adjusted for size of family unit) in 1990 is shown for sex, marital status, and household size subgroups in table 2. (The subgroups shown in this table differ substantially in size; see table 1.) The median was $11,728 for all persons aged 85 or older. The median was higher for males ($13,520) than for females ($10,468). For both sexes, the median was substantially higher for those living with others than for those living alone, although the difference was larger for females.[8] (The percentages who lived alone differ by sex; 59 percent of females, but only 28 percent of males (not shown), lived alone.) It should be remembered that, for old old persons living with others, any income received by related persons with whom they live was included when the median was calculated. Married persons as a whole had a higher median than widowed persons. Widowed females living alone had the lowest median ($8,120) of any of the groups shown.[9]

Widows living alone constitute one of the three subgroups of the old old that are shown in the remainder of this article—other females and males are the other two.[10] It is important to understand the differences in composition among these three subgroups. The other female subgroup consisted of 14 percent who lived alone and 86 percent who lived with others, while the male subgroup included 28 percent who lived alone and 72 percent who lived with others (not shown). Within the other female subgroup, 19 percent were married (with spouse present) and 63 percent were widows living with others. Within the male subgroup, 47 percent were married, 25 percent were widowers who lived alone, and 21 percent were widowers who lived with others.

It is also important to examine the composition of the subgroups in terms of the proportion who belonged to families; income was summed over all family members. Widows living alone had only their own income considered. The other female subgroup consisted of 21 percent who were unrelated individuals (and therefore had only their own income considered), 19 percent who were married and living with their spouse, and the remaining 60 percent who lived with one or more relatives, but not with a spouse (not shown). The vast majority of the latter group (57 percent of the subgroup total) consisted of widows. The problem of equal access to income is most important for the 60 percent in the latter group; married couples presumably are more likely to share income equally. If, on average, the old old persons had less than equal access to the family income, then their economic status probably would be overstated. The degree of any overstatement that might exist, however, is not known.

The male subgroup consisted of

31 percent who were unrelated individuals (mostly widowers), 47 percent who were married and living with their spouse, and the remaining 21 percent who lived with one or more relatives, but not with a spouse (not shown). The vast majority of the latter group (18 percent of the subgroup total) consisted of widowers. The problem of equal access to income is most important for the latter group, which accounted for 21 percent of the subgroup. Because this group is smaller for males than for other females, it is likely that the possible overstatement of economic status is larger for other females than for males. Widows living alone are not subject to this possible overstatement because only their own income is included. Therefore, differences in economic status between widows living alone and the other two subgroups may be overstated somewhat. It should be noted, however, that the use of measurement methods that do not include the incomes of all family members probably would understate the economic status of the other female and male subgroups.[11]

Median incomes adjusted for unit size are shown for the groups aged 85 or older, 65-69, and 65 or older, and for subgroups of those age groups, for 1990 in table 3. (The group aged 65 or older is shown for comparison in several tables, but generally is not discussed.) Within the old old group, widows living alone had by far the lowest median, while other females had the highest (chart 1). The median for widows living alone was less than half the median for other females.

The median for the old old was 63 percent of the median for the young old.[12] It should be noted that when the old old are compared with the young old in this article, the economic status of the old old relative to the young old could be overstated somewhat because the inclusion of the income of other family members is likely to be more important for the old old than for the young old. Despite that possible overstatement, the economic status of the old old group as measured here generally is below that of the young old.

Differences in the compositions of the age groups have a strong impact on

Table 2.—Median family unit incomes of persons aged 85 or older, income adjusted for unit size, 1990

Characteristic of person	Total [1]	Married	Widowed
Total	$11,728	$13,456	$10,851
Female	10,468	14,688	10,300
Living alone	8,150	(2)	8,120
Living with others	18,119	15,561	18,915
Male	13,520	13,237	13,913
Living alone	10,823	(2)	11,037
Living with others	14,760	13,456	17,855

[1] Includes never married, divorced, and separated persons.

[2] Fewer than 10,000 weighted cases. All other cells contain more than 100,000 weighted cases.

Source: Tabulations from the March 1991 Current Population Survey.

Table 3.—Median family unit income of old old and young old persons, income adjusted for unit size, 1990

Characteristic of person	Age of person		
	85 or older	65–69	65 or older
Total	$11,728	$18,632	$15,526
Female	10,468	17,246	13,921
Widow living alone	8,120	10,668	9,328
Other	16,509	19,156	17,244
Male	13,520	20,260	17,693

Source: Tabulations from the March 1991 Current Population Survey.

Chart 1.—Median family unit incomes of old old and young old persons, 1990

the differences between the age groups as a whole. The old old group had relatively more widows living alone (table 1), who had a lower median than the other two subgroups.

For each subgroup, the median for the old old was below the median for the young old. For males the median for the old old was 67 percent of the median for the young old, while for widows living alone the corresponding figure was 76 percent, and for other females the figure was 86 percent. Widows living alone in the young old group had a lower median than other females and males in the old old group, as well as in the young old group.

Income quintiles.—It is also useful to examine income quintiles of persons within the old old group (table 4).[13] For the group as a whole, by definition each quintile contained 20 percent of all persons in the group. Widows living alone were concentrated, in a relative sense, in the lower quintiles. For that subgroup, 31 percent were in the bottom quintile and 28 percent were in the second quintile, while only 7 percent were in the top quintile. Other females showed a far different distribution—only 15 percent were in the bottom quintile and 32 percent were in the top quintile. Males showed the smallest percentage in the bottom quintile (13 percent), but only 22 percent in the top quintile, far below the figure for other females.

When the composition of each income quintile of the old old group was examined, large differences were found among the quintiles. Although widows living alone accounted for 35 percent of the age group as a whole, they comprised 55 percent of the bottom income quintile. In contrast, other females, who constituted 32 percent of all persons, accounted for 51 percent of the top income quintile.[14]

Composition of total income.—The relative importance of different income types received by the old old is also of interest. These estimates are sensitive to the choice of the measurement method used here in which, for old old persons in families, the income of all family members was summed. For the old old as a whole, Social Security benefits were the most important income type, accounting for 36 percent of total family unit income (table 5).[15] Property income accounted for 27 percent, earnings for 20 percent, pensions and annuities for 14 percent, and other income for 3 percent.

The substantial percentage for earnings reflected the earnings of other family members. Grad (1992, table VII.1) showed the composition in 1990 of the total income of married couples and nonmarried persons aged 85 or older excluding the income of

Table 4.—Distribution of subgroups among family unit income quintiles of persons aged 85 or older, and composition of those quintiles, income adjusted for unit size, 1990

Characteristic of person	Total	Income quintiles: 1	2	3	4	5
	Distribution among quintiles					
Total	100	20	20	20	20	20
Female	100	24	22	18	18	19
Widow living alone	100	31	28	19	14	7
Other	100	15	14	17	22	32
Male	100	13	17	25	24	22
	Composition of quintiles					
Total	100	100	100	100	100	100
Female	67	79	72	59	61	63
Widow living alone	35	55	49	33	25	13
Other	32	24	22	26	35	51
Male	33	21	28	41	39	37

Source: Tabulations from the March 1991 Current Population Survey.

Table 5.—Percentage composition of family unit income of persons aged 85 or older, income adjusted for unit size, 1990

Characteristic of person	Total	Earnings	Social Security	Property	Pensions	Other
	All percentiles					
Total	100	20	36	27	14	3
Female	100	22	35	27	14	3
Widow living alone	100	(1)	48	36	12	3
Other	100	35	27	21	15	2
Male	100	18	38	27	15	2
	Middle 60 percent [2]					
Total	100	9	53	18	16	3
Female	100	9	53	19	16	4
Widow living alone	100	(1)	69	17	11	3
Other	100	22	40	19	16	3
Male	100	10	53	17	16	3

[1] Less than 0.5 percent.
[2] Defined within each subgroup according to size of total income adjusted for unit size.

Source: Tabulations from the March 1991 Current Population Survey.

other family members. Earnings accounted for only 3 percent of total income using that definition. Social Security benefits accounted for 47 percent, property income for 32 percent, and pensions or annuities for 14 percent.

The composition of income varied among the subgroups of the old old (table 5). For widows living alone, earnings were negligible, and Social Security benefits (48 percent) and property income (36 percent) accounted for 84 percent of total income. Supplemental Security Income (a component of other income) accounted for 2 percent of total income. For other females, however, earnings was the most important type (35 percent), followed by Social Security (27 percent) and property income (21 percent). The percentages for males were similar to those for the old old group as a whole.

The composition of aggregate income for a group can be influenced strongly by the composition of income of units with high incomes. Excluding units with the highest and lowest incomes can provide a better picture of the composition of income of "typical" units in the group. For the old old group as a whole, Social Security benefits were more important and earnings and property income were less important for the middle 60 percent of the distribution of total income than for the entire distribution.[16] When the middle 60 percent of the distribution of total income within each subgroup was examined, it was found that for each subgroup property income was less important and Social Security benefits were more important than for the subgroup as a whole. Earnings was less important for other females and males in the middle 60 percent (and negligible for widows living alone in both cases). For widows living alone, Social Security accounted for 69 percent of total income, property income for 17 percent, and pensions for 11 percent. Earnings remained an important source for other females, accounting for 22 percent of their total income.[17]

Poverty.—Another measure of the economic status of a group is the group's poverty rate. Poverty rates for persons in the old old and young old groups, using the official definition of poverty, are shown for 1990 in table 6. Because the appropriate level for the poverty threshold is controversial, it is useful to examine units that are not far above the official threshold. Rates below 125 percent and below 150 percent of the threshold are also shown in table 6. In 1990, the poverty threshold for an aged unrelated individual was $6,268, while the (weighted average) threshold for an aged two-person family was $7,905 (Bureau of the Census 1991b).

Looking first at the old old group, 20.2 percent of persons were poor. The corresponding rates were 24.0 percent for females and 12.6 percent for males. The rate for widows living alone (32.1 percent) was more than double the rates for other females (15.2 percent) and males (chart 2).[18]

When the higher thresholds were examined, the rates were substantially higher, but the pattern among the subgroups was similar to that found using the official rates. For the old old group as a whole, 30.4 percent were below 125 percent of the poverty threshold and 39.8 percent were below 150 percent of the threshold. For both of the higher thresholds, the rate for females was substantially higher than the rate for males, and the rate for widows living alone was more than double the rates for the other two subgroups. For widows living alone, 59.8 percent were below 150 percent of the threshold. For all three levels, the rate for other females was similar to the rate for males.

The poverty rate for the young old (8.4 percent) was less than half the rate for the old old.[19] For each subgroup, the rate for the old old was substantially above the rate for the young old. The smallest relative difference was for widows living alone; the rate in the young old group was quite high (22.2 percent).

When persons whose family unit income was not far above the poverty threshold were included in the count, the old old group still had a higher percentage below the cutoff than the

Table 6.—Percentage of persons below the poverty threshold and below alternative thresholds, 1990

Ratio of income to poverty threshold	Age of person: 85 or older	65–69	65 or older
Total			
Less than 1.00	20.2	8.4	12.2
Less than 1.25	30.4	13.4	19.0
Less than 1.50	39.8	18.7	26.3
Female:			
Less than 1.00	24.0	10.4	15.4
Less than 1.25	35.6	16.0	23.4
Less than 1.50	44.9	22.3	31.5
Widow living alone:			
Less than 1.00	32.1	22.2	25.2
Less than 1.25	48.6	33.6	39.1
Less than 1.50	59.8	44.4	50.6
Other:			
Less than 1.00	15.2	7.6	10.2
Less than 1.25	21.3	11.9	15.2
Less than 1.50	28.4	17.2	21.4
Male:			
Less than 1.00	12.6	5.9	7.6
Less than 1.25	19.9	10.2	12.8
Less than 1.50	29.5	14.3	19.0

Source: Tabulations from the March 1991 Current Population Survey.

young old. The young old showed 13.4 percent below 125 percent of the official threshold and 18.7 percent below 150 percent of that threshold. Compared with the young old, a higher percentage of the old old was between the poverty threshold and 150 percent of the threshold. The old old showed 10.2 percent between the threshold and 125 percent of the threshold and 9.4 percent between 125 percent and 150 percent of the threshold. Thus, 19.6 percent of the old old group was above the poverty threshold but below 150 percent of that threshold, compared with 10.3 percent of the young old in that range.

When the two higher thresholds were used and the old old group was compared with the young old group, for both females and males, the percentage for the old old group was roughly double the percentage for the young old group. For both widows living alone and other females, the rates for the old old were substantially higher than for the young old. The rates for all females are affected by the composition of the age group as well as by the rate for each subgroup. Because the old old group contained a higher percentage of widows living alone than the young old group, the combined percentages for all females were relatively higher than the subgroup rates for the old old group.

Summary.—Within the old old group, the economic status of females was below that of males, and the status of widows living alone was substantially below that of other females and males. This result was found using median incomes, the distribution of persons among income quintiles, and poverty rates. The status of the old old was below that of the young old, for the groups as a whole and for subgroups, in terms of both median incomes and poverty rates. The status of widows living alone was quite low in the young old group, as well as in the old old group.

Wealth

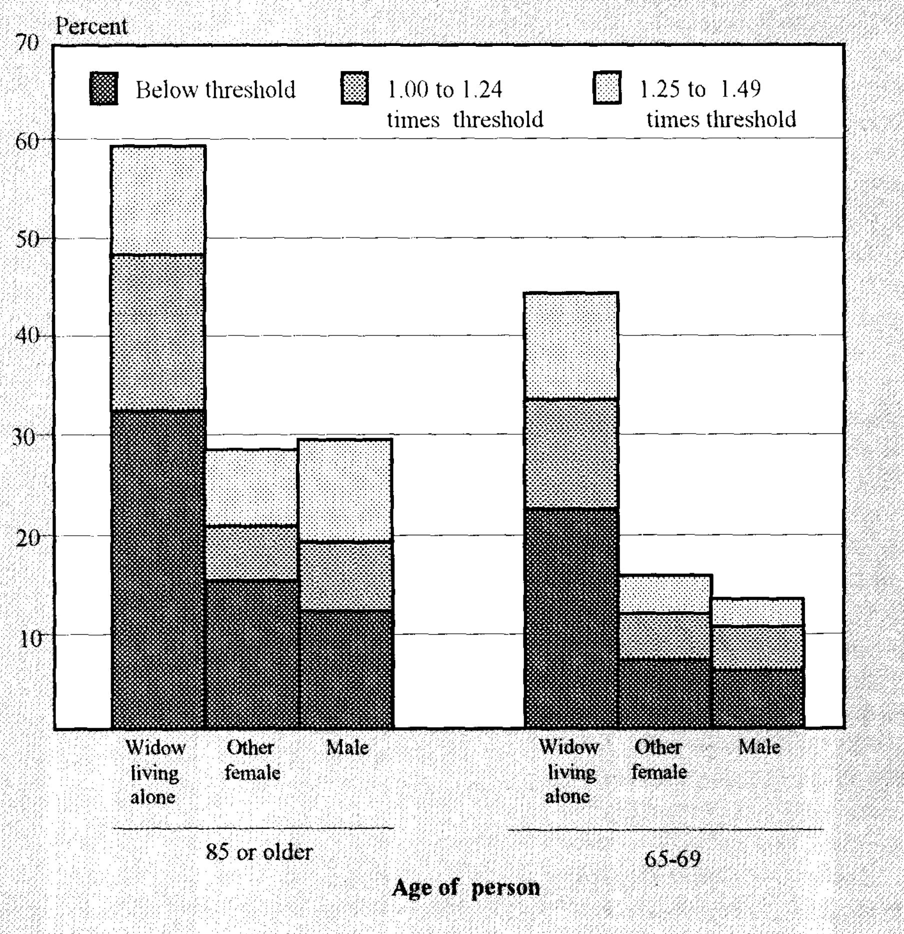
The amount of wealth held is also an important aspect of economic well-being. Median amounts of household net worth and financial assets of old old persons (aged 80 or older) and young old persons are examined in this section. The composition of household net worth of old old persons is also discussed.

These estimates are sensitive to the choice of the household as the wealth-holding unit. It is assumed here that the old old person has equal access to the total wealth of the household. For example, an 85-year-old widow who lived with her son in the son's owner-occupied home would be assigned the total wealth of the household, including the son's equity in the home. Because of resource constraints and the characteristics of the SIPP data, it was not feasible to use a less comprehensive wealth-holding unit in these estimates.

The estimates in this section and in the following section were made using data from wave 4 of the 1984 SIPP. That wave contained information from interviews conducted in September through December 1984. The reference date for the wealth amounts was the last day of the month preceding the interview. The information in this section is for the household in which the person resided. Persons are classified by their own age. There were 1,141 persons aged 80 or older in the data used here. Some persons classified as aged 80 or older resided in households headed by a younger person.

Two principal definitions of wealth—net worth and financial assets—are used in this article. Net worth excluding home equity is also used in some cases. Financial assets generally are considered to be more

Chart 2.—Persons with family income below the poverty threshold and below alternative thresholds, 1990



liquid than net worth, primarily because net worth includes equity in owner-occupied homes. Net worth is defined as equity in assets minus unsecured debt. Equity in assets consists of the following five items: (1) Financial assets (defined below); (2) equity (market value minus debt) in owner-occupied homes; (3) equity in motor vehicles; (4) equity in business, professional practice, or farm; and (5) equity in rental property, vacation homes, and other real estate. Financial assets include savings accounts, money market deposit accounts, certificates of deposit, checking accounts, money market funds, U.S. Government securities, municipal and corporate bonds, stocks and mutual fund shares (less associated debt), U.S. savings bonds, Individual Retirement Accounts and Keogh plans, and other financial assets. Social Security wealth and pension wealth are not included in assets.

Unsecured debt includes credit card and store bills, doctor, dentist, hospital and nursing home bills, loans from financial institutions and individuals, and educational loans. Although the value of household durables is not included in wealth, debt incurred to purchase those items is included in unsecured debt. (The 1984 SIPP did not ask about consumer durables.)

It is important to note that the wealth data from the 1984 SIPP suffer from reporting errors and item nonresponse. Aggregate amounts of home equity and vehicle equity appear to be overstated substantially, while financial assets, equity in business and rental property, and unsecured debt appear to be underestimated substantially (Bureau of the Census 1986b, table D-3). Although there is uncertainty about the accuracy of the independent aggregates used in these comparisons, the size and pattern of the differences suggest a problem with the SIPP data. There is also general agreement that the SIPP estimates of the upper tail of the wealth distribution are not very good. The emphasis in this article is on households that are not wealthy. Thus, the accuracy of the estimates of the upper tail is not an important concern here. Also, item nonresponse rates were high for amounts of many financial assets, although nonresponse rates for asset ownership were low. Missing amounts were imputed by the Bureau of the Census. It should be noted that response errors and nonresponses can have an important effect on the estimated joint distribution of income and wealth that is examined later.

The amounts of wealth and income used in this section and the following section have been adjusted to take into account differential needs associated with differences in household size. Each household's income and wealth were divided by the appropriate value from an equivalence scale derived from the poverty thresholds that was similar to the scale applied to the CPS income data.[20]

Median wealth.—Median household wealth (adjusted for household size) of old old persons (aged 80 or older) is shown for 1984 in table 7. For the entire old old group, median net worth was $47,599, median financial assets (for all units, not just for those with financial assets) was $9,100, and median net worth excluding home equity (for all units) was $14,052. Median net worth, median financial assets, and median net worth excluding home equity all were lower for females than for males, and were lower for widows living alone than for other females and males.[21] Median net worth for widows living alone ($41,046) was 83 percent of the median for other females and 81 percent of the median for males. In the case of financial assets, the median for widows living alone ($8,000) was 80 percent of the median for other females and 68 percent of the median for males. For net worth excluding home equity, the median for widows living alone ($9,959) was 69 percent of the median for other females and 60 percent of the median for males.

Median net worth for old old persons was 81 percent of the median for young old persons (table 8). Median financial assets for old old persons was 73 percent of the median for young old persons. For females, males, and other females, median net worth and median financial assets were substantially lower for the old old than for the young old. For widows living alone, however, median financial assets for the old old ($8,000) was higher than the median for the young old ($7,499).[22,23] Median net worth for widows living alone in the old old group was 98 percent of the median for widows living alone in the young old group.

Composition of net worth.—The composition of net worth for the old old is shown in table 9. For the old old group as a whole, home equity and financial assets were of roughly equal importance (42 and 43 percent of net worth, respectively). It is interesting to note that although financial assets accounted for more than two-fifths of aggregate net worth, median financial assets was only about one-fifth of median net worth (table 8). This difference was related to skewness in the distribution of financial assets; relatively few large amounts pulled the mean substantially above the median.

The composition of household net worth varied somewhat among the subgroups of the old old. For females, home equity and financial assets were of roughly equal importance (44 and 43 percent, respectively); for males, financial assets were slightly more important (43 percent) than home equity (40 percent). Home equity (52 percent) was more important than financial assets (40 percent) for widows living alone. Financial assets (45 percent) were somewhat more important than home equity (38 percent) for other females. For all subgroups, the "other" category of net worth was dominated by equity in real estate other than an owner-occupied home. Business equity was less important for widows living alone than for other females or for males.

These percentages differed by wealth level within each subgroup. When the middle 60 percent (defined according to size of net worth adjusted for household size) of each subgroup was examined, home equity was more important and financial assets and other assets were less important than for the group as a whole. For the middle 60 percent, all subgroups showed roughly the same composition of net worth—home equity accounted for

56-58 percent, financial assets accounted for 34-36 percent, and the "other" category accounted for 7-9 percent (not shown).

Summary.—For the old old, median net worth and median financial assets were lower for widows living alone than for other females and males. Median net worth and median financial assets were lower for the old old than for the young old. For the old old group as a whole, home equity and financial assets were about equally important, but home equity was more important for widows living alone. When the middle 60 percent of the net worth distribution was examined, home equity was the most important asset for the group as a whole and for each subgroup.

Income and Wealth

Both income and wealth are important types of resources. When the ratio of median wealth (net worth or financial assets) to median income was examined for old old persons, widows living alone had the highest ratio of the three subgroups. Thus, if both wealth and income were taken into account, it might be expected that widows living alone would be relatively better off than when only income was considered. The results from the application of several versions of a combined income-wealth measure are discussed in this section.

The research presented here is exploratory in nature. Measures based on a two-dimensional, income-wealth classification are used in the first part of this section.[24] Then measures based on a three-dimensional classification are used. Estimates of the percentage of persons with both low income and low wealth based on these measures are presented.

Interest in multidimensional income-wealth measures results from the lack of a fully satisfactory measure that combines income and wealth (Radner 1990). Although wealth sometimes is converted to an annuity and added to income, that method of combining income and wealth has been criticized because of important differences among age groups (Radner 1990).[25] Wealth, as treated here, can be viewed as being used either to increase regular consumption, to provide the ability to pay for large irregular expenses (for example, medical expenses), or both.

The estimates presented here refer to the household income and wealth of persons, classified by the age of the person. Both the income and wealth

Table 7.—Median household wealth of persons aged 80 older, adjusted for household size, 1984

Characteristic of person	Net worth	Financial assets	Net worth less home equity
Total	$47,599	$9,100	$14,052
Female	46,400	8,500	11,951
Widow living alone	41,046	8,000	9,959
Other	49,522	9,980	14,486
Male	50,710	11,708	16,481

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

Table 8.—Median household wealth of persons for the old old and young old, adjusted for household size, 1984

Characteristic of person	Age of person: 80 or older	65–69	65 or older
	Net worth		
Total	$47,599	$59,128	$53,709
Female	46,400	56,596	51,016
Widow living alone	41,046	42,031	41,271
Other	49,522	59,127	55,163
Male	50,710	63,966	58,157
	Financial assets		
Total	$9,100	$12,490	$11,037
Female	8,500	11,124	9,999
Widow living alone	8,000	7,499	7,500
Other	9,980	12,099	11,475
Male	11,708	14,476	13,010

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

Table 9.—Percentage composition of household net worth of persons aged 80 or older, adjusted for household size, 1984

Characteristic of person	Total	Home equity	Financial assets	Other
Total	100	42	43	15
Female	100	44	43	13
Widow living alone	100	52	40	8
Other	100	38	45	16
Male	100	40	43	18

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

amounts are from wave 4 of the 1984 SIPP. The income amounts used in this section are 4-month amounts that have been annualized (by multiplying them by three). The income information is for the 4 months preceding the interview month. Thus, the amounts are for the May through November 1984 period.

Income is defined to be money income before taxes or other deductions. The definition is roughly similar to that used in the CPS estimates. The definition includes wages and salaries, nonfarm and farm self-employment income (both measured as the salary or other income received from the business by the owner, rather than as net profit), property income, Social Security and railroad retirement benefits, Supplemental Security Income payments, government and private pensions, other transfer payments, and other income types. Lump sum and one-time payments, such as inheritances or insurance settlements, are included; these types were excluded from the CPS definition. Capital gains or losses are excluded, as are accrued interest on Individual Retirement Accounts, Keogh plans, and U.S. savings bonds.

In the low income and low wealth (LILW) measure used here, the bottom portion of the distribution is defined to be those persons with household total money income less than one-half median household total money income (for persons of all ages) and household wealth less than one-half median household wealth (for persons of all ages). Both income and wealth are adjusted for household size in these comparisons using the equivalence scale derived from the poverty thresholds that was described earlier.[26,27] The percentage of persons with both low income and low wealth, using several definitions of wealth, is shown.

The two-dimensional classification does not produce a complete ordering of households by size of income and wealth. This classification, however, can identify a portion of the joint distribution such as the portion with both low income and low wealth.[28]

The measures presented here should be considered experimental. The cutoffs that define low income and low wealth essentially are arbitrary. Several versions of the wealth cutoffs are used so that the sensitivity of the results to alternative specifications can be shown. The important aspect here is the multidimensionality of the measure, rather than the precise ways in which the cutoffs are defined.

Also, the LILW measures are crude because they are based on a simple classification of being above or below a threshold. Distance above or below the threshold is ignored. For example, a person who has income $1 above the threshold and no wealth is not included in the LILW group. In contrast, a person who has income $1 below the threshold and wealth $1 below the threshold is included in the LILW group.

The first set of estimates shown uses financial assets and net worth as the definitions of wealth. When the definition of wealth is confined to financial assets, the emphasis is on the role played by liquid assets. The use of financial assets, however, means that home equity, other nonfinancial assets, and unsecured debt have no effect on the measure. The role of home equity in economic status is particularly complex because of the housing services provided by an owner-occupied home. When net worth is used as the definition of wealth, it is assumed that home equity, financial assets, and other assets can simply be summed in the measure.[29]

The implied thresholds (for amounts before adjustment for household size) are shown for selected household sizes in table 10. For a widow living alone, who by definition is in a household of size one, the income threshold was $7,187 (annualized), the net worth threshold was $9,250, and the financial assets threshold was $625.[30] (The threshold for net worth excluding home equity is discussed later.) The thresholds for larger household sizes are higher.

Two-dimensional measure.—When LILNW (low income and low net worth) was used as the measure, 14.7 percent of the old old were below the thresholds (table 11). The percentage for females in the old old group (16.8 percent) was substantially higher than the percentage for males (10.9 percent). The percentage for widows living alone (22.6 percent) was double the percentage for other females (11.3 percent) and more than double that of males (chart 3). A one-person household, such as a widow living alone, had to have income below $7,187 and net worth below $9,250 to be included in the LILNW group.

In the old old group, 55.7 percent of widows living alone had low income, a figure that was more than double the percentages for other females and males (table 12). In contrast, 25.2 percent of widows living alone had low net worth. That figure was somewhat higher than the percentages for other females and males.

The percentage with LILNW was almost twice as high for the old old as for the young old (table 11). Females and males both had substantially higher percentages in the old old group than in the young old group. All three subgroups showed higher percentages with LILNW for the old old than for the young old. Widows living alone had by far the highest percentage with LILNW within both of the age groups.

Using the LILFA (low income and low financial assets) measure, 14.2 percent of the old old were below the thresholds (table 11). As in the case of LILNW, the percentage with LILFA varied among the subgroups of that age group. The percentage for females was above the percentage for males. Widows living alone showed 20.3 percent with LILFA, while other females and males showed far lower percentages (11.1 percent and 11.6 percent, respectively) (chart 4). The percentages with low financial assets were roughly similar for the three subgroups of the old old group (18.7 percent to 21.5 percent) (table 12). A one-person household, such as a widow living alone, had to have income below $7,187 and financial assets below $625 to be included in the LILFA group.

The percentage of old old persons with LILFA was higher than the percentage for young old persons(10.1 percent). For females, for males, and for other females, the percentage in the old old group was higher than the percentage in the young old group. For other females the difference was small. For widows living alone, however, the percentage for the young old was higher than that for the old old. Widows living alone had by far the highest percentage within both the old old and young old groups.

Three-dimensional measure.—A three-dimensional measure (low income and wealth and zero home equity) is also used here. A three-dimensional measure may be useful because it is not clear that it is appropriate to sum home equity and other types of assets. Home equity provides housing services as well as a financial resource.

Financial assets and net worth excluding home equity are the definitions of wealth used here. When financial assets is used as the definition, the three-dimensional measure is obtained by adding a third restriction (zero home equity) to the LILFA measure. This added restriction is a strong one which would be expected to remove a substantial number of persons from the low group. In this version of the three-dimensional measure, unsecured debt and nonfinancial assets other than home equity play no role.

When net worth excluding home equity is used, the three-dimensional measure is obtained by comparing amounts for that definition of wealth with a new cutoff, one-half median household net worth excluding home equity (for all persons), adjusted for household size. The cutoff was $2,065 for a one-person household (table 10). The zero home equity restriction is also applied. In this version of the measure, all asset and debt types in net worth play a role in the measure. It is no longer assumed, however, as it was in LILNW, that home equity can be summed with other asset and debt types. Instead, home equity plays a unique and very powerful role in this version.

When the three-dimensional measures were used, the percentages for the old old were lower than for the two-dimensional measures (tables 13 and 11). When net worth excluding home equity was used, 9.1 percent of the old old were in the low group. The percentage for females was higher than for males, and the percentage for widows living alone (15.3 percent) was more than double the percentages for other females and males. When only one dimension at a time was examined, of the three subgroups of the old old, widows living alone had the highest percentages with low net worth excluding home equity (32.8 percent) and with no home equity (36.7 percent) (table 12).

The percentage for the old old was higher than the percentage for the young old (5.4 percent). For each subgroup, the percentage for the old old was above the percentage for the young old. The percentage for widows living alone was the highest of the three subgroups in both age groups, but was only slightly higher for the old old than for the young old.

Using financial assets as the measure of wealth, 7.2 percent of the old old were in the low group. Within the old old group, 8.0 percent of females and 5.5 percent of males were in the low group, compared with 10.6 percent of widows living alone and 5.7 percent of other females.

The percentage in the low group for the old old was slightly higher than for the young old. For the old old, 29.7 percent had no home equity, while 19.3 percent of the young old had no home equity.

The percentages for females, for males, and for other females were higher for the old old than for the young old. For widows living alone, however, the

Table 10.—Cutoff amounts for low income and wealth, before adjustment for household size, for selected household sizes, 1984

Resource definition	Household size: 1	2	3	4
Income (annualized)	$7,187	$9,207	$11,269	$14,446
Net worth	9,250	11,849	14,504	18,592
Financial assets	625	801	980	1,256
Net worth excluding home equity	2,065	2,645	3,238	4,151

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

Table 11.—Percentage of persons with low income and low wealth, by age of person, 1984

Characteristic of person	Age of person: 80 or older	65–69	65 or older
	Low income and low net worth		
Total	14.7	7.6	11.2
Female	16.8	9.9	13.3
Widow living alone	22.6	17.6	19.5
Other	11.3	7.7	10.1
Male	10.9	4.8	8.1
	Low income and low financial assets		
Total	14.2	10.1	12.8
Female	15.6	12.9	15.1
Widow living alone	20.3	22.0	22.1
Other	11.1	10.4	11.5
Male	11.6	6.7	9.4

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

percentage was higher in the young old group (14.5 percent) than in the old old group (10.6 percent). The percentages with no home equity were lower in the young old group than in the old old group for all three subgroups.

Summary.—For all four income-wealth measures, the percentage of the old old group that was below the thresholds was higher for females than for males, and higher for widows living alone than for other females or males. When the old old and young old were compared, for the groups as a whole, for females, for males, and for other females, the old old had higher percentages than the young old. For widows living alone, however, the percentages for the old old were higher when net worth was used, but lower when financial assets was used. Within both age groups, widows living alone had by far the highest percentage for all four measures.

Summary and Conclusions

In this article, the economic status of old old persons was examined using the 1990 (CPS) income of the family unit to which each old old person belonged and the 1984 (SIPP) wealth and income of the household to which each old old person belonged. Several implications of those measurement choices were discussed. If old old persons who live in multiperson units generally have less than equal access to the income (and wealth) of that unit, then their economic status could be overstated by the measures used here. The size and importance of any possible overstatement, however, are not known.

When the old old group was separated into three subgroups (widows living alone, other females, and males), important differences were found among those groups in terms of economic status. The economic status of widows living alone was substantially below that of the other two subgroups. This difference was found when income, wealth, and combined income-wealth measures were used.

When 1990 family unit cash income before taxes (adjusted for size of family unit) was examined for persons aged

Chart 3.—Persons with low income and low net worth, 1984

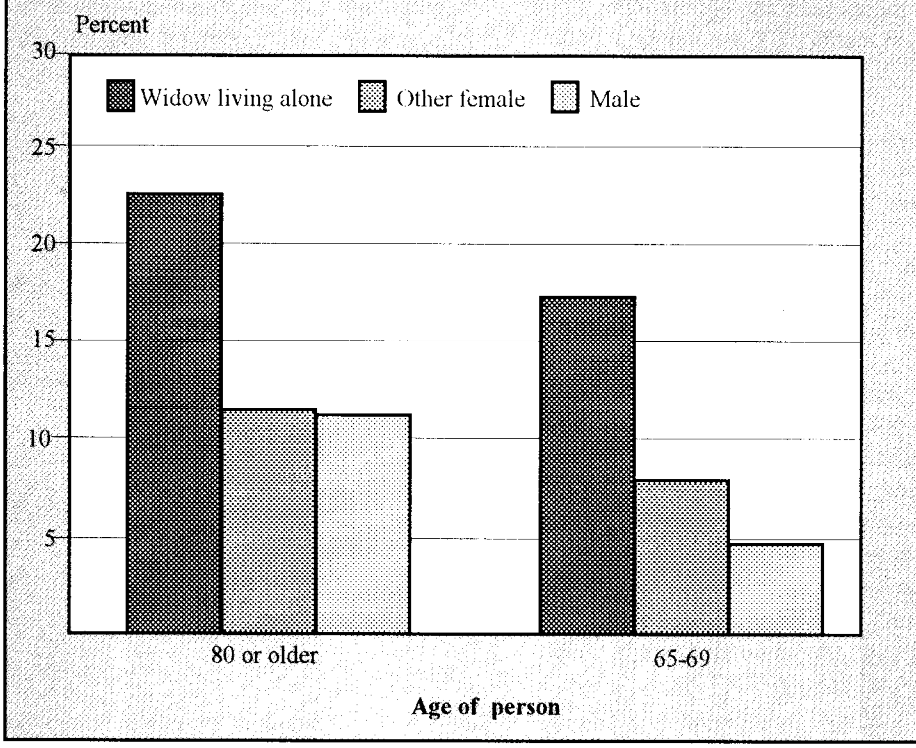


Chart 4.—Persons with low income and low financial assets, 1984

85 or older, the median for widows living alone ($8,120) was 49 percent of the median for other females and 60 percent of the median for males. For widows living alone, the poverty rate (32.1 percent) and the percentage below 1.50 times the poverty threshold (59.8 percent) were more than twice the rates for the other two subgroups.

The differences generally were smaller for wealth in 1984. Within the group aged 80 or older, for net worth the median for widows living alone was 81 percent of the median for males and 83 percent of the median for other females. For financial assets, the median for widows living alone was 68 percent of the median for males and 80 percent of the median for other females. When percentages with both low income and low wealth were examined, widows living alone showed percentages that were roughly twice those of the other two subgroups.

When the old old group was compared with the young old group, the economic status of the old old was substantially lower for all measures examined. For median cash income before taxes in 1990, the median for the old old was 63 percent of that of the young old. The poverty rate and the percentage below 1.50 times the poverty threshold for the old old were more than double the percentages for the young old. For persons aged 80 or older, median net worth was 81 percent of the median for the young old, and median financial assets was 73 percent of the median for the young old. When percentages with both low income and low wealth were examined, the old old showed higher percentages than the young old, with the differences greater when net worth, rather than financial assets, was used in the wealth measure.

When the three subgroups within both the old old and young old groups were compared, the economic status of each of the subgroups was lower for the old old than for the young old for most measures. For other females and for males, the old old were worse off than the young old for all measures. The exceptions involved widows living alone. Widows living alone in the old old group had higher median financial assets than widows living alone in the young old group, and a lower percentage with low income and low financial assets. For the other measures, widows living alone in the old old group were worse off than widows living alone in the young old group.

For all measures, widows living alone were substantially worse off than the other two subgroups within both the old old and young old groups. Widows living alone generally were not much better off (or were worse off by some measures) in the young old group than in the old old group.

Table 12.—Percentage of persons with low income and percentage of persons with low wealth, by age of person, 1984

Characteristic of person	Age of person: 80 or older	65–69	65 or older
	Low income		
Total	34.6	16.6	25.2
Female	39.1	20.8	30.5
Widow living alone	55.7	36.3	50.1
Other	23.5	16.6	20.3
Male	26.3	11.4	17.5
	Low net worth		
Total	21.4	15.5	18.1
Female	23.0	17.2	19.8
Widow living alone	25.2	22.0	23.4
Other	21.0	15.9	17.9
Male	18.4	13.4	15.7
	Low financial assets		
Total	19.9	20.5	21.[illegible]
Female	20.6	22.5	22.[illegible]
Widow living alone	21.5	30.2	26.[illegible]
Other	19.8	20.5	20.[illegible]
Male	18.7	18.0	19.[illegible]
	Low net worth excluding home equity		
Total	25.8	20.4	22.[illegible]
Female	28.7	22.9	25.[illegible]
Widow living alone	32.8	30.7	31.[illegible]
Other	24.9	20.8	22[illegible]
Male	20.4	17.2	18[illegible]
	No home equity		
Total	29.7	19.3	24[illegible]
Female	30.6	21.0	2[illegible]
Widow living alone	36.7	31.0	3[illegible]
Other	25.0	18.2	2[illegible]
Male	27.8	17.2	2[illegible]

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

Table 13.—Percentage of persons with low income, low wealth, and no home equity, by age of person, 1984

Characteristic of person	Age of person: 80 or older	65–69	65 or older
	Low income, low net worth excluding home equity, and no home equity		
Total	9.1	5.4	7.4
Female	10.7	7.3	9.0
Widow living alone	15.3	14.9	13.9
Other	6.4	5.2	6.5
Male	6.0	3.1	5.0
	Low income, low financial assets, and no home equity		
Total	7.2	5.5	6.7
Female	8.0	7.2	8.0
Widow living alone	10.6	14.5	11.8
Other	5.7	5.1	6.0
Male	5.5	3.4	4.9

Source: Tabulations from wave 4 of the 1984 Survey of Income and Program Participation.

Although it is clear that the economic status of the old old is relatively low, we need to know more about important aspects of their situation, such as their economic status when they were younger. For example, were the old old persons who have few financial resources now generally in a similar situation when they were younger, or have they suffered a substantial decline? Although some work on this question has been done, more is needed.

Notes

Acknowledgments: The author is greatly indebted to Sharon Johnson, who prepared the estimates, and to Benjamin Bridges, Susan Grad, and Selig Lesnoy for their helpful comments. An earlier version of this article was presented at the 1992 annual meeting of the American Statistical Association. A shorter version, entitled "The Income and Wealth of the Old Old," will be published in the *American Statistical Association 1992 Proceedings of the Social Statistics Section.*

[1] A family unit is a family (two or more related persons who live together) or an unrelated individual (a person who lives alone or only with one or more nonrelatives). A household consists of all persons, related or unrelated, living together in a dwelling unit (Bureau of the Census 1991a).

[2] It should be noted that living arrangements, at least to some extent, are a matter of choice. Living arrangements can have an important effect on measured economic status.

[3] In most of their estimates, both Grad and Radner used unit weighting (in which each unit was counted once), rather than person weighting (in which each person was counted once), as was used in this article. Also, Grad did not adjust for differences in needs between couples and nonmarried persons. Radner did adjust for differences in needs among family units of different sizes.

[4] This discussion is in terms of cash income and the need for cash income. Alternatively, free room and board could have been considered as noncash income received by the old old person.

[5] See Bureau of the Census (1991a) for a more detailed definition of total income.

[6] There is an effect because some aged persons live in family units with a nonaged householder; such units would have had the nonaged scale value applied. Also, the relative needs assumed between aged family units of sizes 1 and 2 on the one hand and sizes 3 or more are affected slightly by the use of the all ages average value for units of size 1 and 2.

[7] The scale used was based on size of family unit (family or unrelated individual): 1 person, 1.000; 2 persons, 1.279; 3 persons, 1.566; 4 persons, 2.008; 5 persons, 2.374; 6 persons, 2.682; 7 persons, 3.043; 8 persons, 3.395; 9 persons or more, 4.036. These values were derived from the weighted average thresholds in table A-2 in Bureau of the Census (1991b).

[8] It should be noted that living with others is defined based on *household* size, while income is summed for all *family* members. Thus, the income amount used for some persons (for example, unrelated individuals) who live with others includes only that person's income.

[9] The adjusted and unadjusted medians for widows living alone are identical because all such persons are in one-person family units by definition. For all groups that include multiperson family units, the adjusted medians are below the unadjusted medians. The percentage of the adjustment varies somewhat among the groups. The range of the medians is smaller for adjusted medians than for unadjusted medians.

[10] In the March 1991 CPS, for persons aged 85 or older, there were the following numbers of observations: Widows living alone, 529; other females, 495; and males, 482.

[11] The important topic of financial support from persons outside the income unit or outside the dwelling unit has not been discussed in this article. Aged persons living alone sometimes receive financial assistance from family members (or others) that might not be reflected fully in the income data. For example, only regular gifts are included in the CPS income concept.

[12] The median adjusted for size of unit declines in each 5-year age group from the group aged 65-69 to the group aged 85 or older.

[13] The quintiles were formed by ranking all old old persons according to the size of their family unit income adjusted for unit size.

[14] Income inequality was higher for the old old than for the young old. The bottom income quintile of the old old received 5.2 percent of aggregate income (adjusted for unit size), while the bottom quintile of the young old received 5.5 percent. The top quintile of the old old received 50.1 percent of aggregate income, whereas the top quintile of the young old received 45.4 percent. The Gini concentration ratio for the old old was 0.438, which was substantially higher than

the Gini ratio for the young old, 0.389. The Gini ratio is a measure of inequality that can vary from 0 (complete equality) to 1 (complete inequality). See Atkinson (1970) for a discussion of Gini concentration ratios.

[15] These percentages were calculated using income amounts that were adjusted for size of family unit, as described earlier.

[16] For the bottom income quintile of persons in the old old group, Social Security benefits were even more important (81 percent) and earnings (1 percent) and property income (5 percent) were even less important (not shown). Supplemental Security Income accounted for 8 percent of total income in the bottom quintile.

[17] The income of widows living alone in the old old group is not sensitive to changes in labor market conditions (earnings are negligible), but is sensitive to changes in interest rates because property income is an important income source for that group. To the extent that pensions are not fully indexed for inflation, the real income of that group can be sensitive to the rate of inflation. The family unit income of old old persons who live with younger persons, however, may be sensitive to changes in labor market conditions because the earnings of the younger persons is an important source of income for many of those family units. The income of those units is also sensitive to changes in interest rates and to the rate of inflation.

[18] When only the income of the married couple or nonmarried person aged 85 or older was considered, Grad (1992, table VIII.5) found that 32 percent of those units were below the poverty threshold in 1990. (The two-person aged threshold was used for married couples and the one-person aged threshold was used for nonmarried persons.)

[19] Beginning with the group aged 65-69, poverty rates for persons in 1990 increased as age rose. The rate was 11.3 percent for the group aged 70-74, 13.3 percent for the group aged 75-79, and 17.5 percent for the group aged 80-84 (Radner 1992).

[20] The scale used was based on size of household: 1 person, 1.000; 2 persons, 1.281; 3 persons, 1.568; 4 persons, 2.010; 5 persons, 2.381; 6 persons, 2.692; 7 persons, 3.050; 8 persons, 3.403; and 9 persons or more, 4.026. These values were derived from the weighted average thresholds in table A-2 in Bureau of the Census (1986a).

[21] For persons aged 80 or older, there were the following numbers of observations: Widows living alone, 337; other females, 399; and males, 405.

[22] The sample of young old widows living alone is relatively small (236 persons); estimates for that subgroup therefore have relatively high sampling error.

[23] A higher percentage of widows living alone had nonzero financial assets for the old old (88 percent) than for the young old (84 percent). For widows living alone who had nonzero financial assets, the median for the old old ($10,119) was below the median for the young old ($12,499). Possible explanations for the higher percentage with financial assets for the old old include differences between cohorts, a lower mortality rate for those with financial assets, and a shift from home equity to financial assets as widows age. A lower percentage of the old old than the young old had home equity (table 12).

[24] Several means-tested government benefit programs have both income and asset tests for eligibility. The Supplemental Security Income program is one prominent example.

[25] Because the calculation of the annuity generally depends on expected remaining lifetime (and therefore on age), for a given amount of wealth, the older a person is the higher his annuity (Radner 1990).

[26] In some earlier estimates, households were considered to have low income if they were in the bottom 20 percent of the all ages distribution of income (after adjustment for household size and age) and were considered to have low wealth if they were in the bottom 40 percent of the all ages distribution of wealth (after adjustment for household size and age) (Radner 1989; Radner and Vaughan 1987; Radner 1984). Those cutoffs did not differ very much from the cutoffs used here. In the estimates used here, 21 percent of all households were classified as having low income, 42 percent as having low financial assets, and 38 percent as having low net worth.

[27] As a sensitivity test, wealth was adjusted using a per capita scale rather than the scale based on the poverty thresholds. The per capita scale might be appropriate for the adjustment of wealth if the needs met by wealth do not exhibit economies of scale or age differences. The results using the per capita scale are similar to those obtained using the scale based on the poverty thresholds. In general, use of the per capita scale improves the relative status of the old old somewhat.

[28] Response error in the income and wealth data can have an important effect on estimates of the joint distribution and the number in the LILW group. Imputations for nonresponse could also have an effect.

[29] For both definitions of wealth, the value of an income-producing asset was included in wealth, while the income produced was included in income. If this income were excluded from the income measure, the estimates of persons in the LILW group would be expected to change only slightly.

[30] The income threshold used here was 44 percent higher than the official poverty threshold for aged unrelated individuals and 47 percent higher than the official threshold for aged two-person families.

References

Atkins, G. Lawrence (1992), "Making it Last: Economic Resources of the Oldest Old," in *The Oldest Old*, Richard M. Suzman, David P. Willis, and Kenneth G. Manton, editors, Oxford: Oxford University Press, pp. 359-377.

Atkinson, Anthony B. (1970), "On the Measurement of Inequality," *Journal of Economic Theory*, Vol. 2, No. 3, pp. 244-263.

Bureau of the Census (1986a), "Characteristics of the Population Below the Poverty Level: 1984," *Current Population Reports*, Series P-60, No. 152, Washington, DC: U.S. Government Printing Office.

__________ (1986b), "Household Wealth and Asset Ownership: 1984," *Current Population Reports*, Washington, DC: U.S. Government Printing Office.

__________ (1990), "U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin 1989," *Current Population Reports*, Series P-25, No. 1057, Washington, DC: U.S. Government Printing Office.

__________ (1991a), "Money Income of Households, Families, and Persons in the United States: 1990," *Current Population Reports*, Series P-60, No. 174, Washington, DC: U.S. Government Printing Office.

__________ (1991b), "Poverty in the United States: 1990," *Current Population Reports*, Series P-60, No. 17: Washington, DC: U.S. Government Printing Office.

Grad, Susan (1992), *Income of the Population 55 or Older, 1990*, Washington, DC: U.S. Government Printing Office.

Longino, Charles F. (1988), "Who Are the Oldest Americans?" *The Gerontologist*, Vol. 28, No. 4, pp. 515-523.

Radner, Daniel B. (1983), "Adjusted Estimates of the Size Distribution of Family Money Income," *Journal of Business & Economic Statistics*, Vol. 1, No. 2, pp. 136-146.

____________ (1984), "The Wealth and Income of Aged Households," *American Statistical Association 1984 Proceedings of the Social Statistics Section*, pp. 490-495.

____________ (1989), "The Wealth of the Aged and Nonaged, 1984," in *The Measurement of Saving, Investment, and Wealth*, Robert E. Lipsey and Helen Stone Tice, editors, Studies in Income and Wealth, Vol. 52, Chicago: University of Chicago Press for the National Bureau of Economic Research, pp. 645-684.

____________ (1990), "Assessing the Economic Status of the Aged and Nonaged Using Alternative Income-Wealth Measures," *Social Security Bulletin*, Vol. 53, No. 3, pp. 2-14.

____________ (1992), "The Economic Status of the Aged," *Social Security Bulletin*, Vol. 55, No. 3, pp. 3-23.

____________ and Denton R. Vaughan (1987), "Wealth, Income, and the Economic Status of Aged Households," in *International Comparisons of the Distribution of Household Wealth*, Edward N. Wolff, editor, Oxford: Oxford University Press, pp. 93-120.

Taeuber, Cynthia M. and Ira Rosenwaike (1992), "A Demographic Portrait of America's Oldest Old," in *The Oldest Old*, Richard M. Suzman, David P. Willis, and Kenneth G. Manton, editors, Oxford: Oxford University Press, pp. 17-49.