

CHANGES IN INCOME AND PROGRAM PARTICIPATION
DURING SIX MONTHS IN A LOW INCOME SAMPLE

Jonathan P. Lane, Consultant
Janice A. Olson, Social Security Administration

The federal government is planning a national longitudinal household survey which will collect data on cash and in-kind income, program eligibility and participation, net worth and related variables on a recurring basis after 1980. The operational survey will be the responsibility of the Office of Research and Statistics in the Social Security Administration, in partnership with the Bureau of the Census.

A unique aspect of the survey is the gathering of monthly income data over the period of a year, through repeated interviews with the same households, i.e., through a longitudinal survey. This should provide the first direct evidence on the sizes of the populations eligible for various welfare programs, since income eligibility is always stated in terms of months, not a year or more. In the past, estimates of the future cost of present and proposed programs have had to be based on guesses about monthly income of families and households on which only annual income data was available.

The purpose of this paper is to illustrate the kind of evidence on this issue which the new survey will provide. It shows the extent to which income varies from month to month in a low income sample and suggest how the numbers of persons eligible for income-tested programs will vary depending on whether the "accounting period" for income eligibility for programs is a single month, or some other period of less than a year.

The new survey has been tentatively named the Survey of Income and Program Participation (the SIPP). Developmental work has included some pilot surveys. The analysis here is based on part (about 700 households) of the so-called Site pilot test for SIPP. This was carried out in the last six months of 1977 and early 1978, with two interviews with the same households, three months apart. The households were drawn from five large cities, three of which are in Texas. About a third of these households come from area sampling frames in those cities, a third from AFDC recipient sampling frames and a third from SSI (Supplemental Security Income) recipient sampling frames. The sample is not nationally representative, and unusual distributions of age, family structure and receipt of transfer income are obvious. Nevertheless, the sample serves the purposes here, which are to illustrate the new kinds of analyses which the intra-year longitudinal data make possible.

1. Types and amounts of income received
(Table 1)

Table 1 describes the types of income which were accessed in the Site research as well as the amounts received by recipient households in this subsample in the final month covered by the survey. As the summary figures show, 92.8 percent of the households reported some income during December, 1977, and the mean December total income for households with any income was \$737.

The breakdowns by income type in Table 1 show that about half (51.2%) of the 727 households in the sample received some current "market" income: that is, labor, property or other private income. (This excludes private transfers such as private retirement income.) Most of this was wage and salary income, and figures for the first "detailed income type" show that for households with these earnings, the average amount was \$1024 in December. (Note that all figures in this report are for households.)

About a third of the sample received some "contributory" kinds of public transfers--entitlements such as social security or unemployment compensation. The average payment to households receiving social security or railroad retirement income was \$271, which was \$50 more than the average amount of private retirement pensions for those who get them.

Half (51.2%) of the households surveyed received some non-contributory public transfers--"public assistance" such as AFDC, SSI or food stamps. Average household payments for SSI range from \$109 to \$156, and average AFDC payments were \$143. Many such households also received food stamps, which adds another \$106 per month. The high percentages of AFDC and SSI households are due, of course to the deliberate oversampling of these program recipients in the Site survey. This also explains the high percentage of food stamp recipients since most of the AFDC and SSI households are automatically eligible for food stamps.

2. Variability in participation (Table 2)

The percentages of all households receiving each kind of income in single months don't change much, which is the kind of information obtained from cross-sectional survey data. For example, 43.1 percent received wage/salary income in July and 42.0 percent in December. But Table 2 shows that these aren't exactly

the same households in the July-December period. Only 34.7 percent got wage/salary income steadily all six months, while 49.1 percent had wage/salary income in at least one month.

More directly relevant for judging welfare issues are the findings about variability in the receipt of public transfer benefits, particularly public assistance. For example, the monthly participation rates for food stamps were almost identical in July and December (28.3 and 28.2%, respectively), but Table 2 shows that over the six months, 33 percent of all households participated in at least one month, while only 23.7 percent were steady monthly participants. The following tabulation shows how the size of the "welfare population" changes depending on the time perspective chosen for counting it:

	All P.A.	SSI	AFDC	Food Stamps	Other P.A.
<u>Steady participants as proportion of monthly participants</u>	.89	.88	.84	.84	.69
<u>All participants as a proportion of monthly participants</u>	1.11	1.12	1.14	1.17	2.03
<u>All participants as a proportion of steady participants</u>	1.25	1.27	1.36	1.39	2.94

For all kinds of public assistance ("All P.A."), the "steady" welfare population is 10 percent smaller than the monthly population. All participants over the six months comprise 25 percent more households than the steady participants. These kind of figures for specific programs are useful for program cost estimates, planning, and evaluation. The tabulation above shows little difference in regularity of use among the three major programs - SSI, AFDC and food stamps - but this may change with more representative samples. "Other P.A." shows more variability, which is not surprising since some of it is emergency aid and some of it is one-time payments to AFDC recipients for special purposes.

The fact that "All P.A." shows slightly less variability than any of the specific programs suggests that when welfare recipients are dropped from one program they may pick up another, or that they may be dropped from one (say, AFDC) without being dropped from another (say, food stamps). When judging the coverage and adequacy of all public welfare programs, the sum as well as the parts need to be considered.

3. Amounts (Table 3)

Table 3 shows how average amounts of various kinds of income differ depending on whether the time perspective is a single month or a longer six-month period. The average monthly amount for all households which ever participate in a program during the six months (shown in the right-hand column of Table 3) is less than the average amount for those participating in any particular month. For example, for AFDC, the average monthly amount for all recipients over the six months was \$124. For those receiving AFDC in December, it was \$143. For food stamps, the comparable figures are \$89 and \$106. This is not surprising since some of the households in the right-hand column are having "zero" months averaged in. These are households which were not steady participants. But the comparison points up two different meanings of the phrase, "average monthly amount to participants." If the interest is in participants in a given month, the higher dollar figure is appropriate and that is the kind of figure furnished by monthly administrative statistics. But if the interest is in all participants over a period of time (in this case six months), the lower figure indicates what the average amount per household has been. The latter figure may be more appropriate for judging contribution of a program to a household's continuing welfare or the number of households who are getting too much "ripping off the system." (For evaluation purposes, of course, other controls - e.g., for the size of the recipient unit - would also be appropriate.)

4. Gross Flows

An advantage of panel data is that it can reveal changes in receipt and amount of various kinds of income from one month to another for particular households. That is, it can show gross flows rather than simply the net changes which are visible in cross-sectional figures. For example, the proportion of all households in this sample receiving some kind of public assistance changed by only 1 to 2 percentage points between July and December, 1977, from 52.8 percent to 51.2 percent. But the gross flow is larger, with 5.3 percent of all households dropping from public assistance rolls and 3.7 percent beginning to receive it. Based on the participating households only, about 10 percent dropped from P.A. between July and December, and 7 percent of those participating in December were non-participants in July.

Considering only the "participant household population," one can calculate the percentage of change in three different ways: change for participants in July, change for participants in December, or change for all participating in either (or both) months. Only one way will be illustrated here. The following tabulation indicates the amount of change in various

public assistance programs based on participants in July:

July recipient households which...	All P.A.	SSI	AFDC	Food Stamps	Other P.A.
No longer receive in Dec.	10%	13%	20%	12%	31%
Receive some but less in Dec.	12	4	6	5	1
Receive more in Dec.	14	4	7	6	0
Receive same amount	$\frac{64}{100}$	$\frac{78}{99}$	$\frac{67}{100}$	$\frac{77}{100}$	$\frac{67}{99}$

These figures show a substantial amount of change in just six months, particularly when we recall that it does not include the new participants in December, (e.g., for All P.A., the 7 percent of December participants mentioned above). It also ignores, for steady participants, the change within the rather gross income categories used. (These categories were \$1-99, \$100-199, \$200-299 for the specific programs, plus \$300-399, \$400-499, and \$500 and over for all P.A.)

Although not shown in the tabulation above, there are also substantial changes in earned income, both in households with any earnings and in the amount earned. One of the potentials of this gross flow data is the analysis of changes in the composition of total income from month to month, particularly for low income people. Such analysis can show whether public assistance provides a timely response to losses in earned income, and also whether being dropped from public assistance coincides with increased earnings and, if not, how people get by. (This could occur through changes in household members rather than changes in the earnings of continuing members.)

5. Change in low-income status within the year

A major use of the Survey of Income and Program Participation (SIPP) will be estimating the size and composition of the population eligible for existing or proposed transfer programs. Major criteria of program eligibility include categorical characteristics (e.g. age, single parent with children), income amounts (and how much of various kinds is counted in determining eligibility), and the period of time considered in counting income amounts (e.g. one-month prospective versus six-month retrospective). Simulations of great detail and complexity are necessary for policy analysis of this sort, something far beyond the scope of this paper.

What can be suggested here is how the SIPP data can add a monthly time dimension to the income data used in such analysis.

The following tabulation summarizes how the percentages of low income households depend on two criteria: the kind of income counted and the time period considered.

Households below a low income level, by type of income counted and time period:

Income type counted	Time period	
	Single month (December) income	Six month mean monthly income
Private income only	65%	63%
Private income plus contributory transfers	54	51
Private income plus contributory transfers plus all P.A. (total income)	41	39

(Note: The "low income level" used here varies by household size, like the official "poverty line" varies by family size. The levels used for each household size, are as close as possible (using \$100 income categories) to one-twelfth of the "official" annual income poverty lines used in 1977. In the case of one and two person families, this is not very close, but that should not affect the illustrative points being made here. Recall that "total income" here includes food stamps but excludes housing and medical assistance. Also recall that the Site data are not representative of the U.S. population.)

The striking differences are those depending on what types of income are counted. Adding contributory transfers, (such as social security) to private income reduces the percentage "poor" in the month of December from 65 percent to 54 percent. The further addition of public assistance (mainly SSI, AFDC and food stamps) drops the figure to 41 percent. These kinds of differences have been seen before in cross-sectional surveys of annual income. The SIPP should be able to improve on past analyses of these differences mainly through greater detail and accuracy in measuring specific income types, as well as through the provision of monthly data.

What is most novel in the SIPP is the capability for comparison between the two columns; that is, the difference in the number of poor depending on whether one is looking at a single month of a six-month

period. The finding here with the Site data is that it makes little difference. What difference there is, is in the expected direction. That, is, fewer people are poor when six-month incomes are considered. But the difference is not statistically or substantively significant. If the broader, more representative SIPP surveys show a similar result, it will be an important finding.

A shortcoming of this tabulation is the use of households, rather than families of other eligibility units within households, as the unit for tabulation by income level. While households and eligibility units are usually synonymous, the difference is enough to make a difference of millions of people and possibly billions of dollars in national estimates of program coverages and costs. In addition, different kinds of people are eligible or not depending on unit criteria. Hence a priority of the new income survey should be development of the capability to group people within households into a variety of eligibility units. This is not a minor problem, particularly for a longitudinal study which must handle changing household and family composition through time. But it should be solvable, and when it is, the new income survey should be able to provide policymakers with significantly improved estimates of the coverages and costs of existing and proposed criteria of eligibility for income maintenance programs.

ADDENDUM

Parts of this paper as it was distributed before and at the ASA meetings have been omitted here, due to the space limitations in this publication. Since the discussant at the meetings commented on some of these omitted parts, they will be mentioned here.

The full paper included "Methodological Notes," which stated that no serious effort was made to handle attrition between the first and second waves of interviews. Persons not interviewed the second time simply had their first three months of data repeated for the second three months. As stated in the Methodological Notes, this seems (to the authors) preferable to either throwing away the first three months of data for these people or expending the effort necessary to handle them separately, considering the purely illustrative purposes of this paper. Some 155 of the 1417 persons in the 727 households were treated in this way.

The full paper includes two additional multi-part tables, Tables 4 and 5, which are the bases of the tabulations in parts 4 and 5 of the text. Table 4 shows the gross flows, between July and December, of people from one income level to another (including 0) for nine different kinds of income and hence is actually nine different tables. Table 5 is actually six tables, tabulating household size by income-level for the three different income defi-

nitions and two different time periods shown in part 5 of the text.

Table 1

Summary and Detailed Income Types in the Site Survey, December 1977 (Percent of Households Receiving and Amount Received)

SUMMARY INCOME TYPES	Percent of HH with any	Mean for HH with any (\$)
Private Except Trans.	51.2%	\$913
Contributory Pub. Trans.	35.4	265
Non-Contributory	51.2	205
Total Income	92.8	737
<u>DETAILED INCOME TYPES</u>		
Private Income		
Labor		
Wage and salary	42.0	1024
Business "draw"	2.2	756
Farm	-	-
Property		
Interest	17.6	68
Dividends	4.7	73
Other property	2.8	167
Other Private		
Lump sums	-	-
Miscellaneous	.8	139
Private Transfers		
Unemployment	.1	54
Retirement	5.9	221
Disability	.6	203
Survivors	.1	366
Other	4.3	92
Public Transfers		
Contributory		
Unempl. Ins. (U.I.)	2.1	183
Disability, W.C.	.1	91
Disability, SS or RR	7.6	214
Retirement, SS or RR	19.8	271
Survivors, SS or RR	8.7	230
Survivors, WC	-	-
Non-Contrib. (P.A.)		
Disability, SSI	8.4	156
Disability, Other	2.2	229
Survivors-VA, etc.	1.5	89
AFDC	23.0	143
Foster, Other child	.3	360
WIN	.1	88
Misc. Pub. Assis.	3.9	78
SSI, Not disability	14.9	109
Education money	1.5	142
Non-Cash		
Food Stamps	28.2	106
Housing	18.3	NA
Medicaid coverage	39.5	NA
Medicare Coverage	24.8	NA

NOTE: NA - Not Applicable. No attempt was made to value subsidized housing or medical care. The total number of households is 727.

Table 2

Monthly Variations in Receipt of Selected
Income Types in the Site Survey

<u>INCOME TYPES</u>	Percent of Households Receiving Income	
	In at least <u>one month</u>	In <u>all</u> <u>six</u>
	<u>July-Dec.</u>	<u>months</u>
Wages and Salary	49.1	34.7
Social Security	37.8	30.4
SSI	25.4	19.9
AFDC	28.5	20.9
Other P.A.	16.2	5.6
Food Stamps	33.0	23.7
All Contributory Public Transfers	41.0	30.9
All P.A.	57.9	46.5

Table 3

Variations in Monthly Amounts of Selected
Income Types in the Site Survey
(In Dollars)

<u>INCOME TYPES</u>	Mean among <u>Households with any</u>		
	In	In	In at least
	<u>July</u>	<u>Dec.</u>	<u>one mo. (Sum</u> <u>of 6 mo./6)</u>
Wages and Salary	1031	1024	892
Social Security	273	269	245
SSI	135	132	119
AFDC	134	143	124
Other P.A.	134	123	69
Food Stamps	101	106	89
All Contributory Public Transfers	268	265	234
All P.A.	202	205	190
Total Income	764	737	738