Income Change at Retirement

by Susan Grad*

Retirement is a complex process involving various stages of withdrawal from the labor force and receipt of one or more types of retirement benefits. Only a minority of retirees move directly into full retirement—that is, from full-time work to benefit receipt with no work. Full retirees have, on average, 46 percent of preretirement income if they receive one retirement benefit and 60 percent of preretirement income if they have more than one benefit. Many persons continue working after benefit receipt, either until they receive a second retirement benefit or until they must stop working. Those who supplement one retirement benefit with earnings generally have low income and high poverty rates when they stop working. Still others who stop working before benefit receipt tend to have low incomes both before and after retirement. Income tends to be relatively stable during the period leading up to and after retirement. However, a sizable minority of retirees have larger changes in income before or after retirement than right at retirement, often because of changes in their labor-force participation. Thus, the full retirement process—including reductions in work effort before receipt of benefits, up through receipt of one or more retirement benefits and stopping work—may extend over many years, beginning for some well before age 60 and ending for others well past age 70.

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The subject of this article is income change at retirement. Most studies of retirement have used data from the Retirement History Study or the National Longitudinal Surveys. However, these data have become quite old. The Survey of Income and Program Participation (SIPP) is a new source of data with which to study retirement in the 1980's. The SIPP is an ongoing household survey that collects information every 4 months over a 32-month period and obtains monthly data. In addition to providing more up-to-date measures of the retirement process, the monthly nature of the SIPP provides a new perspective on retirement.

Many definitions of retirement have been used in the literature involving some combination of stopping work, reducing one's hours of work, collecting Social Security benefits, or collecting an employer pension. Individual studies tend to use only one definition of retirement and often restrict the focus to white male wage and salary workers. Because sample sizes are small when only one definition of retirement is used, this analysis uses alternative definitions and includes all persons meeting these definitions. By doing so, the complexities of the retirement process are highlighted.

The definitions of retirement for this analysis include first receiving Social Security retired-worker benefits; receiving an employer pension (including Railroad Retirement, military pensions, private pensions, and Federal, State, and local government pensions); and stopping work. Analyzing labor-force transitions is complicated because of the amount of movement in and out of employment. Only one group is included based solely on stopping work. This group kept working after receiving benefits presumably to supplement their income, but later stopped working.

The population for this analysis is persons aged 55 or older who, during the 32 months of the 1984 SIPP panel, began receiving Social Security retired-worker benefits or employer pensions, or who were initially working and receiving retirement benefits and then stopped working for the remainder of the panel period. There were 1,117 cases meeting these criteria. [1]

The analysis covers four topics: (1) changes in average income in the 3 months before retirement, compared with the 3 months after retirement, both for the retirees alone and for the families of retirees; (2) poverty rates based on individual and family incomes; (3) the stability of income both before and after retirement, comparing total income for adjacent 3-month periods; and (4) the composition of income before and after retirement.

The data are weighted as of the end of the first interview because for 25 percent of the usable cases interviews were not conducted for all 32 months and, therefore, a longitudinal "full panel" weight was not assigned. The use of first interview weights makes little substantive difference in the results. Mean and median preretirement income and median postretirement income, when weighted by the first interview weight and then by the full panel weight, differ by 1 percent or less. The means of postretirement income differ by only 4 percent.

Retirement Groups

Inspection of the data reveals that SIPP retirees are in various stages of the retirement process, and many

[1] This article uses data from the Survey of Income and Program Participation (SIPP) 1984 Full Panel (Preliminary) File, which was released by the Bureau of the Census for research to improve understanding and analysis of SIPP data. The data on the file are preliminary and should be analyzed and interpreted with caution. At the time the file or extract was created, the Census Bureau was still exploring certain unresolved technical and methodological issues associated with the creation of this data set. The Census Bureau does not approve or endorse the use of these data for official estimates. The Social Security Administration, through an agreement with the Census Bureau, obtained record data for the 1984 SIPP respondents with which retired-worker beneficiaries who had not previously collected benefits were identified.

are in interim stages. To make sense of income change at retirement, persons are classified by their observed retirement transitions. Each person in each month of the SIPP panel is assigned 1 of 12 possible statuses for various combinations of receipt of Social Security benefits, receipt of employer pensions, and work status (defined by the presence of earnings and whether one usually works more or less than 35 hours a week). A large proportion of the sample have only one retirement transition during the SIPP panel (beginning to receive Social Security benefits or employer pensions, or stopping work as described above) or multiple transitions that occur within 3 months of each other. For some, however, the first and last retirement transitions are widely separated in time. The preretirement period ends at the month of the first or only retirement transition. The postretirement period begins in the month of the last or only retirement transition. The period between the first and last retirement transitions, if any, is ignored.

Income is measured on the basis of 3 months of data. Retirees are required to have at least 3 months of data before the first transition and after the last transition and to have the same status in the 3 months before and in the 3 months after the transitions.[2] The analysis excluded 286 cases, most of which had fewer than 3 months of observation before and after retirement transitions. The remaining 831 cases representing 3,567,000 retirees were used in the analysis.

[2] In some cases, a search was made up to 3 months before or after the month of the first or last retirement transition to find 3-month periods with no change in status.

The SIPP retirees are clustered into the seven groups listed in table 1. The intention here is not to put great weight on the particular groups, but to illustrate in the next section that income increases as well as decreases at various stages in the retirement process.

Full Retirement

Only 22 percent of the individuals in the sample were working full time just before the first retirement transition and were collecting retirement benefits and not working just after the last retirement transition—the stereotype of retirement. The number of retirees collecting Social Security benefits and employer pensions approximately equaled the number collecting only one of these types of benefits. These stereotypical retirees are presented as two separate groups to measure differences in income change of retirees with both types of benefits, compared with those who had only one (groups 1 and 2). The median ages of retirement for groups 1 and 2 were age 63 and age 60, respectively.

Partial Retirement

Some individuals who initially were working and not collecting retirement benefits continued working after receiving retirement benefits (15 percent). About 80 percent of this group were working full time before the first retirement transition, and 90 percent collected only one type of benefit after the last retirement transition. The median age in this group (group 3) was age 62. Persons in group 3 are, for the most part, entering partial retirement.

Two groups began where group 3 left off—working and collecting a retirement benefit. One group began collecting the other type of benefit (6 percent). Most individuals in that group reduced their work effort after receipt of the second benefit (from full time to part time or from part time to no work). About 60 percent were exiting partial retirement and 40 percent were moving from one stage of partial retirement to another. The median age at which they began to receive the second type of benefit was age 65 (group 4).

Individuals in the other group who initially were working and collecting a benefit stopped working—that is, they exited partial retirement (13 percent). The median age at which they stopped working was age 69 (group 5).

Table 1.—Retirement groups, by status before and after SIPP retirement transitions and median age

Retirement group	Percent	Age
Total percent	100	63
Full retirement:		
1 Full-time work, no benefits → two benefits, no work	12	63
2 Full-time work, no benefits → one benefit, no work	10	60
Partial retirement:		
3 Work, no benefits → work and benefit(s)	15	62
4 Work and one benefit → two benefits, may have work	6	65
Other:		
5 Work and benefit(s) → benefit(s), no work	13	69
6 No work, no benefits → benefit(s), may have work	20	62
7 No work, one benefit → two benefits, may have work	24	68

Retirement Gap

Not everyone works until benefit receipt. Twenty percent of the SIPP retirees had stopped working before collecting benefits (group 6). About 1 in 8 had stopped work for only 3 or 4 months before collecting benefits. But, most had stopped work for a much longer period. Their median age of beginning to receive benefits was age 62.

Full Retirees Adding Benefits

Finally, some individuals who eventually collect both Social Security benefits and employer pensions have a period in which they have stopped working and are collecting only one type of retirement benefit before the second type of benefit begins (24 percent) (group 7). Curiously, the median age of this group was 68. Forty percent of the group were aged 65 or younger, and they may not have been old enough to collect the second benefit, or they may have waited until age 65 to receive unreduced benefits. The remaining 60 percent were older than age 65 (half of them were older than age 73) when they began collecting the second benefit. A small number of those older than age 65 became widowed and may have become eligible for a survivor pension. Others may have had a lengthy wait for their retirement papers to be processed and payments to begin. Reporting error of either who received the pension or the type of income received may be a factor for these retirees.

The retirement transitions of some of these groups are more meaningful than the transitions of others from a policy standpoint. Groups 1 and 2 show change in income from full employment to full retirement. However, their income change may not be representative of all retirees as they move from full employment to full retirement. Group 5 shows the decline in income when earnings, which had been supplementing pension income, cease. The other transitions are not as intrinsically interesting, especially without knowing their durations, because information about the beginning or end of the retirement process is missing and the middle is only a transitory state. Nevertheless, some interesting observations emerge from looking at income change of these seven groups.

Income Change and Poverty

Table 2 shows median pretransition and posttransition incomes of the retirees themselves and their families and median ratios of these incomes. To give some idea of the economic impact of being in these various stages of retirement, unofficial estimates of pretransition and posttransition poverty rates are calculated based on the retiree's own income. Summed income in each 3-month period is compared with summed one-person poverty thresholds in those months in table 3.

Groups 1 and 2 had the highest posttransition incomes and the lowest ratios of post-to-pre-transition income (60 percent and 46 percent, respectively). These substantial declines in income fit the stereotype of income change at retirement. Not surprisingly, retirees with only one type of benefit lost more of their pretransition income than those with both types of benefits. These two groups had little or no poverty before retirement. Only 2 percent of those with two pensions, but as many as 15 percent of those with just one pension, had posttransition income below the poverty threshold.

The other group that was working and not collecting benefits before the first transition (group 3) had a median pretransition income 30 percent lower than the average of the two stereotypical groups, in part because 20 percent of them were working part time, and in part because the pretransition earnings of full-time workers in group 3 were 20 percent lower than the average for groups 1 and 2. Ten percent of group 3, compared with almost no one in groups 1 and 2, had pretransition incomes below the poverty threshold.

Median posttransition income other than earnings of group 3 were only half as large as that of the stereotypical groups ($552, compared with $1,140 and $961). This finding suggests that group 3 may have had an economic need to continue working after benefit receipt. By continuing to work, their median posttransition income was 15 percent higher than their pretransition income, and they had the highest median posttransition income of any group. However, work is probably not sustainable indefinitely. The posttransition poverty rate of this group was a comparatively low 4 percent, but still higher than that of two other groups.

In group 3, some persons who continued working after receiving a benefit may begin receiving another type of benefit at a later point, as group 4 did. Group 4's median pretransition income was only slightly lower than group 3's posttransition income when they had the same status—working and collecting retirement benefits—and their respective poverty rates were about the same (4-5 percent). When members of group 4 added a benefit, they often reduced their

Table 2.—Retirement groups, by median income before and after retirement transitions [1] and median income ratios [2]

Retirement group	Retirees			Families		
	Before	After	Ratio	Before	After	Ratio
Total	$907	$930	1.05	$1,811	$1,789	1.05
1	1,917	1,140	.60	2,682	1,938	.74
2	2,111	961	.46	3,143	1,859	.62
3	1,402	1,561	1.15	2,331	2,396	1.11
4	1,457	1,257	.96	2,074	2,178	1.03
5	897	616	.67	1,455	956	.78
6	117	503	3.29	1,238	1,765	1.32
7	598	929	1.36	1,185	1,608	1.23

[1] Average monthly amounts in 3-month periods before and after retirement transitions.

[2] Medians of each retiree's and family's ratios of income after retirement transitions to before transitions, rather than ratios of the group medians, to reflect income change at the individual level.

hours of work or stopped working. Their median posttransition income was only 4 percent lower than pretransition income.

The posttransition income of persons in group 4 was slightly higher than that of the stereotypical group with both types of retirement benefits (group 1), possibly because they were older, on average, when they completed this transition. Later retirees would not have had as much of a benefit reduction for early retirement. In addition, later retirees may have improved the earnings records on which their benefits are based, or they may have amassed greater savings. Groups 1 and 4 had the lowest posttransition poverty rates: only 2 percent.

Others in group 3 who continue working after benefit receipt will have to stop working at some point, as group 5 did. Only one-fifth of those in group 5 had both types of retirement benefits when they stopped working. The median pretransition income of those in group 5 who were working and collecting benefits was less than two-thirds of the posttransition income of those in group 3 or the pretransition income of group 4—the other two groups that had earnings as well as retirement benefits. This lower median income for group 5 suggests that those who earn only one type of pension and work to supplement pension income are probably lower earners with smaller pensions than retirees who earn both types of pensions. Nevertheless, when group 5 did have earnings and retirement benefits, only 4 percent were poor.

Not only was the pretransition income of group 5 lower than the incomes of groups 3 and 4 at comparable statuses, but also group 5's income decreased substantially—to 67 percent of previous levels on average—when they did stop working. As a result, they had low posttransition income and the second highest posttransition poverty rate (30 percent). Nonmarried women were overrepresented in this group (31 percent, compared with 18 percent overall).

The two groups with the lowest pretransition incomes were those who had already stopped working. Group 6 had stopped working before receiving benefits, and group 7 had a gap between receipt of one benefit and the other. The former group had only minimal pretransition income and had the lowest posttransition income even

Table 3.—Retirement groups, by percent poor before and after retirement transitions

Retirement group	Percent poor			
	Retiree		Family	
	Before	After	Before	After
Total	23	16	7	6
1	0	2	0	0
2	0	15	3	0
3	10	4	4	1
4	5	2	2	0
5	4	30	1	17
6	77	38	23	8
7	25	7	9	4

though their income increased threefold. This group's poverty rates both before and after the retirement transition were the highest (77 percent beforehand and 38 percent afterwards). Forty-six percent were married women, compared with 22 percent overall.

The group that was initially collecting only one type of benefit had the second lowest median pretransition income and poverty rate. Its median posttransition income was about 20 percent lower than that of the stereotypical group collecting both types of benefits, largely because its transfer income from retirement benefits and other public programs was lower (median of $765, compared with $1,024). This finding suggests that the latter group contains more individuals who were low earners or who had intermittent work histories than does group 1. Their income increased by about one-third with the addition of the second benefit and their poverty rate dropped from 25 percent to only 7 percent.

Family Income and Poverty

Most SIPP retirees were married and some of the nonmarried retirees were living with extended families. The effective incomes of retirees living with relatives include the income of other family members.

Percentage changes in income of most retirement groups were not as great for families as they were for the individual retirees. For example, the stereotypical retirees had posttransition incomes of 60 percent and 46 percent, respectively, of pretransition incomes. Their posttransition family incomes were 74 percent and 62 percent, respectively, of pretransition levels.

As one would expect, poverty rates were lower based on family income (6-7 percent both before and after retirement transitions, compared with 23 percent before and 16 percent after the transitions, based on the retiree's own income). Group 6, with no earnings or benefits before the transition, had the highest pretransition family poverty rate (23 percent). Group 5—who stopped working—had the highest posttransition family poverty rate (17 percent).

Income Stability

If retirement is indeed a process rather than an event, how does income change over a longer period before and after retirement? Following the same methodology of comparing income in 3-month periods, table 4 shows income in several adjacent 3-month periods near the retirement transitions.[3] Income ratios of less than 100 percent indicate a decline in income; ratios of more than 100 percent indicate an increase in income. Based only on the medians of these income ratios, it would appear that income is very stable both before and after retirement transitions and, for most persons, the large change in income occurs right at the retirement transition. However, income increases and decreases in table 4 cancel each other so that the medians of the ratios do not reflect the magnitude of changes either up or down. The distribution of these ratios, and the level of the median recalculated to reflect the magnitude of change in income irrespective of direction, shows changes in income during the months both leading up to and after retirement transitions. For many, the change is fairly modest. For some, however, the change is substantial. Close to one-third of the SIPP retirees had a change in income shortly before or after their retirement transitions that was larger than the change at their retirement transitions.

Income may change because of a status change, which is generally a change in level of work, but it may also be a change in receipt of Social Security benefits or employer pensions. Or, income may change because amounts received from various sources have changed. The proportion of retirees whose status changed in various 6-month periods near the retirement transitions was 12-19 percent. The median percentage change in income, either up or down, was 3-9 percent if status was unchanged and 19-55 percent if the status changed (table 5). Income appeared to change more before the retirement transitions than after: 6-9 percent had no change and 30-55 percent had a status change before the first transition, compared with 3-4 percent and 19-29 percent, respectively, after the last transition.

Two-thirds of the sample had no change in status during the 32-month SIPP panel other than the retirement transition changes. About one-fourth of this group had changes in labor-force participation either before the first or after the last retirement transition. And, about one-tenth of the sample lost either Social Security benefits or employer pensions after the last transition for some period of time. In most cases of lost pensions, either the reporting of pensions or the reporting of no pension receipt lasted for one wave or less, and often for exactly one wave. Such a pattern may indicate misreporting either of having received the pension or having lost

[3] Months 1-3 before the first transition and after the last transition are compared with months 4-6; months 4-6 with months 7-9, in a continuum up to months 10-12 with months 13-15, for persons with data in both 3-month periods.

Table 4.—Distributions and median ratios of income between adjacent 3-month periods before and after retirement transitions

Income ratios	Months before and after retirement								
	Before				At	After			
	10-12 / 13-15	7-9 / 10-12	4-6 / 7-9	1-3 / 4-6	1-3 after / 1-3 before	4-6 / 1-3	7-9 / 4-6	10-12 / 7-9	13-15 / 10-12
Number (in thousands)	1,313	1,750	1,973	2,642	3,428	2,892	2,306	1,960	1,662
Total percent	100	100	100	100	100	100	100	100	100
Less than 50 percent	6	3	4	7	16	2	2	2	1
50-89	19	16	18	19	24	20	13	11	14
90-109	50	58	55	50	12	58	68	69	66
110-149	14	14	15	16	16	15	15	13	14
150 or more	10	8	8	8	32	5	2	5	5
Median ratio	100	100	100	100	105	100	100	101	100
Median change [1]	110	107	108	110	147	106	104	105	105

[1] Direction of change is included in median ratio but not in median change.

the pension. If cases of lost pensions were misreporting, it would account for up to one-fifth of the very old persons in group 7 who appeared to begin receiving a second retirement benefit.

Change in Sources of Income

How do particular sources of income contribute to change in income at retirement? Income is divided into three types—earnings, asset income, and all transfer sources. The transfers include Social Security benefits and employer pensions plus a number of other sources such as public assistance and veterans' benefits.

Obviously, the earnings and the transfers are key income sources in the retirement process. At retirement there is a major shift from reliance on earnings to reliance on transfers. By definition, the receipt of earnings and transfers and their importance vary greatly by the type of retiree.

Table 5.—Percent of retirees with income status change over two adjacent 3-month periods before and after retirement transitions and median income change between periods

Three-month periods	Percent with status change	Median change	
		Status change	No status change
Before retirement:			
10-12 and 13-15	13	41	9
7-9 and 10-12	12	37	6
4-6 and 7-9	16	30	6
1-3 and 4-6	12	55	9
After retirement:			
1-3 and 4-6	17	29	4
4-6 and 7-9	19	19	3
7-9 and 10-12	13	28	4
10-12 and 13-15	13	24	4

Even given the fact that many of these SIPP retirees are not fully retired in the stereotypical sense, twice as many had transfers and only one-third as many had earnings just after the retirement transitions, compared with just before the retirement transitions (table 6). The share of income from transfers was twice as great and the share from earnings was only one-fourth as great after the retirement transitions.

The share of income from particular sources depends very much on how it is measured. For this analysis, means of individual ratios of amounts from the three sources to total income are calculated. This method gives very different results from those obtained by calculating the means of the three sources and the percentage distribution of the means. The choice of measures depends on whether one is more interested in the importance of income sources to individuals (the former) or to the group (the latter). Means rather than medians are calculated so that the share of income from various sources adds to 100 percent.

Asset income is a more stable and less important source of income than transfers or earnings at retirement. More than 80 percent of the SIPP retirees received asset income before and after the retirement transitions. The share of income from assets was 22 percent in the 3 months before the first transition and 14 percent in the 3 months after the last transition.[4]

An unchanging amount of asset income will become a larger or smaller share of one's income depending on what happens to total income at retirement. But amounts of asset income often change near retirement transitions. The median percentage change in asset income amounts was a sizable 39 percent. Less than 1 in 10 retirees had no change in amounts of asset income. Increases were slightly more prevalent than decreases (48 percent, compared with 43 percent).

Such volatility in asset income amounts may be an artifact of the short measurement period. To determine whether asset income was as changeable over a longer period, the above measures were repeated for those having 12 months of data before and after retirement transitions (only about one-fourth of the cases with 3 months of data on asset amounts). The magnitude of change in asset income was about the same over 12-month periods as over 3-month periods—40 percent.

[4] Asset income is reported once in each wave, rather than monthly. It appears on the file as equal monthly amounts during each wave.

Table 6.—Percent of retirees receiving income, by source and share of total income before and after retirement transitions

Income sources	Percent receiving		Income share [1]	
	Before	After	Before	After
Total	...	...	100	100
Transfers	53	100	35	76
Asset income	81	84	22	14
Earnings	56	19	43	10

[1] Means of individual ratios of amounts from sources to total income.

One might conclude that many persons rearrange their asset holdings at retirement, resulting in changing amounts of asset income. However, a visual inspection of individual asset income amounts revealed substantial variability both up and down across the whole panel, even for interest income, which one might expect to be fairly constant.

Although the share of total income from assets decreased for retirees as a whole, it increased for some and decreased for others. The share of income from assets decreased dramatically for the one retirement group that had a severalfold increase in income at the SIPP retirement transition—group 6 (table 7). The share of income from assets increased substantially for the three groups with large decreases in income at retirement—groups 1, 2, and 5. The other groups with smaller changes in income at the retirement transitions had smaller changes in the share of income from assets. For all but the two retirement groups with the lowest pretransition incomes, asset income amounted to 10 percent or less of income. After the transitions, asset income amounted to 20 percent of income at most.

It seems premature, at this time, to make pronouncements about the role of asset income in income changes at retirement. It is unclear to what extent changes in asset income are related to the retirement process and to what extent they go on long before and after retirement.

Summary and Conclusions

Less than one-fourth of SIPP retirees made the transition from full-time work and no benefit receipt to benefit receipt and no work during the 32 months of the 1984 SIPP panel, and these full retirees appear to differ economically from those who had not fully retired during the 32 months. Income declined to 60 percent of preretirement levels for those who received Social Security benefits and employer pensions, and to 46 percent for those who received only one type of benefit after ceasing full-time work. Family income cushioned the decline. About one-third of retirees had larger changes in income shortly before or after observed retirement transitions than right at the retirement transitions. Larger changes in income were associated with changing one's work effort. Asset income was quite variable across the entire panel.

A monthly view of persons in various stages of retirement has brought into sharper focus than has previously been recognized the many paths into retirement, often over an extended period of time, during which status may change back and forth. A one-time or occasional extension of the SIPP to perhaps a 5-year period for the near-retirement-age population would increase the proportion of retirees for whom the full process is observed in such great detail.

Alternatively, information on the timing of changes in labor-force and pension status may be collected in a proposed new Retirement History Study that calls for interviewing persons at 2-year intervals over a 10-year period for a more accurate picture of the retirement process.

Table 7.—Retirement group, by share of income from assets [1] before and after retirement transitions

Retirement group	Income share	
	Before	After
Total	22	14
1	5	9
2	6	16
3	8	8
4	8	11
5	10	15
6	75	20
7	19	15

[1] Means of individual ratios of asset income to total income.