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SHIFTS IN THE AGED-NONAGED INCOME RELATIONSHIP, 1979-85

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I. Introduction*

In recent years there has been a substantial amount of discussion about the economic status of the aged. There is a widely accepted view that the status of the aged has improved relative to the nonaged. This view has affected the debate on modifications to the social security system and other retirement plans. This paper discusses changes in the economic status of the aged during the past several years, in terms of the real income of the aged and in terms of the income of the aged relative to the income of the nonaged. The analysis in this paper uses detailed age groups within both the aged and nonaged groups. This detail is important because summary age groups are not homogeneous. Income change at different income levels within each age group is also examined. Income is adjusted for size of family unit and, in some cases, age of head.

The relationship between the income of the aged and the income of the nonaged has shown a pronounced pattern since the end of World War II. The ratio of aged to nonaged mean money income before tax fell substantially from 1947 to 1970, and has risen since, although there have been short-term fluctuations (Grad 1984; Radner 1986).[1] The 1985 ratio is roughly the same as the 1948 ratio. The period from 1970 to 1979 showed a slow increase in the ratio, with fluctuations. However, the ratio rose rapidly in the 1979-85 period. This paper examines the extent and nature of the increase in the aged-nonaged income

ratio since 1979. Of particular interest is the identification of the types of income that are responsible for the shift.

The data used in this paper are from the March interviews of the Current Population Survey (CPS) conducted by the Bureau of the Census (U.S. Bureau of the Census 1986a). The estimates are for families and unrelated individuals (called "family units" in this paper).[2] Income is defined as money income before tax. The income amounts used in the rest of this paper have been adjusted for size of family unit and age of head using an equivalence scale derived from the U.S. poverty thresholds.[3] For each family unit in the CPS microdata file, the unit's amount of income was divided by the appropriate equivalence scale value to obtain adjusted income. An adjustment for size of family unit is important because units with an aged head generally are smaller than units with a nonaged head--because aged units have a higher proportion of unrelated individuals and because aged families generally are smaller. It should be noted that the equivalence scale used here assumes that, for units of size one or two, aged units need slightly less income than nonaged units. Although the unit size and age adjustment is most important for comparisons of levels of income, changes in size of unit can affect estimates of income change.[4]

Many different equivalence scales have been used by researchers. The choice of a scale can affect estimates of aged-nonaged income ratios (Radner 1986, table A1). The equivalence scale used here is not an extreme one. Some researchers have used per capita income (in which the unit's income is divided by

the unit's size). That is an extreme adjustment that does not allow for economies of scale and does not take account of age differences in unit members (e.g., an infant is assumed to have the same needs as an adult). The scale used here does allow for economies of scale and for some age differences.

II. Changes in the Income of Aged and Nonaged Units, 1979-85

The ratio of aged to nonaged median incomes, adjusted for size of unit, rose from 0.604 in 1979 to 0.712 in 1985 (table 1). In the twelve years from 1967 to 1979, the ratio rose only 0.078 (from 0.526 to 0.604), while in the six years from 1979 to 1985 the increase was 0.108. In fact, there was an increase of 0.095 in the three years from 1979 to 1982. The increase was rapid in 1980 (0.027), 1981 (0.037), and 1982 (0.031), and slowed in 1983 (0.011) and 1984 (0.016). The only decline in this period was in 1985 (0.014).

It is important to note that the income data for 1984 and 1985 are affected by a change in the Census Bureau's processing of the CPS income data. Beginning with the 1984 data, a new method for imputing interest income to nonrespondents was introduced.[5] That change had the effect of raising interest income and total income of both aged and nonaged units, but the incomes of aged units were raised more than the incomes of nonaged units. This happened primarily because interest income is a more important income source for the aged. Although precise estimates are not available, a rough guess is that the aged-

nonaged ratio was raised by about 0.010 in both 1984 and 1985 over what it would have been if the old imputation procedure had been used. If that change is adjusted for, the increase in the ratio is very small in 1984, and the 1985 ratio falls to about the level of the 1982 ratio. Thus, virtually all of the increase in the ratio in the 1979-85 period occurred from 1979 to 1982. Also, the change in the ratio has generally become less favorable for the aged since 1981, moving from a change of +0.037 in 1981 to -0.014 in 1985.

One important question is whether the rapid rise in the ratio was the result of a very high increase in aged income, a very small increase (or decrease) in nonaged income, or both. The percentage changes in aged and nonaged real income for each year during the period are shown in table 2.[6] For the 1979-85 period, the median income of aged units rose 18.4 percent, or 2.9 percent per year. This is a fairly high increase in historical terms. In contrast, the median income of nonaged units rose only 0.3 percent (which rounds to zero annual average change). That is clearly a small increase in historical terms.

The rapid rise in the ratio of aged to nonaged median incomes from 1979 to 1982 resulted from the combination of substantial declines in the income of the nonaged and large increases in the income of the aged. For the 1979-82 period, the median income of the nonaged declined in each of the three years, although the declines became smaller. A decline in real wages associated with the recessions in 1980-82 was important. For the aged, although the 1979-80 increase was small, the 1980-81 and 1981-82 increases

were large. Social security benefits and property income were important in the large increases in 1980-81 and 1981-82. The 1982-85 period shows a smaller increase for the aged than the first three years; the 1983-84 change is inflated by the imputation change mentioned earlier, and there was no change from 1984 to 1985. The nonaged show relatively small increases from 1982 to 1985.

A second important question is whether the income change in the 1979-85 period was similar for subgroups of the aged and nonaged. It has often been emphasized that neither the aged nor the nonaged constitutes a homogeneous group. Did more detailed aged age groups show similar income change? Was the income change fairly uniform across detailed nonaged age groups? Also, did different parts of the income distribution within those detailed age groups experience similar income changes?

Table 3 shows average annual percentage changes in real median income during the 1979-85 period for detailed age groups and income quintiles within those age groups. The overall changes for each age group are examined first; the change for the third quintile is the change in the overall median. The two aged age groups show similar increases. However, the zero change for the nonaged group as a whole hides variation from -3.3 percent per year for the under 25 age group to +0.9 percent per year for the 35-44 age group. The increase for either of the aged age groups exceeds the change for each nonaged age group.[7]

Table 3 also shows that, within each income quintile, the two aged age groups had the highest rates of income growth. Within

each of the aged age groups there was a tendency for income growth to be higher in the higher income quintiles, but this pattern could be due, at least in part, to the change in interest imputation. That change would be expected to have more of an impact on the incomes of higher income units (both aged and nonaged) since interest income is more important in the total income of those units. In general, within the nonaged age groups, higher income quintiles experienced higher income growth.

Before the causes of these changes are discussed, it is useful to examine the relative levels of median income of the different age groups in 1979 and 1985. It should be noted that these estimates cover only money income before taxes. Thus, the many types of noncash income received by all of these age groups are not considered. Also, any differences in tax rates do not affect these estimates. In addition, these estimates are affected by underreporting of income amounts. There is evidence that total income is underreported more for aged units than for nonaged units (Radner 1983).

Table 4 shows relative median incomes of age groups for 1979 and 1985, using the median for the 45-54 age group as the base (because it has the highest median) in each year. The income changes from 1979 to 1985 produced increases in the relative medians of the two aged age groups, but the values were still quite low in 1985. The median for the 75 and over age group is still less than half the median for the 45-54 age group, and the median for the 65-74 age group is less than two thirds. The relative median for the youngest age group fell sharply, and the

25-34 and 55-64 age groups also showed declines. Despite these changes, in 1985 the relative medians for the two aged age groups were still below the relative medians for all the other age groups except the under 25 group.

III. Changes in Specific Types of Income

In this section, changes from 1979 to 1985 in amounts of specific income types are examined. The income types considered are: (1) **earnings**, which includes wage and salary income and nonfarm and farm self-employment income; (2) **social security**, which includes Old Age and Survivors and Disability (OASDI) benefits and railroad retirement benefits; (3) **property income**, which includes interest, dividends, rent, and income from estates and trusts; (4) **pensions**, which includes private pensions, annuities, and government pensions, both civilian and military; and (5) **other**, which includes Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), unemployment compensation, worker's compensation, veterans' payments, alimony, child support, regular contributions from outside the household, and other regularly received money income.

Changes in real mean amounts of these five income types for the aged, the nonaged, and all ages are shown in table 5. These means are for everyone in the age group, not just for those receiving the income type. Mean total income for the aged rose 18.9 percent during this period, which was slightly more than the 18.4 percent increase in the median. For the aged, property

income rose 46 percent, but the change in imputation procedures inflated that figure. Pensions rose 29 percent and social security rose 16 percent. Other income fell by nine percent and earnings showed little change. About half of the increase in total income was accounted for by property income, with social security accounting for 30 percent and pensions for 20 percent.

For the nonaged, mean total income rose by almost five percent, far above the 0.3 percent increase in the median. Property income rose by 31 percent and pensions by 14 percent; all other types changed by five percent or less. Despite an increase of less than four percent, earnings accounted for more than two thirds of the increase, with property income accounting for about a quarter.

At this point, it is useful to discuss several income types that had important effects on changes in total income during this period. Social security benefits for aged units rose about 16 percent in real terms from 1979 to 1985. The increase resulted from adjustments for inflation, increases in the percentage of aged units receiving social security, and the fact that units entering the aged group on average had higher benefits than those that left the aged group during this period.

Automatic increases in social security benefits amounted to 53 percent in current dollars from 1979 to 1985.[8] When that increase is adjusted for inflation using the Personal Consumption Expenditure (PCE) implicit price deflator, the automatic increase in real terms is seven percent. This increase resulted in part from differences between the deflator used here and the index

actually used to adjust social security benefits (CPI-W). The PCE deflator rose more slowly than the CPI-W during the 1979-85 period (43 percent compared to 46 percent), in part because of different treatments of housing costs.[9] Also, the actual adjustment of benefits is carried out with a lag. The change in prices actually used to adjust benefits referred to a period approximately from 1978 to 1984. Because inflation generally was declining during the period, the actual adjustment for the 1979-85 period exceeded the increase in the CPI-W during the 1979-85 period.[10]

The percentage of aged units receiving social security benefits rose from 92 percent in 1979 to 94 percent in 1985. The real mean amount of social security income for aged units with that income type rose 13 percent from 1979 to 1985. The difference between this increase and the seven percent automatic real increase results primarily from recipients who entered the universe (usually those who reached age 65) having higher average benefits than recipients who left the CPS universe (mostly as a result of death or institutionalization). In general, the newer recipients have more lifetime social security taxable earnings than the recipients who died or entered institutions during this period. Even though benefits for a given amount of average earnings were not as generous for new beneficiaries in 1985 as they were in 1979, the differences in amounts of earnings produced this increase in mean real benefits.

Property income was also very important in the rise in the income of the aged, and interest income is the dominant type of

property income. Changes in interest rates are one important factor in changes in amounts of interest income.[11] Interest rates fluctuated widely during the period. For example, the 6-month Treasury bill rate rose from 10.0 percent in 1979 to 13.8 percent in 1981, then fell to 11.1 percent in 1982 and 8.8 percent in 1983. That rate rose to 9.8 percent in 1984 and fell to 7.7 percent in 1985. Changes in interest rates are loosely related to changes in inflation. Increases in the PCE implicit price deflator were large at the beginning of the period (10.7 percent in 1980), but declined each year during the period (to 3.5 percent in 1985). The largest one-year fall was from 9.2 percent in 1981 to 5.7 percent in 1982. Based on the 6-month Treasury bill rate, real interest rates (the nominal rate minus the rate of price increase) were low (less than one percent) in 1979-80 and high (more than four percent) in 1981-85.

It should be noted that changes in nominal interest rates affect real interest income (which is used in the income estimates in this paper) even if real interest rates are unchanged. For example, assume that the real interest rate is constant at three percent. If the nominal interest rate rises from five percent in year one to ten percent in year two, current dollar interest income (on a fixed current dollar amount) would increase by 100 percent. The adjustment to constant year one dollars (assuming a price increase of seven percent in year two) would leave real interest income in year two far above the year one value (in this example, 87 percent higher).[12]

In the early part of the 1979-85 period, rising nominal interest rates produced large increases in real interest income for aged units. Because interest income is a far more important income source for aged than for nonaged units, rising interest rates increased total income of the aged more than they increased total income of the nonaged.

Pension income rose 29 percent for aged units. This increase resulted from both a rise in the proportion receiving pension income and an increase in the mean amount of pension income for those with pensions. The percentage receiving pension income rose from 34 percent in 1979 to 40 percent in 1985, an increase of 16 percent. The mean amount of pension income for those with pensions rose 12 percent.

Wage and salary income, the principal component of earnings, is by far the most important income type for the nonaged. The 1979-85 period included two recessions. The first covered roughly the first half of 1980 and was relatively mild. The second, which was severe, occurred in roughly the last half of 1981 and most of 1982. As might be expected, these two recessions had a serious impact on real wages. Average gross weekly private nonagricultural earnings in real terms fell five percent during the 1979-85 period. The decline was 3.5 percent in 1980, and a total of about 1.5 percent in 1981-82. This decline held the increase in mean real earnings to less than four percent during the period.

The Middle Quintile of Detailed Age Groups

The means shown in table 5 are affected greatly by the changes that occur in the upper part of the income distribution. For example, property income is much more important for that group than for the age group as a whole or for the middle of the age group. Table 6 shows changes in real means of income types for the middle income quintile (percentiles 41-60) of each age group. The middle quintile provides a better indication of the "typical" unit in the age group, in the sense that the incomes of those units are neither extremely high nor extremely low. Also, unlike the previous table, table 6 shows detailed age groups.

For the middle quintile of each of the two aged age groups, property income was a far less important factor in the change than for the overall aged mean.[13] For the 65-74 age group, property income accounted for 23 percent of the change (i.e., $431/$1878), while social security accounted for 38 percent and pensions for 30 percent.[14] Earnings accounted for 13 percent, in contrast to no substantial change in the overall mean. For the 75 and over age group, property income accounted for 24 percent of the increase, but was far outweighed by social security, which was responsible for 62 percent. Pensions accounted for 21 percent and earnings for seven percent. Rises in property income were particularly important early in the period, and there was a sharp artificial increase in 1984 when the imputation procedure for interest income was changed. Increases in social security were also particularly important early in the period.

Changes in the groups under age 45 were dominated by changes in earnings. The under 25 and 25-34 age groups showed declines in earnings. The 45-54 age group showed an increase in property income along with an increase in earnings. The 55-64 age group experienced a very small decline in total income. For that group, a large (10 percent) fall in earnings was offset by increases in pensions, property income, and social security. Earlier withdrawal from the labor force was responsible for the income pattern in the 55-64 age group.

Income Quintiles for Aged Units

Changes in real mean income for each aged income quintile are shown in table 7. As noted earlier, changes in total income tended to be a higher percentage for higher income units. The mean of the bottom quintile rose about 12 percent from 1979 to 1985, with almost all of the increase accounted for by social security. For the second quintile, 90 percent of the 14 percent increase in total income was accounted for by social security, with pensions also rising substantially. However, other income fell. In the third quintile, property income was important in the change, although social security was the most important income type in the change. In the fourth quintile, property income was the most important type, accounting for 42 percent of the change. Social security, pensions, and earnings were also important. Changes in property income dominated in the top quintile, accounting for 73 percent of the change. Pensions and

social security were also important. Earnings fell about six percent in the top quintile to offset some of the other increases. Of course, the change in imputation procedures inflated the importance of property income.

As income increased from quintile to quintile, social security fell sharply in importance in the change, from 99 percent in the bottom quintile to only 19 percent in the top quintile. In contrast, property income rose sharply, from one percent in the bottom quintile to 73 percent in the top quintile. Pensions were most important in the middle quintile. Earnings were most important in the top three quintiles (negatively in the top quintile). Other income was important only in the second quintile (negatively).

IV. Summary and Conclusions

This paper examines changes in the money income (before tax) of family units, using income estimates adjusted for size of family unit and age. From 1979 to 1985, the ratio of aged to nonaged median incomes rose rapidly. Most of this increase had occurred by 1982. After taking account of a technical change in the processing of the income data, the 1985 ratio was about the same as the 1982 ratio. The rapid rise in the ratio in the 1979-82 period resulted from a large increase in the income of the aged and a decline in the income of the nonaged.[15] Social security benefits and property income increased substantially for

the aged, and a decline in real wages (associated with two recessions) was important for the nonaged.

Within the aged group, the 65-74 and 75 and over age groups experienced similar growth in median income. However, within the nonaged group there were substantial differences. The under 35 age groups showed declines, while the 35-54 age groups showed small increases. The 55-64 age group showed no change. Relative median incomes of aged family units rose from 1979 to 1985, but they were still quite low in 1985.

Earnings dominated the changes for the middle income quintile of the nonaged age groups from 1979 to 1985. The 55-64 age group showed a decline in earnings as a result of earlier withdrawal from the labor force. Changes in the bottom two quintiles of aged units were dominated by changes in social security. The third quintile showed substantial increases in social security, pensions, property income, and earnings. In the top two quintiles, the largest increases were in property income.

Property income played an important role in the rapid rise in the real income of the aged between 1979 and 1982. However, interest income, the principal component of property income, can be a very volatile income type. The fall in interest rates in 1985 was a major factor in the lack of an increase in median total income for the aged in that year. Unfortunately, a technical change in the data that increased interest income for 1984 and 1985 makes it very difficult to assess the importance of property income for those years. It does appear that substantial changes in interest rates can have an important impact on the

total income of the aged. While these effects are most important for high-income units, they are also important for middle-income aged units. Changes in property income are not a very important factor for lower income aged units.

Table 1.--Ratio of aged to nonaged median incomes, income adjusted for size of unit, 1979-85

	1979	1980	1981	1982	1983	1984	1985
Ratio	0.604	0.631	0.668	0.699	0.710	0.726	0.712

Table 2.--Percentage change in real median incomes, income adjusted for size of unit, 1979-85

	Period						1979-85	
Age group	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	Total	Annual average
Aged	+1.2	+4.4	+4.1	+2.6	+4.8	0	+18.4	+2.9
Nonaged	-3.1	-1.4	-0.6	+1.0	+2.4	+2.0	+0.3	0

Table 3.--Average annual percentage change in real median income, by age and income quintile, income adjusted for size of unit, 1979-85

Age	Income Quintiles 1	2	3	4	5
Under 25	-7.1	-5.5	-3.3	-2.2	-1.0
25-34	-3.8	-1.6	-0.5	0.3	1.1
35-44	-2.0	0.1	0.9	1.3	2.0
45-54	-0.4	0.1	0.8	1.2	2.4
55-64	-0.1	-0.5	0.0	0.4	1.1
65-74	2.2	2.5	2.9	3.2	2.6
75 and over	1.8	1.8	2.8	3.4	3.5
Under 65	-2.4	-0.9	0.0	0.7	1.6
65 and over	1.9	2.1	2.9	3.2	2.7
All ages	-0.9	-0.1	0.5	0.9	1.6

Table 4.--Relative median incomes of family units, by age, income adjusted for size of unit, 1979 and 1985[a]

Age	Year	
	1979	1985
Under 25	0.57	0.44
25-34	0.82	0.76
35-44	0.87	0.87
45-54	1.00	1.00
55-64	0.93	0.89
65-74	0.58	0.65
75 and over	0.43	0.48
65 and over	0.51	0.57

[a] The 45-54 age group is the base.

Table 5.--Mean incomes of family units by age and type of income, adjusted for size of unit, in 1982 dollars[a]

Age	Year	Type of Income					
		Total	Earnings	Social Security	Property	Pensions	Other
All Ages							
	1979	15,496	12,263	1,123	1,023	561	526
	1985	16,549	12,644	1,268	1,425	692	521
	Change	1,053	381	145	402	131	-5
	Percentage change	6.8	3.1	12.9	39.3	23.4	-1.0
Under 65							
	1979	16,392	14,552	300	670	323	547
	1985	17,174	15,094	285	877	368	551
	Change	782	542	-15	207	45	4
	Percentage change	4.8	3.7	-5.0	30.9	13.9	0.7
65 and over							
	1979	11,813	2,860	4,502	2,474	1,538	438
	1985	14,048	2,849	5,198	3,616	1,987	398
	Change	2,235	-11	696	1,142	449	-40
	Percentage change	18.9	-0.4	15.5	46.2	29.2	-9.1

[a] Mean amounts are for all units in the age group.

Table 6.--Mean incomes of family units for the third income quintile in each age group, adjusted for size of unit, in 1982 dollars[a]

Age	Year	Total	Type of Income				
			Earnings	Social Security	Property	Pensions	Other
Under 25							
	1979	9,658	8,811	104	73	7	663
	1985	8,014	7,172	33	79	6	724
	Change	-1644	-1639	-71	6	-1	61
	Percentage change	-17.0	-18.6	-68.3	8.2	-14.3	9.2
25-34							
	1979	14,014	13,343	49	144	23	455
	1985	13,650	13,059	46	143	24	377
	Change	-364	-284	-3	-1	1	-78
	Percentage change	-2.6	-2.1	-6.1	-0.7	4.3	-17.1
35-44							
	1979	14,766	13,871	149	259	103	384
	1985	15,520	14,587	131	268	90	444
	Change	754	716	-18	9	-13	60
	Percentage change	5.1	5.2	-12.1	3.5	-12.6	15.6
45-54							
	1979	17,085	15,558	231	412	345	539
	1985	17,974	16,347	207	533	371	516
	Change	889	789	-24	121	26	-23
	Percentage change	5.2	5.1	-10.4	29.4	7.5	-4.3
55-64							
	1979	15,973	12,334	940	981	1,210	507
	1985	15,892	11,123	1,166	1,406	1,655	541
	Change	-81	-1211	226	425	445	34
	Percentage change	-0.5	-9.8	24.0	43.3	36.8	6.7
65-74							
	1979	9,843	1,739	5,206	1,292	1,235	371
	1985	11,721	1,986	5,911	1,723	1,793	308
	Change	1,878	247	705	431	558	-63
	Percentage change	19.1	14.2	13.5	33.4	45.2	-17.0
75+							
	1979	7,313	285	4,983	1,005	582	458
	1985	8,627	374	5,803	1,324	863	264
	Change	1,314	89	820	319	281	-194
	Percentage change	18.0	31.2	16.5	31.7	48.3	-42.4

[a] Mean amounts are for all units in the quintile in the age group.

Table 7.--Mean incomes of aged family units, by income quintile and type of income, adjusted for size of unit, in 1982 dollars[a]

Income quintile	Year	Total	Type of Income				
			Earnings	Social Security	Property	Pensions	Other
1							
	1979	3,483	65	2,693	142	62	521
	1985	3,892	73	3,096	146	78	499
	Change	409	8	403	4	16	-22
	Percentage Change	11.7	12.3	15.0	2.8	25.8	-4.2
2							
	1979	5,954	326	4,325	498	299	506
	1985	6,777	343	5,067	552	411	403
	Change	823	17	742	54	112	-103
	Percentage Change	13.8	5.2	17.2	10.8	37.5	-20.4
3							
	1979	8,752	973	5,181	1,195	1,005	398
	1985	10,337	1,142	5,815	1,614	1,454	312
	Change	1,585	169	634	419	449	-86
	Percentage Change	18.1	17.4	12.2	35.1	44.7	-21.6
4							
	1979	13,074	2,555	5,501	2,489	2,201	328
	1985	15,830	2,921	6,149	3,640	2,775	345
	Change	2,756	366	648	1,151	574	17
	Percentage Change	21.1	14.3	11.8	46.2	26.1	5.2
5							
	1979	27,798	10,379	4,811	8,047	4,125	436
	1985	33,399	9,765	5,860	12,125	5,215	433
	Change	5,601	-614	1,049	4,078	1,090	-3
	Percentage Change	20.1	-5.9	21.8	50.7	26.4	-0.7

[a] Mean amounts are for all units in the quintile.

FOOTNOTES

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[1] Although the median generally is a more appropriate measure than the mean for analysis of the economic status of groups, medians are not available for the entire postwar time period.

[2] A family is a group of two or more persons related by birth, marriage, or adoption and residing together; an unrelated individual is a person 15 years old or over who is not living with any relatives (U.S. Bureau of the Census 1986a).

[3] The equivalence scale values are: one person (age under 65) 1.024; one person (age 65 or over) 0.943; two persons (age under 65) 1.322; two persons (age 65 or over) 1.190; three persons 1.568; four persons 2.009; five persons 2.379; six persons 2.687; seven persons or more 3.329. These values were obtained by dividing the 1979 nonfarm total weighted average threshold for each size of family unit (and age of head where applicable) by the threshold for one-person units of all ages (U.S. Bureau of the Census 1981, table A-3).

[4] From 1979 to 1985, mean unit size fell slightly faster for nonaged units than for aged units. The rapid increase in the number of nonaged unrelated individuals was an important factor.

[5] When income items are not answered, the Census Bureau assigns amounts from similar units that did answer; see U.S. Bureau of the Census (1986a).

[6] The Personal Consumption Expenditure implicit price deflator from the National Income and Product Accounts is used in this paper to construct the constant (1982) dollar estimates. The Consumer Price Index was not used because it contained a distorted treatment of housing costs during part of this period. See Radner (1986) for a discussion of the choice of the deflator.

[7] An examination of five-year age groups from age 65-69 to age 85 and over shows that all of those age groups experienced relatively high rates of income growth (Radner 1986 and unpublished tabulations by the author).

[8] This figure was obtained by constructing changes in annual income from the automatic changes shown in Social Security Administration (1986), table J.

[9] Beginning in 1985, the treatment of housing costs in the CPI-W was revised to incorporate a rental equivalence measure for

homeowners' costs.

[10] Midyear automatic benefit increases (1979-82) were based on price change from the first quarter of the previous year to the first quarter of the current year. Automatic benefit increases at the end of the year (1983-84) were based on price change from the third quarter of the previous year to the third quarter of the current year. Thus, in both cases the adjustment was based on price change in an earlier period. Also, the use of annual income estimates here means that price change from an even earlier period is taken into account. For the years in which the increase was effective in the middle of the year, the percentage increase in annual social security benefits produced by the automatic increases was approximately the average of the automatic percentage increases in the current and previous years. Taking account of earlier time periods tended to increase the benefit adjustment during the period because inflation generally was falling. A partially offsetting factor was that the 1983 automatic increase, scheduled for midyear, was postponed six months to the end of 1983. The CPI-W rose 2.4 percent from the first to the third quarters of 1983. This rise was not reflected in the automatic adjustments.

[11] Amounts of interest income received are also affected by the amounts of interest-bearing assets held.

[12] It should be noted that the real value of the asset (e.g., a C.D.) declines as the price level rises.

[13] Units can shift between income quintiles over time. Thus, units that were in the middle quintile in 1979 might not be in the middle quintile in 1985.

[14] Positive percentage changes will sum to more than 100 percent if at least one of the income types shown had a negative change.

[15] Although Federal income tax cuts occurred during the period discussed in this paper, as estimated by the Census Bureau, changes in the percentage of income paid in selected taxes from 1980 to 1984 were small relative to the rates of income change shown here. See U.S. Bureau of the Census (1983, 1986b) for estimates of after-tax income.

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