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3 The Economic Status of the Elderly in the United States

Michael D. Hurd

Although reliable poverty statistics for the United States do not extend very far back in time, the data that are available show that, until recently, many of the elderly (age 65 and older) were poor. For example, in 1959, 35.2 percent of persons age 65 and older were living in poverty. Because the elderly had low incomes, and because they had few responses to economic reversal, society has developed programs that transfer resources to the elderly and that shield them from risk. These programs were successful: partly as a result of them, the poverty rate of the elderly is now lower than that of the nonelderly population. For example, in 1987, the poverty rate of the elderly was 12.2 percent, as opposed to 13.5 percent in the general population.

Society's future contribution to the elderly will depend partly on demographic changes. The fraction of the population over 65 has grown substantially since the turn of the century, and it is projected to continue to grow until well into the twenty-first century. For example, about 4 percent of the population was elderly in 1900, 11 percent in 1980, and the fraction is forecast to grow to 22 percent in 2040. Combined with a long-term trend toward early retirement, the demographic changes imply that an increasing number of retirees will have to be supported by each worker. Even maintaining the current level of relative transfers will strain the system.

Whether the current level of transfers should be maintained or even increased depends on the economic status of the elderly relative to the nonelderly. Because of differences between the elderly and the nonelderly in family size and composition, needs, position in the life cycle, and so forth, it is far from straightforward to compare the economic status of the elderly and the nonelderly. Nonetheless, the goal of this paper is to provide a comparison.

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Two methods will be used. The first draws on government statistics to give an overview of the change and level of economic status as conventionally measured by income. That second method summarizes results from a number of research papers that adjust income to make the comparison between the elderly and the nonelderly more meaningful. Indicators of economic status will be growth in income, growth in the income of the elderly relative to the nonelderly, and a comparison of absolute levels. In addition, some data on levels and composition of wealth will be given, but, because of difficulties of interpretation and coverage, comparison of the wealth of the elderly and nonelderly is not made.

The general finding is that, as measured by adjusted income, the economic status of the elderly has improved faster than that of the nonelderly and that now the elderly are at least as well off as the nonelderly and possibly much better off. Transfer programs such as Social Security and Medicare and Medicaid can take credit for an important part of the change, especially among the less well-to-do. Because of demographic changes, however, the future is much less bright: today, about 3.3 workers support each retired Social Security beneficiary; in 2030, just 1.9 workers will support each beneficiary. Whether through the political process the workers will be willing to support the beneficiaries at their current level of economic well-being is an open question.

3.1 Demographic and Economic Changes

This section reviews government data on demographic change and income as measured by government statistics. Besides giving information on unadjusted income change, it puts into perspective the adjustments to income to be discussed in section 3.2 below.

The fraction of the population that is elderly has increased substantially since 1900, and it is forecast to increase further. As table 3.1 shows, only 4 percent of the population was 65 or older in 1900. The fraction of the very elderly (85 and older) rounded to zero. In 1980, about 11 percent were elderly, and about 1 percent were very elderly. The projections, which should be quite accurate over the next thirty years, show large increases in the size of the elderly population, especially in the oldest. By 2050, 6 percent of the population will be 85 or older (16 million people). About 8 million will be 90 or older.

The causes of the change in the age distribution of the population include a long-term decline in birthrates. Such a decline will cause a population to have a higher average age and more elderly persons than a population with a steady birthrate. On top of the long-term decline in births were the exceptionally high birthrates from 1946 to 1964, the baby boom. The cohort born in the midpoint of the baby boom, 1955, will be 65 in 2020 and 95 in 2050. Another factor is that mortality rates have declined and life expectancy has increased: in 1900, life expectancy of males and females was 46 and 49, respectively; in 1980, it was 70 and 78.

Both the probability of reaching 65 and, as shown in table 3.2, life expec-

Table 3.1 **Fraction of Population of Different Ages: Actual 1900–80 and Predicted 1990–2050 (middle series)[a]**

	% Aged								
	55–59	60–64	65–69	70–74	75+	75–79	80–84	85+	
1900	3	2	2	1	1				
1910	3	2	2	1	1				
1920	3	3	2	1	1				
1930	4	3	2	2	2				
1940	4	4	3	2	2				
1950	5	4	3	2	3				
1960	5	4	3	3	3				
1970	5	4	3	3	4				
1980	5	4	4	3	4	2	1	1	
	% Aged								
	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95+
1990	4	4	4	3	2	2	1	0	0
2000	5	4	4	3	3	2	1	0	0
2010	7	6	4	3	2	2	1	1	0
2020	7	7	6	6	3	2	1	1	0
2030	6	6	6	6	5	3	2	1	0
2040	6	6	5	5	5	4	2	1	1
2050	6	6	6	5	4	3	3	2	1

Source: U.S. Bureau of the Census, "Projections of the Population of the U.S., by Age, Sex, and Race, 1988–2080," *Current Population Reports,* ser. P-25, no. 1018 (January 1989), table 4.

[a]The middle series (series 14) is based on intermediate assumptions about fertility, mortality, and immigration.

tancy conditional on reaching 65 have increased. The latter is forecast to be 2.9 years higher for males and 3.8 years higher for females in 2050 than in 1985. The increase in life expectancy after 65, along with earlier retirement (to be discussed below), has had, and will continue to have, important effects on Social Security and pension plans and on the ability of the elderly to finance their retirement years through their own savings: earnings from a shorter work life must be used to finance consumption over a longer lifetime.

Table 3.2 shows that the conditional life expectancy of females has been, and should continue to be, much greater than the conditional life expectancy of males. Beyond the more obvious effects on Social Security and pensions, the differences in life expectancy mean that most of the very old are widows. Furthermore, because the very old must finance a long lifetime of consumption, it is likely that they will have few assets toward the end of their lives. Therefore, in the absence of social programs, differential mortality makes almost inevitable high rates of poverty among elderly widows, and that is, in fact, what is found in the data.

Incomes of the elderly have increased both absolutely and relative to the rest

Table 3.2 **Actual and Predicted Life Expectancy at Age 65**

	Male	Female		Male	Female
Actual:			Predicted:		
1900	11.3	12.0	1990	14.9	19.2
1910	11.4	12.1	2000	15.6	20.1
1920	11.8	12.3	2010	16.0	20.6
1930	11.4	12.9	2020	16.3	21.0
1940	11.9	13.4	2030	16.7	21.5
1950	12.8	15.1	2040	17.0	21.9
1960	12.9	15.9	2050	17.4	22.4
1970	13.1	17.1	2060	17.7	22.8
1980	14.0	18.4	2070	18.1	23.3
1985	14.5	18.6	2080	18.5	23.7

Source: Social Security Bulletin 51, no. 2 (February 1988), table 14.

of the population. Table 3.3 shows that their household income, as measured in the Current Population Survey (CPS), increased by about 28 percent in real terms between 1970 and 1987. The mean income of the entire population increased by only 10 percent, with the result that the income of the elderly relative to the entire population rose from 0.54 to 0.63. However, as will be discussed below, the income comparison is somewhat misleading because the income measures are not what economists would call full income measures; furthermore, they make no provision for differences in household size.

The income growth was accompanied by rather large changes in the source of income, as shown in table 3.4. In 1967, 29 percent of the income of the elderly was from earnings; by 1986, only 17 percent was from earnings. Correspondingly, the fraction of income from Social Security and from assets increased. The fraction from pensions was constant.

The decrease in the importance of earnings is reflected in changes in labor force participation, which, for the elderly, is practically synonymous with retirement. The changes in participation were large: between 1950 and 1987, the participation rate of elderly men fell from 46 to 16 percent. In the population, however, the participation rate rose from 60 to 66 percent, owing mainly to the increasing participation of women.

Detail by age and sex is shown in table 3.5. The normal retirement age of men, which at one time was 65 or even older, is now substantially younger than 65, and many men retire in their late 50s. Among women, two opposite trends—earlier retirement and higher lifetime participation rates—have kept the participation rates of 60–64- and 65–69-year-olds approximately constant.

The decrease in the fraction of income from earnings in table 3.4 above is broadly representative of the experience of many of the elderly, but the increase in income from assets shown in that table is somewhat misleading as a representation of the experience of a typical elderly household because of the skewed distribution of wealth. Table 3.6 gives the distribution of elderly house-

Table 3.3 **Mean Household Income of the Elderly and of the General Population (1983 dollars)**

Year	Mean 65+	Mean All	Ratio
1970	13,901	25,660	.54
1975	16,188	26,580	.61
1980	15,268	25,467	.60
1985	17,411	26,919	.65
1987	17,849	28,217	.63

Source: U.S. Bureau of the Census, "Money Income of Households, Families and Persons," *Current Population Reports,* ser. P-60 (various years).

Table 3.4 **Distribution of Sources of Income (%)**

	1967	1976	1984	1986
Earnings	29	23	16	17
Social Security	34	39	38	38
Pensions and other retirement	15	16	15	16
Assets	15	18	28	26
Public assistance	4	2	1	1
Other	3	2	2	2
Total	100	100	100	100

Source: U.S. House of Representatives (1987); *Income of the Population Aged 65 and Over* (Washington, D.C.: Social Security Administration, 1986).

holds according to the fraction of each household's income from various sources. For example, in 1971, 69 percent of elderly households had no earnings, 16 percent had from 1 to 49 percent of their income from earnings, and 15 percent had from 50 to 100 percent of their income from earnings. The table shows that, by 1986, 81 percent of elderly households had no income from earnings and that just 8 percent had more than half their income from earnings.[1] The percentage of households having no income from Social Security dropped from 13 percent in 1971 to 8 percent in 1986. This change is partly due to increasing coverage of Social Security. It is also due to earlier retirement: under the Social Security law, few full-time workers would have had Social Security benefits, so, as participation rates fell, the fraction receiving Social Security benefits rose. The importance of Social Security to most elderly can hardly be overstated: 57 percent had more than half their income from Social Security, and 24 percent had more than 90 percent.

Although the fraction of the elderly with income from private pensions and annuities (almost all pensions) has increased, private pensions remain modest

1. A household is classified as elderly if the "householder" is elderly; earnings can come from a nonelderly spouse.

Table 3.5 **Labor Force Participation Rates (%)**

	Men					Women				
Year	55–59	60–64	65–69	70–74	75+	55–59	60–64	65–69	70–74	75+
1957	91.4	82.9	52.6	[a]	[a]	38.2	30.3	17.5	[a]	[a]
1965	90.2	78.0	43.0	24.8	14.1	47.1	34.0	17.4	9.1	3.7
1970	89.5	75.0	41.6	25.2	12.0	49.0	36.1	17.3	9.1	3.4
1975	89.4	65.5	31.7	21.1	10.1	47.9	33.2	14.5	7.6	3.0
1980	81.7	60.8	28.5	17.9	8.8	48.5	33.2	15.1	7.5	2.5
1985	79.6	55.6	24.5	14.9	7.0	50.3	33.4	13.5	7.6	2.2
1987	79.7	54.9	25.8	14.7	7.1	52.2	33.2	14.3	6.8	2.4

Source: Labor Force Statistics Derived from the CPS, 1948–1987, Publication no. 2307 (Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, August 1988).

[a]Not available.

for most. In fact, in 1986, 74 percent had no private pension income. By combining the private and public pension data, one can roughly calculate that no more than 39 percent of elderly households had pension income in 1986. Even among those with pension income, few households had a large fraction of their income from pensions: just 7 percent of households had more than 50 percent of their income from either private or public pensions.

Table 3.6 confirms that asset income (which does not include any imputed income to housing equity) has become more important, yet, in 1986, 40 percent of households had no income from assets. This accords with findings to be reported later that many households retire with practically no financial savings. Seventy percent of households had less than 20 percent of their income from assets. Although asset income was 26 percent of total income (table 3.4 above), most households had modest amounts from assets.

The data discussed in this section show large changes in the demographic structure of the population and in the income, labor force participation, and living arrangements of the elderly. The elderly have gained with respect to the nonelderly, but they still have lower household incomes. Results to be given in the rest of the paper will make adjustments to income that will make income comparisons more valid.

3.2 Economic Status

The most commonly used measure of economic status is income. But the simple income statistics discussed in the last section are not very well suited to the measurement of economic status. They need to be adjusted to account for income flows from nonmoney sources such as housing, Medicare and Medicaid, taxes and underreporting of income, and family size and composition. The aim of this section is to give some evidence about the economic status of the elderly based on adjusted income.

Table 3.6 **Percentage Distribution of Elderly Households by Importance of Income Source**

	1971	1980	1986
Earnings:			
Total (%):	100	100	100
0	69	78	81
1–49	16	12	11
50–100	15	10	8
90–100	5	2	2
Social Security:			
Total (%):	100	100	100
0	13	9	8
1–49	38	32	35
50–100	49	59	57
90–100	17	23	24
Private pensions and annuities:			
Total (%):	100	100	100
0	83	79	74
1–19	6	10	13
20–49	8	9	11
50–100	3	2	2
Government pensions:			
Total (%):	100	100	100
0	94	89	87
1–49	3	7	8
50–100	3	4	5
Income from assets:			
Total (%):	100	100	100
0	51	41	40
1–19	27	33	30
20–49	15	17	18
50–100	7	9	12

Sources: Income of the Population Aged 60 and Older (Washington, D.C.: Social Security Administration, various years); *Income of the Population Aged 55 and Over* (Washington, D.C.: Social Security Administration, various years).

3.2.1 Trends in Income

Before one can find trends in the real income of the elderly or compare trends in the income of the elderly and the nonelderly, one must find an appropriate price index for the elderly. That an index specifically tailored for the elderly might differ from the CPI can be seen by comparing budget shares of the elderly and nonelderly and the inflation rates in the components of the CPI. For example, in the 1972–73 Consumer Expenditure Survey, 70–74-year-olds spent 8.3 percent of their budgets on medical care, compared with 4.9 percent among the nonelderly; they spent 4.5 percent on clothing, compared with 7.0 percent among the nonelderly (Boskin and Hurd 1985). Between 1961 and 1981, the average annual rate of inflation of medical care was 6.4 percent and of apparel 3.6 percent. One might well imagine that a Laspeyres index based

Table 3.7 **Growth in Average Real Family Unit Income**

	Annual Income Growth (%)		
	1967–79	1979–84	Income in 1984[a]
No size adjustment:			
Under 65	1.0	−.4	27,464
65+	1.5	3.4	18,279
Size adjustment:			
Under 65	1.7	.5	16,293
65+:	2.2	3.7	14,160
65–69	1.8	3.8	16,496
70–74	2.1	4.2	14,401
75–79	3.0	3.1	12,617
80–84	2.9	3.3	11,469
85+	2.7	5.5	11,825

Source: Radner (1987).

[a]Measured in 1982 dollars.

on the elderly's consumption patterns could differ from the CPI. That, however, turns out not to be the case. According to a Laspeyres index based on consumption patterns by age, the average annual rate of inflation of 21–54-year-olds from 1961 to 1981 was 5.08 percent. For 65–69-year-olds it was 5.10 percent, for 70–74-year-olds it was 5.11 percent, and for those 75 and older it was 5.10 percent (Boskin and Hurd 1985). These annual rates are almost identical, which is remarkable in view of the great variability in the annual rate of inflation of the CPI during the twenty-year period.[2] Because of the similarity of the two indices, the CPI is an adequate index for calculating real income changes.

Table 3.7 has annual growth rates in income and the level of income in 1984 adjusted for household size according to the official poverty index. In this scaling, one nonelderly person has a weight of 1.024, two nonelderly persons 1.322, three persons (either elderly or nonelderly) 1.568, and so forth. Elderly persons are given slightly smaller weights (about 8 percent smaller). Size-adjusted income (income per equivalent person) is household income divided by the household weight. The scaling implies substantial returns to scale in household consumption: a two-person household requires only 29 percent more income than a one-person household. This scaling yields income measures that are closer to income per household than to income per person: income per household has an implicit weight of 1.0 for all households, whereas income per person is based on assigning a weight of 1.0 to each person.

2. Bridges and Packard (1981) and Clark et al. (1984) come to the same conclusion. An additional reason for constructing a price index for the elderly has come from the use of the CPI to adjust Social Security benefits to inflation: it is periodically argued that the elderly face higher rates of inflation than the nonelderly and that the CPI-based Social Security adjustment is therefore inadequate.

The average elderly family unit is smaller than the average nonelderly family unit (1.7 persons per household vs. 3.0 persons in 1980), so the size adjustments will raise the income measure of the elderly relative to the nonelderly. In table 3.7, the ratio of incomes of the nonelderly to those of the elderly was 0.67 in 1984 with no size adjustment and 0.87 with the size adjustment. Average family size has decreased over time, but it has decreased more for the nonelderly than for the elderly. Therefore, the size adjustment will produce a larger increase in income per equivalent person of the nonelderly than of the elderly. For example, the size adjustment increased the annual rate of growth of income between 1979 and 1984 by 0.9 percent for the nonelderly but by just 0.3 percent for the elderly.

By either the unadjusted or the adjusted income measure, the elderly had much higher rates of growth of income than the nonelderly. These differences cumulate over a number of years to give quite different income changes. For example, the total income changes from 1967 to 1984 are shown in table 3.8. The growth of income of the nonelderly has come from increased work effort,[3] whereas income from earnings and labor force participation of the elderly fell sharply.

Table 3.7 above shows that, in most cases, income growth increased with age. This is partly due to the aging of younger, more wealthy cohorts and partly due to increases in Social Security, which are relatively more important to the very old. Still, as measured in table 3.7, by 1984, the incomes of the most elderly were still lower than the incomes of any age group shown in the table.

Some may find the growth in income of the elderly surprising in view of the high rates of inflation during the 1970s: at one time, it was generally thought that the elderly lived on fixed incomes and were vulnerable to inflation. It appears, however, that a substantial fraction of both income and wealth of most elderly is effectively indexed. Consider real incomes (in 1982 dollars) of the cohort born in 1898–1902, shown in table 3.9.

In 1967, when this cohort was 65–69 years old, its mean real income was $10,730. Between 1967 and 1972, Social Security benefits increased substantially owing to changes in the law, and, over the same years, some of the cohort retired. The net effect was an increase in both mean and median real income. After 1972, there were no legislated changes in Social Security benefits and little change in earnings because almost all the cohort would have already retired. Yet real income of the cohort was stable between 1972 and 1982, a period over which the average annual inflation rate was 8.4 percent.

Just why income should be effectively indexed is not apparent from the distribution of income by source shown in table 3.4 above. Although ad hoc adjustments are sometimes made to private pensions during periods of high inflation (Allen, Clark, and Sumner 1986), at least part of pension income and

3. In 1984, average hourly real nonagricultural earnings were almost exactly the same as in 1967 (*1988 Economic Report of the President,* table B-44).

Table 3.8 **Income Change, 1967–84 (%)**

	No Size Adjustment	Size Adjustment
Nonelderly	10.7	26.7
Elderly	42.4	54.7

Table 3.9 **Real Income, Cohort Born 1898–1902 (1982 dollars)**

Year and Age	Mean Income	Median Income
1967; 65–69	10,730	7,820
1972; 70–74	11,360	8,330
1977; 75–79	11,210	8,060
1982; 80–84	11,560	8,560

Source: Radner (1986).

part of asset income are not indexed, with the result that total income is not completely indexed. Another method of investigating inflation vulnerability will be discussed later in connection with wealthholdings. It is based on a detailed classification of wealth, and it verifies that the elderly are, on average, not particularly vulnerable to inflation.

3.2.2 Income Comparisons

The aim of income comparisons is to understand better the economic status of the elderly compared to that of the nonelderly. Its method is to bring income measures closer to welfare measures by scaling for family size and by adjusting income for nonmoney components, underreporting, and taxes.

No adjustment for household size is universally accepted, but, as discussed previously, a common method is based on the poverty line: household income is divided by the poverty line for that household (after normalization) to produce a measure of income per adult equivalent (Smeeding 1989). For example, if a single elderly person is assigned an adult equivalent weight of 1.0, in the poverty-line scaling an elderly couple is assigned a weight of 1.26 and a nonelderly three-person household a weight of 1.47. Therefore, if each household had an income of $20,000, the poverty-line scaling would assign the single elderly household an income of $20,000, the elderly couple an income of $15,873, and the three-person household an income of $13,605. This scaling implies large returns to scale in consumption: a couple needs only 26 percent more income than a single person.

An alternative scaling is based on observed consumption behavior in the 1972–73 Consumer Expenditure Survey (van der Gaag and Smolensky 1982). This scaling implies more modest returns to scale: for example, a couple needs 37 percent more than a single person. It has a firmer foundation than the pov-

erty scaling, which is ad hoc, because it is based on observed behavior rather than on arbitrary assumptions; therefore, at least in principle, it is superior to the poverty-line scaling.

Table 3.10 gives the ratio of the size-adjusted income of the elderly to the size-adjusted income of the nonelderly in 1986 for the poverty-line scaling and the budget-share scaling. The ratio of income, which was 0.64 in 1986 before size adjustment, is 0.79 under the poverty scaling and 0.91 under the budget-share scaling. Because the tax rate of the elderly is lower than the tax rate of the nonelderly, an adjustment for taxes increases the ratio further, as shown in the second line of table 3.10. The last adjustment in the table adds an imputed return to housing equity, which increases the incomes of the elderly more than the incomes of the nonelderly because the elderly hold more housing equity. By the budget-share scaling, the elderly had incomes about 4 percent higher than the nonelderly in 1986.

The adjustments shown in table 3.10 are probably not controversial and, by the budget-share scaling, show that the incomes of the elderly and nonelderly were about the same in 1986. According to a validation study of the 1973 CPS, the elderly underreport their incomes by 37 percent, mainly because of the underreporting of financial asset income, and the nonelderly by 3 percent. Were incomes to be adjusted for underreporting by these percentages, the income of the elderly would be greater according to the poverty scaling and substantially greater according to the budget-share scaling. Because financial assets are very highly concentrated, an adjustment for underreporting may be valid for mean incomes, but it would not reflect the economic status of most households.

Adjusting for nonmoney transfers (income in kind) is also controversial; but the transfers are large and surely of value to the recipient, so they should be taken into account when assessing consumption opportunities. The most common method of valuing income in kind is market valuation, the cost to the provider. Some people object that recipients value in-kind transfers, particularly Medicare, at less than the market value. An alternative method that, although arbitrary, has some plausibility assigns a "fungible value" to in-kind transfers. The fungible value is zero if the household income is so low that it

Table 3.10 **Mean Household Income of the Elderly Relative to That of the Nonelderly, 1986**

Income Concept	Poverty Line	Budget Share
Gross money income	.79	.91
After-tax money income	.84	.99
After-tax money income plus housing	.90	1.04

Source: Author's calculations from U.S. Bureau of the Census (1988).

Note: Figures given in the table represent the ratio of the mean household income of the elderly to the mean household income of the nonelderly.

cannot purchase the minimum necessary amounts of food and housing. At higher income levels, income in kind frees money income that would have otherwise been spent on the good that has been transferred. This liberated income can then be spent as desired, so it is valued as ordinary money income, and it is the fungible value of the in-kind transfer. Fungible value probably understates the value of the transfer to the recipient because it places no value on the transfer for households with low income levels.

In 1986, according to a "fungible value" measure, the elderly received $2,560 in nonmoney transfers, mostly Medicare. This was 12 percent of their before-tax, unadjusted household income. The nonelderly had nonmoney transfers of $886, which was just 3 percent of their before-tax, unadjusted household income. For the elderly, the fungible value is substantially below the market value of the transfers and may well be an underestimate of the value to the recipients: in 1984, 72 percent of elderly households had some form of private supplementary medical insurance. To the extent that the insurance was freely purchased and took roughly the same form as Medicare insurance, market valuation is appropriate, not fungible value. Even so, if the fungible value of nonmoney transfers were added to the incomes of the elderly and nonelderly, the elderly would be better off than the nonelderly even by the poverty-line measure.

The conclusion of the comparison of income levels is that, regardless of the exact magnitudes of the adjustments made for underreporting and the value of nonmoney transfers, on average the elderly were as well off (as measured by fully inclusive after-tax income adjusted by the budget-share scaling) as the nonelderly in 1986. Making modest adjustments for underreporting or income in kind implies that they were at least as well off under poverty scaling and better off under budget-share scaling. Adjusting fully for underreporting and income in kind makes them substantially better off under either scaling.[4]

It should be emphasized that the full income comparisons are not utility comparisons. The adjustment for nonmoney transfers puts a monetary value on the transfers to an individual that yields a monetary measure of the economic position of the individual. It aims to answer the question, What money income would make the individual as well off as the combination of actual money income and nonmoney income transfers? Although actual measurement may pose difficulties, the concept is clear, simple, and well supported in economic theory. The main difficulty arises in comparing incomes (whether adjusted for income in kind or not) across individuals or households because the comparison of income is not a welfare comparison. The utility functions of the individuals would have to be the same to make a utility comparison, but it is unreasonable to suppose that they are, especially in the case of a comparison between the elderly and the nonelderly because of different needs, in particular

4. Adjusting for underreporting, market value of nonmoney transfers, and taxes gives an income ratio of 1.48 for the budget-share measure (Hurd 1990).

different medical needs. The important issue is not, as some people believe, the valuation of nonmoney transfers but rather the use of an income measure to make cross-person or cross-household welfare comparisons.

3.2.3 Distribution of Income

Table 3.4 above showed that, on average, the most important income sources of the elderly are Social Security and asset income. Social Security acts strongly to reduce income inequality through the progressivity of the benefit schedule from lifetime earnings to benefits, whereas asset income acts to increase income inequality owing to the highly skewed distribution of assetholdings. The net effect appears to be that the income of the elderly is more unequally distributed than that of the nonelderly. Table 3.11 has Gini coefficients of income and the percentage of income going to the highest income quintile. Although there is some variation by year, data set, and income measure, both inequality measures show more income inequality among the elderly than among the nonelderly. The results from the 1973 Consumer Expenditure Survey and the 1979 CPS are based on the same income measure, and they are about the same. The adjustments to income in the 1979 CPS reduced income inequality because the well-to-do have higher tax rates and the poor receive a large fraction of their budgets from nonmoney transfers. The differences between the unadjusted and the adjusted inequality measures are greatest among the elderly because of the importance of Medicare and Medicaid. The last three rows of table 3.11 are based on consistent methods of measuring income in the CPS; they have the poverty scale size adjustment for household size discussed earlier. They indicate increasing inequality from 1979 to 1984, especially among the nonelderly.

3.2.4 Poverty

The poverty rate is the fraction of a population whose incomes fall below the poverty line, which varies by age and household composition. It is a widely used measure of income inequality and an indicator of the need for social policy. In 1987, the poverty line was $5,447 for a single elderly person and $6,871 for an elderly couple.

Table 3.12 shows that, as the income of the elderly rose, their poverty rate fell. By 1984, the rate was lower than the poverty rates of the nonelderly, and it remained lower through 1987.[5] The decline was largest for the oldest, yet their poverty rate remains high.

As discussed earlier, putting a value on nonmoney income increases income measures of the elderly considerably, which should lead to a large reduction in poverty rates, as shown in table 3.13. Adjusted income includes capital gains,

5. In 1987, the poverty rate of the elderly was 12.2 percent and that of the general population was 13.5 percent.

Table 3.11 **Distribution of Income**

Year, Data, and Income Measure	Gini Coefficients		% of Income to Upper Income Quintile	
	Age < 65	Age ≥ 65	Age < 65	Age ≥ 65
1973 Consumer Expenditure Survey[a]	.36	.44	40.4	49.8
1979 CPS[b]	.35	.43	40.6	49.5
1979 CPS, adjusted[c]	.31	.35	37.2	42.8
1967 CPS, family size adjustment[d]	.36	.42	41.6	51.6
1979 CPS, family size adjustment[d]	.36	.40	41.3	47.1
1984 CPS, family size adjustment[d]	.40	.42	44.2	48.1

[a]Danziger et al. (1984). Household income.

[b]Smeeding (1989). Household income.

[c]Smeeding (1989). Household income adjusted for nonmoney income, taxes, and employment-related income.

[d]Radner (1987). Family unit income. Size adjustment based on poverty scale.

Table 3.12 **Poverty Rates of Family Units (%) Based on Family Unit Money Income**

Age	1967	1979	1984
Under 65	11.8	11.1	14.5
65+	28.1	15.1	12.4
65–69	21.9	12.2	9.4
70–74	25.8	13.4	11.5
75–79	33.8	17.9	13.7
80–84	38.2	19.4	17.7
85+	38.9	22.7	18.5

Source: Radner (1987, 19).

Table 3.13 **Poverty Rates, 1986 (%)**

	Elderly	Nonelderly
Measured income	12.4	13.8
Adjusted income	5.7	10.9

Source: U.S. Bureau of the Census (1988).

nonmoney income (measured as fungible value), and taxes. Even as calculated by measured income, the poverty rate of the elderly was lower than that of the nonelderly. This is a considerable social accomplishment: in 1959, 35.2 percent of the elderly were in poverty. Social Security can take much of the credit for the improvement. For example, in 1984, 78 percent of the income of households in the lowest income quintile came from Social Security.

The poverty rate of elderly widows has also declined, but it remains consid-

erably higher than the poverty rates of the general population and of the rest of the elderly. Some of the poverty is undoubtedly due to the high fraction of the very elderly that are widows: ceteris paribus, one would expect the very elderly to be poor simply because they must finance a longer lifetime of consumption from a given lifetime wealth. Table 3.14 shows, however, that the explanation is more complicated. It is true that widows age 72 and older had higher poverty rates than widows age 65–71, but younger widows had poverty rates at least as high.

One explanation is differential mortality by income and wealth level: husbands in poor families die sooner than husbands in wealthy families. For example, in the Retirement History Survey (RHS), the poverty rate in 1969 of couples who survived intact during the entire ten years of the RHS (1969–79) was 7.6 percent. The poverty rate in 1969 of couples in which the husband eventually died during the ten years of the RHS was 11.7 percent (Holden, Burkhauser, and Myers 1986). One might think that the difference in poverty rates is caused by health expenditures in the several years before the husband's death, but the association with poverty in 1969 and eventual widowhood lasts over many years. For example, the poverty rate in 1969 of couples in which the husband died between 1977 and 1979 was 9.2 percent, again compared with 7.6 percent for couples intact between 1969 and 1979.

Beyond differential mortality, the transition to widowhood itself seems to induce poverty. Table 3.15 gives poverty rates from the RHS by marital transition between 1975 and 1977 for the entire sample of 1975 couples and for the 1975 couples not in poverty in 1975. The table shows that the couples in which the husband died between 1975 and 1977 had somewhat but not greatly higher poverty rates than the other couples in the years before the husband's death. However, in the first survey year after the husband's death, the poverty rate of the surviving widow rose to 42 percent, while the poverty rate of the intact couple was just 7 percent. Other calculations (not given here) show that the average increase in poverty following the husband's death was 30 percent. The increase is partly due to income mismeasurement associated with the husband's death, but mostly due to permanent changes in economic resources

Table 3.14 Poverty Rates of Widows

			65 and Over		
Year	60–61	62–64	Total	65–71	72+
1971	...	...	35.1	...	...
1976	22.8	22.9	23.3	21.7	24.0
1981	26.2	27.2	25.4	23.9	26.1
1984	27.6	25.5	20.1	18.3	20.9
1987	22.0	22.8	19.1	17.3	19.9

Sources: U.S. Bureau of the Census, *Current Population Reports,* ser. P-60 (various years).

Table 3.15 Poverty Rates (%)

	Entire Sample		Not Poor in 1975	
Year	Couple to Couple	Couple to Widow	Couple to Couple	Couple to Widow
1969	5	8	3	5
1971	7	11	4	7
1973	8	8	4	4
1975[a]	8	9	0	0
1977[a]	7	42	4	37
1979	10	32	6	26

Source: Calculations of Hurd and Wise (1989) from the RHS.

[a]Husband in "couple to widow" columns died between these years.

(Burkhauser, Holden, and Myers 1986). The two right-hand columns give poverty rates before and after the transition years over couples that were above the poverty line in 1975. Thirty-seven percent of the surviving widows, none of whom had been in poverty in 1975, were in poverty in 1977.

One might well imagine that much of the increase in poverty at the husband's death is due to the termination of his earnings. Apparently, however, this is not the case: using RHS data, Burkhauser, Holden, and Feaster (1988) studied the determinants of the hazard of poverty of widows. Only 10.1 percent of the transitions into poverty were associated with the loss of the husband's earnings. About two-thirds of the cases were associated with widowhood itself and with a decline in nonwage income, particularly Social Security. Even after the husband's retirement (so that he had no earnings), the probability that the widow became poor when the husband died is high (Holden, Burkhauser, and Feaster 1988)

The causes of the high rates of poverty among elderly widows are varied and complex. Some families reach retirement already poor or close to becoming poor. Were the husband to survive, the family would have a high risk of poverty, but, because husbands in poor families tend to die sooner than husbands in wealthy families, often the widow inherits the family's poverty. In addition, some sources of income drop when the husband dies, and some wealth is reduced. How much poverty is due to age itself is not clear. Cross-sectional poverty rates have cohort effects; one would want to observe panels over, say, twenty years to observe the life-cycle effects.

3.2.5 Wealth

Table 3.16 has average net wealth from the 1975 RHS and the 1979 RHS. Most of the heads of households were 64–69 years old in 1975 and 68–73 years old in 1979, so the table shows wealth near the beginning of retirement. In fact, future earnings accounted for only 6 percent of wealth in 1975 and 3 percent in 1979, so, practically speaking, the sample had retired by 1979. Financial

Table 3.16 **Average Household Wealth and the Distribution of Wealth by Source, 1975 and 1979 RHS Sample**

	1975		1979		Lowest Wealth Decile 1979	
	Wealth	%	Wealth	%	Wealth	%
Housing	22.4	14	26.9	18	1.4	4
Business and property	11.0	7	11.6	8	1.1	3
Financial	23.2	15	22.5	15	.7	2
Pensions	23.2	15	18.0	12	1.6	4
SSI, welfare, and transfers	2.7	2	2.3	2	3.6	10
Medicare-Medicaid	15.8	10	17.7	12	11.9	34
Social Security	48.4	31	44.0	30	14.2	40
Future earnings	9.6	6	3.9	3	1.0	3
Total	156.3	100	146.7	100	35.5	100

Source: Hurd and Shoven (1985).

Note: Wealth in thousands of 1979 dollars. Based on 7,483 (1975) and 6,610 (1979) observations from the RHS. Farm families and farm wealth excluded.

wealth includes stocks and bonds, savings accounts, and so forth. Flows (all but the first three entries) are converted to stocks through actuarial discounting, either real or nominal, depending on the flow. SSI is Supplemental Security Income, a means-tested old-age welfare program. Transfers includes transfers from relatives and children. Medicare and Medicaid is the expected present value of the per household transfer through the Medicare and Medicaid program evaluated at cost, the market value discussed earlier.[6]

The average wealth levels are reasonably high and consistent with independent measures of income and wealth.[7] Most people, however, would be surprised at how little saving is in the conventional form of business and property and financial wealth: about 22 percent in 1975 and 23 percent in 1979. Adding in housing equity to find the fraction of saving that takes place at the household level brings these figures to 36 percent and 41 percent. Pensions and Social Security, which represent saving by firms and society on behalf of the household, accounted for 46 percent in 1975. Both in levels and as percentages of total wealth, the sum of pensions and Social Security fell between 1975 and

6. This is the method used by Smeeding (1989) and Clark et al. (1984).

7. For example, Smeeding (1989) calculates the full income of the elderly to be $13,423; if the wealth in 1979 were annuitized at a 7 percent interest rate and a 4 percent mortality rate, it would yield $16,137. Given that this applies to 68–73-year-olds who are more wealthy than older cohorts, the figures seem quite consistent. Radner (1989) reports mean financial and housing wealth of 65–74-year-olds from the Survey of Income and Program Participation to be $99,800, which is $69,700 in 1979 dollars. The comparable wealth figure in the 1979 RHS, when most heads of households were 68–73, is $71,100.

1979 because of higher mortality discounting at the RHS sample aged and, in the case of pensions, because inflation reduced the real value. Undoubtedly, for the same reasons discussed earlier in connection with the valuation of the income flow from Medicare and Medicaid, the most controversial entry is the wealth value of Medicare and Medicaid.[8] It accounted for 10 percent of wealth in 1975 and 12 percent in 1979.[9] Its value rose between 1975 and 1979 despite the aging of the RHS population (the actuarial discounting is higher at greater ages) because the growth in Medicare and Medicaid transfers was much higher than the inflation rate.

The level of wealth in the lowest wealth decile is low indeed and consists almost entirely of wealth from public programs. Any underreporting is not likely to be substantial because most underreporting is associated with financial assets, but, even allowing for some, it is clear that many elderly reach retirement with very little.

3.2.6 Inflation Vulnerability

Although the elderly may be reasonably well off as measured by either income or wealth, their economic status could be eroded by inflation. As noted earlier, however, incomes of the elderly maintained their purchasing power during the 1970s and early 1980s despite high inflation rates, which suggests that they are not particularly vulnerable to inflation. This suggestion was verified by Hurd and Shoven (1985), who used the wealth data in the RHS to calculate an index of inflation vulnerability. All assets and income flows were classified as real or nominal. Under the assumption that the nominal interest rate varies one for one with the rate of inflation, the value of a nominal asset such as a bond will vary with changes in the inflation rate in a way that depends on the maturity of the bond. Neither the value of a real asset, such as a house, nor the present value of a real income flow, such as Social Security, will vary with inflation. Nominal income flows such as private pensions or a stream of mortgage payments will vary with inflation owing to a change in the nominal discount rate.

Table 3.17 has measures of inflation vulnerability for the RHS sample calculated according to these assumptions. The table gives the percentage change in wealth associated with an increase in the inflation rate of 0.01 from the base inflation rate, which is given in parentheses. For comparison, the change in the value of a consol bond is given for the assumption that the nominal interest

8. The market valuation for most elderly may be fairly accurate: many elderly purchase additional medical insurance beyond Medicare and Medicaid. This indicates that, from Medicare and Medicaid alone, they are not at a corner solution in their demand for medical coverage and that, apart from wealth effects, market valuation is appropriate. This argument would not hold for the poor elderly, many of whom do not purchase additional medical coverage (U.S. Senate Special Committee on Aging 1988).

9. These fractions are very close to the fraction of income from Medicare and Medicaid (10 percent) in Smeeding (1989).

Table 3.17 **Median % Wealth Change**

Year[a]	Bond	All	Lowest Decile	Highest Decile	SS Vulnerable
1969 (.057)	10.3	.03	.00	.32	3.7
1975 (.058)	10.4	.06	.00	.25	2.3
1979 (.113)	6.5	.09	.00	.23	1.7

Source: Hurd and Shoven (1985).

[a]The base inflation rate is given in parentheses.

rate is 0.03 higher than the inflation rate. Thus, if the inflation rate changed from 5.7 to 6.7 percent, the value of a consol would change by 10.3 percent. Because the assumed change of 0.01 in the inflation rate is a smaller fraction of the inflation rate in 1979 than in 1969, the percentage wealth change of the consol will be smaller in 1979 than in 1969. The interpretation of the first row is that, if the inflation rate had changed in 1969 from 5.7 to 6.7 percent, the medial total wealthholding of the RHS population would have declined by 0.03 percent. In the lowest wealth decile, there would have been no change. Even in the highest wealth decile, just 0.32 percent of wealth would have been lost. As a practical matter, these estimated changes are zero. The importance of the indexing of Social Security is shown in the last column: it gives the wealth loss under the assumption that Social Security benefits are not indexed (vulnerable to inflation). The loss would be 3.7 percent of wealth. Because of the importance of Social Security to households in the lower part of the wealth distribution, the loss in the lowest decile would be even greater: 4.5 percent of total wealth in 1969 (not shown).

The conclusion to be drawn from table 3.17 and from observed income over periods of high inflation is that the elderly are not particularly vulnerable to inflation.[10] The indexing of Social Security is responsible for a considerable part of this income and wealth stability.

3.3 Conclusion

On average, the elderly in the United States are at least as well off as the nonelderly and possibly substantially better off. The averages, however, conceal considerable income inequality, as reflected in the Gini coefficient of income and in the high poverty rate of widows. In fact, it may well be that the Gini coefficient of all the elderly is simply a reflection of the low incomes of widows.

Not only are the elderly well off on average, but they are substantially protected from uncertainty. Indeed, one reason that they gained with respect to the nonelderly is that, since the early 1970s, real wage rates have been constant

10. For a similar conclusion, see also Clark et al. (1984) and Burkhauser, Holden, and Feaster (1988).

yet real Social Security benefits have increased substantially. Most of the elderly are well protected against inflation changes. Medical costs, however, remain a major source of uncertainty.

The future economic status of the currently retired seems well assured. The baby boom generation, moving into their prime earning years, will be contributing to the Social Security trust funds more than enough for the funds to meet their obligations. The elderly hold substantial stocks of housing and other assets. When they decide to convert those assets to consumption, there will be an ample number of buyers in the younger generations who will be saving for their own retirements.

The more distant future of the elderly does not seem as bright. When the baby boom generation retires, there will be fewer workers to support each retired person. This has negative implications for the Social Security and Medicare systems, of course, but also for the pension systems and for private savings. Firms will have to support larger numbers of retirees. When the retired want to sell and consume their financial assets, they will have fewer buyers. This implies that their consumption relative to the consumption of workers will be lower than it is today. Whether it will be absolutely lower than it is today depends on the future course of productivity in the economy. Productivity, in turn, depends on how the large bulge in Social Security contributions and retirement savings of the baby boom generation is used.

In principle, the world economy could help relieve the stress caused by the aging of the U.S. population. By purchasing claims today to the future output of other countries, the United States could prefund future consumption. This would require an export surplus. Of course, exactly the opposite has happened: other countries are accumulating claims on future U.S. production because the United States has a trade deficit. Because many developed countries have roughly the same demographic problem as the United States, it is likely that they will want to redeem those claims just when the United States has a high ratio of retirees to workers. This will, of course, make it even more difficult to support the consumption of retirees in the distant future.

References

Allen, Steven, Robert L. Clark, and Daniel Sumner. 1986. Postretirement adjustments of pension benefits. *Journal of Human Resources* 21, no. 1:118–37.

Boskin, Michael J., and Michael D. Hurd. 1985. Indexing Social Security benefits: A separate price index for the elderly? *Public Finance Quarterly* 13, no. 4 (October): 436–49.

Bridges, Benjamin, and Michael Packard. 1981. Price and income changes for the elderly. *Social Security Bulletin* 44, no. 1:3–15.

Burkhauser, Richard, Karen C. Holden, and Daniel Feaster. 1988. Incidence, timing,

and events associated with poverty: A dynamic view of poverty in retirement. *Journal of Gerontology* 43, no. 2 (March): S46–S52.

Burkhauser, Richard V., Karen C. Holden, and Daniel A. Myers. 1986. Marital disruption and poverty: The role of survey procedures in artificially creating poverty. *Demography* 23, no. 4:621–31.

Clark, Robert L., George Maddox, Ronald Schrimper, and Daniel Sumner. 1984. *Inflation and the economic well-being of the elderly.* Baltimore: Johns Hopkins University Press.

Danziger, Sheldon, Jacques van der Gaag, Eugene Smolensky, and Michael Taussig. 1984. Implications of the relative economic status of the elderly for transfer policy. In *Retirement and economic behavior,* ed. H. Aaron and G. Burtless. Washington, D.C.: Brookings.

Holden, Karen, Richard Burkhauser, and Daniel J. Feaster. 1988. The timing of falls into poverty after retirement and widowhood. *Demography* 25, no. 3:405–14.

Holden, Karen, Richard V. Burkhauser, and Daniel Myers. 1986. Income transitions at older stages of life: The dynamics of poverty. *Gerontologist* 26, no. 3:292–97.

Hurd, Michael D. 1990. Research on the elderly: Economic status, retirement, and consumption and saving. *Journal of Economic Literature* 28 (June): 565–637.

Hurd, Michael D., and John B. Shoven. 1985. Inflation vulnerability, income and wealth of the elderly, 1969–1979. In *Horizontal equity, uncertainty, and economic well-being,* ed. Martin David and Timothy Smeeding. Chicago: University of Chicago Press.

Hurd, Michael D., and David A. Wise. 1989. The wealth and poverty of widows: Assets before and after the husband's death. In *The economics of aging,* ed. D. Wise. Chicago: University of Chicago Press.

Radner, Daniel, 1986. *Changes in the money income of the aged and nonaged, 1967–1983.* Studies in Income Distribution, no. 14. Washington, D.C.: Office of Research and Statistics, Social Security Administration.

———. 1987. Money incomes of aged and nonaged family units, 1967–84. *Social Security Bulletin* 50, no. 8 (August): 9–28.

———. 1989. The wealth of the aged and nonaged, 1984. In *The measurement of saving, investment and wealth,* ed. Robert E. Lipsey and Helen Stone Tice. Chicago: University of Chicago Press.

Smeeding, Timothy, 1989. Full income estimates of the relative well-being of the elderly and the nonelderly. In *Research in economic inequality,* vol. 1, ed. D. Bloom and D. Slottje. Greenwich, Conn.: JAI.

U.S. Bureau of the Census. 1988. Measuring the effect of taxes and income on poverty: 1986. *Current Population Reports,* Ser. P-60, no. 164-RD-1.

U.S. House of Representatives. Committee on Ways and Means. 1987. Retirement income for an aging population. Washington, D.C.: U.S. Government Printing Office.

U.S. Senate Special Committee on Aging. 1988. *Aging America, 1987–88 edition.* Washington, D.C.: U.S. Department of Health and Human Services.

van der Gaag, Jacques, and Eugene Smolensky. 1982. True household equivalence scales and characteristics of the poor in the U.S. *Review of Income and Wealth* 28 (March): 17–28.

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