SURVEY OF INCOME AND PROGRAM PARTICIPATION

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I. Introduction

Nonresponse is particularly critical in the U.S. Census Bureau's Survey of Income and Program Participation (SIPP) since a household is usually interviewed on eight occasions, allowing nonresponse rates to increase with the number of times households are in sample. Also, persons entering the sample after the first interview of a longitudinal reference period are not included in longitudinal estimates. These issues create concerns about the bias in cross-sectional and longitudinal estimates.

Household nonresponse rates at the first interview range from 5 to 7%. Even with considerable efforts to avoid household nonresponse (Nelson, et.al., 1987; Bryant and Lavin, 1990), the cumulative rate increases to about 20% by the last interview. (Jabine, et. al., 1990.) Nonresponse adjustments attempt to compensate for biases resulting from this nonresponse. Our exploratory work indicates that the adjustments work well for some characteristics, but not for others.

McArthur (1988) found that first interview characteristics of persons who are respondents through all interviews and persons who are initial respondents but who become nonrespondents at later interviews differ by regional office, type (Standard Metropolitan Statistical Area (SMSA)/non-SMSA) and population of area in which a person lives, tenure, race, household size, household relationship, age, whether the person has moved anytime during the 8 interview periods, sex, ethnicity, marital status, hours worked weekly, employment status, monthly household income, person monthly income, and asset types. In a similar study (McArthur, 1986) which compared the characteristics of movers and nonmovers (anyone who moved at least once after the first interview), McArthur found that (1) movers tend to rent while non-movers tend to own their own homes; (2) movers tend to be younger than non-movers; (3) movers are more likely to be never married and non-movers tend more often to be married; (4) movers are more likely to report being employed at the first interview; and (5) movers are less likely to have assets, such as savings accounts, but are more likely to receive benefits such as food stamps.

McArthur's work lends support to much of our current nonresponse adjustment procedure. However, her results along with work by O'Connell (Jabine, et. al., 1990), De Are (1990), and Hernandez (1990) suggest we examine nonresponse adjustment by mover/non-mover status. Their examinations of SIPP marital history and migration estimates show underestimates which are potentially due to differential nonresponse among movers and nonmovers.

As a result, we are now researching the adequacy of our current noninterview cells to reduce bias in cross-sectional estimates from households which have been in sample a number of times and exploring how to improve the current adjustment. We are examining whether making adjustments by mover/nonmover status could reduce bias in estimates. Research completed to date suggests that we consider inclusion of "monthly income" categories as noninterview cells and further explore separate nonresponse adjustments for movers and nonmovers. Both avenues of research are

being extended to examine more SIPP estimates. The mover/nonmover research is being extended to learn how movement and characteristics are related. This research will provide input for potential revisions to our current nonresponse adjustments. Before any revisions are made, we will evaluate the adequacy of such changes for improving SIPP estimates. Due to limited resources we have not yet conducted in depth research of noninterview adjustment for longitudinal estimates.

Other nonresponse research has been conducted for the SIPP. It includes research on imputation for item nonresponse (Heeringa and Lepkowski, 1986; Little and Su, 1989; Huggins, et. al., 1985), missing interview nonresponse for longitudinal estimates (Singh, et. al., 1990), and use of incentives to study increase nonresponse rates. (Petroni, et. al., 1989).

New nonresponse research projects are currently being discussed. They include work to further study the nature of nonresponse and cross-sectional imputation and ways to increase response rates. Other projects are being considered to research longitudinal imputation and adjustments for longitudinal nonresponse. (Kasprzyk, 1990; Singh, 1990.)

After providing background on the SIPP, this paper discusses the two currently active nonresponse projects mentioned above and plans for extending the research. (A large portion of sections II throughout IV come directly from King, et. al., 1990.) The paper concludes with a discussion of new nonresponse research which is being proposed. Since the purpose of this paper is to present active nonresponse projects and to suggest additional potential nonresponse research, we only mention past research endeavors briefly above.

II. Background

A. Design and Content of the SIPP

The SIPP is a nationally representative survey of the noninstitutionalized population of the United States which obtains comprehensive information about the financial situation of persons, families, and households. The information includes data on cash and noncash income, eligibility and participation in various government transfer programs, labor force status, assets and liabilities, and many other topics (e.g. work history, marital history, educational attainment, etc.).

The SIPP is a continuing survey with new national probability samples of households (panels) introduced each year. For most panels, sample households are interviewed every four months for about 2½ years (8 interviews). At each interview data is collected for the four months prior to the interview month. To facilitate field and processing operations, each panel is divided into four approximately equal subsamples (i.e., rotation groups). Only one rotation group is interviewed in a

given month so that one cycle (i.e., wave) of interviewing, in general, requires four consecutive months.

Interviewing for the 1984 and 1985 panels began in October 1983 and February 1985, respectively. The 1984 panel began with 20,000 occupied and eligible households. In March 1985 (the middle of the fifth interview), 17.8% of the eligible sample was dropped. The 1985 panel started with about 17,000. In February 1986 (the second rotation of wave 4), roughly 15% of the sample was dropped. For both panels, sample was dropped due to budget constraints.

All persons in a sample household at the time of the first interview remain eligible for interviewing even if they move to new addresses. At each interview, information is obtained for each person who is 15 or more years old. In addition, persons aged 15 and over who subsequently share living quarters with original sample persons (individuals who were living in an interviewed sample unit at the time of the first interview) are interviewed as long as they reside with an original sample person. Such persons are movers into households. (Nelson, et.al., 1985.)

Generally, no attempts are made to interview first wave nonrespondent households in subsequent waves. If a household first becomes a nonrespondent at a subsequent interview, an attempt is made to interview it at the next interview. If the household is still a nonresponse, no further attempts are made to interview it.

For cross-sectional estimates, imputation procedures are used to compensate for item nonresponse and nonresponding eligible persons in responding households. (Nelson, et.al., 1985) Weighting procedures compensate for household nonresponse.

B. Weighting Overview

The final SIPP weights include several factors to account for sampling, household nonresponse, and coverage errors, with the intent of reducing the mean square error of estimates. For details of the weighting see King (1988a and 1988b) and U.S. Department of Commerce (1988).

To account for household nonresponse, the weighting procedure partitions interviewed and noninterviewed households into weighting classes by values of variables available for respondent and nonrespondent households. Variables used to form weighting classes are correlated with SIPP estimates. Separate nonresponse adjustment factors are obtained for each weighting class by dividing the weighted count of interviewed and noninterviewed households by the weighted count of interviewed households. More details are given in Singh and Petroni (1988).

At the time of the first SIPP interview little information is available about the noninterviewed households. Therefore, a limited number of variables are used to form noninterview classes: Race of reference person (black, non-black); Tenure (owner, renter); Residence (MSA, not MSA); Census region (Northeast, Midwest, South, West); and Household size (1, 2, 3, 4 or more). (King, 1988a; U.S. Department of Commerce, 1988.)

The subsequent waves' noninterview adjustments are in addition to the Wave 1 noninterview adjustment. In subsequent waves, additional information obtained on previous wave respondent households is available for forming weighting classes. This information includes: Tenure (owner, renter); Public housing or rent subsidized (resident of public housing or recipient of government rent subsidies, others); Type of income (welfare etc., others); Household type (female householder with own children under 16 years of age but no husband present, householder is 65 years of age or older, others); Assets (bonds etc., others); Education level of reference person (less than 8 years, 8-11 years, 12-15 years, 16 or more years); Race and Spanish origin of reference person (non-Spanish white, other); and Household size (1, 2, 3, 4 or more). The welfare etc. category includes income sources such as Federal Supplemental Security Income; State Supplemental Security Income; Aid to Families with Dependent Children; Women, Infants and Children Nutrition Program; Food Stamps; and Medicaid. The bonds etc. category includes households in which at least one member possesses at least one asset type other than regular/passbook savings accounts in a bank, savings and loan or credit union or NOW, Super NOW or other interest-earning checking accounts. (King, 1988b; U.S. Department of Commerce, 1988.)

III. Evaluation of the Nonresponse Adjustment Procedure

A. The Evaluation Project

This study assumes that the current nonresponse adjustment procedure is adequate for Waves 1 and 2 and uses the 1985 panel to evaluate how well the adjustment accounts for nonresponse bias in estimates at later waves, when the cumulative nonresponse rates are higher. All estimates use SIPP final weights.

To evaluate the noninterview adjustment for later waves, ideally data for the later wave's noninterviews would be available. Estimates calculated with their actual data could then be compared to the SIPP estimate, in which their data are missing. Of course, this is impossible since by definition these data are missing.

To approximate such a comparison, we used t-tests to compare two sets of second quarter 1985 estimates of selected socioeconomic characteristics. The estimates were based on final weights and households in sample at Wave 2 of the 1985 panel which were not later dropped from sample due to budgetary constraints. One

estimate (W2/W2) was based on the actual Wave 2 household interview status. The other estimate (W2/W6) treated households which were interviewed at Wave 2 but not interviewed at Wave 6 as noninterviews, as well as Wave 2 noninterviews. (Determination of the Wave 6 interview status is described in Petroni and King, 1988). We assumed that a house-hold's Wave 2 characteristics are similar to its characteristics at Wave 6 to approximate the actual situation at the later wave.[1]

B. Evaluation of Findings

i. Household Level Estimates

Tables 1 and 2 provide estimates of households with cash income; mean and median monthly cash income; number of households; and percent of persons in households receiving unemployment compensation, means tested benefits, cash benefits, and food stamps.

Table 1 shows W2/W6 estimated median income to be significantly higher and W2/W6 estimated mean income to be higher (although not statistically) for total, White and Black; W2/W6 number of households, mean income, and median income for wages and salaries to be significantly higher; W2/W6 median and mean income to be significantly higher for metropolitan and large metropolitan areas (i.e., 1,000,000+ population); W2/W6 mean and median income to be higher (although for most not significantly) for most of the other characteristics; and W2/W6 number of low income households to be significantly lower and W2/W6 number of higher income (i.e., 2.00 or more times low income) households to be significantly higher. These findings suggest that the "type of income" noninterview categories do not fully account for attrition of low income households.

Of the significant income differences, only the differences for Black median income, and metropolitan and large metropolitan areas mean and median incomes are deemed important by analysts. While the differences in most W2/W2 and W2/W6 estimates in this table are not analytically important, they could have implications for analyses which compare incomes for different subpopulations if the degree of bias differs by sub-population. Thus, we may want to consider the use of "monthly income amounts" categories. Consideration would include investigation of the operational feasibility of using such categories.

In table 2 we did not observe a systematic pattern of differences between the W2/W2 and W2/W6 program participation estimates. However, W2/W6 unemployment compensation estimates are significantly lower for Blacks, Hispanics, male headed non-family households and for households residing in

large metropolitan areas. These differences are also judged important by analysts. For other types of program participation estimates, there are significant differences between the two estimates for total households, Hispanic households, married couple households, other family households, female-headed non-family households and households residing inside and outside metropolitan areas. Most of these differences are at least marginally important to analysts.

The W2/W2 and W2/W6 estimates were about the same for the majority of the program participation estimates. However, about 25% of the differences are significant. Statistically, we'd expect only 10% to be significant if there was no affect. Because no systematic patterns of differences exist, the results of table 2 don't point to a particular problem with estimates of program participation using the current SIPP noninterview adjustment procedures.

ii. Person Level Estimates

Tables 3 and 4 provide estimates of number of persons with income; mean and median monthly income; persons in households; percent in households receiving unemployment compensation, means tested benefits, cash benefits, noncash benefits, and food stamps; and percent of persons in low income (cash only) households.

Tables 3 and 4 show evidence that the nonresponse adjustment does not fully account for noninterviewed persons in white low income households. Table 4 also shows a similar result for the total population. Most of the differences in income amounts between W2/W2 and W2/W6 are not analytically important in table 3. The differences in percent of persons in low income households which are statistically different are important to analysts. Table 4 shows some significant differences in percents of persons receiving benefits, but few of these are of analytical importance. Without further investigation it is not clear if changes in the household adjustment cells would affect these estimates. These results, however, suggest that the potential changes to the noninterview cells identified above for household estimates may at least marginally improve person level estimates.

C. Conclusion

Results of this project suggest that research be conducted to determine whether inclusion of "monthly household income" categories or some correlated variable should be considered for noninterview adjustment. Use of "monthly household income" categories was also identified in a similar study conducted on the 1984 panel. (Petroni and King, 1988). This finding is consistent with findings by Allin and Doyle (1990) for food stamp eligibility estimates.

We intend to extend the current analysis to other estimates such as education and work disability. Additionally, we want to examine whether the present nonresponse adjustment is reducing bias. We will do this by leaving out the nonresponse adjustment procedure and forming two new sets of estimates to correspond to W2/W2 and W2/W6. Again t-tests will be used to compare the two sets of estimates to W2/W2.

IV. Mobility and Nonresponse Characteristics

A. The Evaluation Project

In the SIPP, if an original sample person moves during the life of the panel, a field representative attempts to obtain subsequent interviews by contacting the individual at his/her new address. The exception is, the individual who moves more than one hundred miles from a SIPP sample PSU and can not be reached by telephone. If attempts were not made to follow movers, the SIPP would have lost approximately 28 percent of its sample by the final wave of the 1984 panel. (McArthur, 1988.) Such a high rate of attrition would result in a serious loss to our available sample size for analysis. Unfortunately, it is impossible to keep all movers in sample.

Our noninterview adjustment attempts to compensate for nonresponse. However, there is some belief that bias could be further reduced if we specifically adjusted for mover nonresponse. (DeAre, 1990.) Hence, we are exploring this issue by comparing distributions of various characteristics by mover/nonmover and interview/noninterview status.

Data for this project were obtained from a file containing an extract of the eight 1984 Panel Cross-Sectional wave files. The file, not longitudinally edited, contains unweighted data for all 15+ original sample persons and those who subsequently share living quarters with an original sample person after the first interview. Persons dropped in the March 1985 sample cut are not on the file.

Individuals present at a given interview were classified as respondent nonmovers, respondent movers, nonrespondent nonmovers or nonrespondent movers. (A mover is a person who changed address during the four reference months prior to the current interview. A person was not considered a mover unless he/she moved after entering a sample household. A nonmover is a person who did not change address during the four reference months prior to the current interview.) Any individual entering the sample in the given interview was classified as a nonmover.

SPSS (the Statistical Package for the Social Sciences) was used to create the distributions of selected characteristics for these classes of individuals. Chi square tests, adjusted to account for the design effect (D.E. = 3.0), were used to compare the distributions of:

1) Respondent vs. Nonrespondent,
2) Respondent nonmover vs. Nonrespondent nonmover,
3) Respondent mover vs. Nonrespondent mover,
4) Respondent nonmover vs. Respondent mover, and
5) Nonrespondent nonmover vs. Nonrespondent mover.

The characteristics of respondent nonmovers were from the fourth reference month (i.e., the month prior to the interview month) of the given interview. Characteristics of all other persons were from the fourth reference month of the interview before the move or noninterview.

The characteristics examined included monthly income, marital status, employment status, cash benefits, noncash benefits, hours worked per week, tenure, age, sex, education, community size (SMSA size), race and ethnicity. This set of characteristics was chosen based on the current noninterview adjustment procedure and on preliminary results profiling the characteristics which differ between the respondent nonmovers and respondent movers. (DeAre, 1990.)

B. Evaluation of Findings

We used the results of the comparisons to determine whether the distribution of respondent movers and nonrespondent movers were significantly different from respondent non-movers and nonrespondent non-movers, respectively. In addition, we considered whether the distribution of the two mover groups were more similar to each other than to the distribution of total respondents. We similarly considered the distributions of the two non-mover groups. We used results from these three analyses to speculate what impact a mover noninterview adjustment would have on the estimates.

The current evaluation concentrated on the third and the seventh interviews. Tables 5 and 6 show the results of the third and seventh interviews, respectively. Superscripts next to characteristics indicate which comparisons show significant differences. For example, a superscript of 1 next to a characteristic indicates a significant difference between respondents and nonrespondents.

Characteristics marked 4 and 5 are ones for which the distributions of mover groups differ from their respective non-mover groups. For such characteristics, if respondent and nonrespondent nonmovers are not significantly different and respondent and nonrespondent movers are not significantly different (i.e., comparisons 2 and 3), gains from a mover nonresponse adjustment are expected. However, gains may still occur even if comparisons 2 or 3 are significant. Gains could occur in these cases if in general for each sub-characteristic in the distribution both the percentage of respondent mover (nonmover) and the percentage of nonrespondent mover (nonmover) appear to be greater or less than the total respondent percentage.

After comparing results from the third and seventh interviews, it appears that a movers adjustment may help some estimates. Marital status, cash benefits, age, poverty, tenure, and employment status would generally show improvement for both movers and non-movers. For non-cash benefits food stamp estimates may improve, but estimates of "other" types of benefits may not. (See interview 7) For education, hours worked weekly, monthly person income, community size, and race, it is not clear whether in general estimates would be improved or hurt. For ethnicity, we feel separating movers and non-movers would neither help nor hurt.

C. Conclusion

The issue explored here was whether bias could be reduced if we adjusted movers and nonmovers separately for nonresponse. For about half of the characteristics examined, we found evidence suggesting some improvement would be possible. The results given here are preliminary with the remaining interviews yet to be analyzed. Future plans include looking at the characteristics of movers with interviews before and after the move to see how movement and person characteristics are related. Characteristics identified as related to movement may then be considered as potential variables for forming nonresponse adjustment cells. When the research described here and in III.C. is completed, we expect to use this information to propose revised nonresponse adjustments. These proposals would be evaluated to see if they produce less biased cross-sectional estimates.

V. Future Research

The research described above focused on evaluation and improvement of cross-sectional noninterview adjustment. There are many other areas which could also be explored. For SIPP, the Census Bureau is considering further exploratory work to learn more about the nature of nonresponse, ways to increase response, research into cross-sectional and longitudinal imputation and longitudinal nonresponse adjustment. Given below are six research projects which have been proposed. Due to limited resources not all of these projects can be completed. Therefore, discussions are currently underway to determine which ones we should do. More detailed plans are to be developed for those projects determined to be high priority. Of these projects the first three are most likely to be deemed high priority.

Longitudinal Imputation - This project would use descriptions of the cross-sectional and longitudinal imputation systems as a starting point for an investigation of the properties of the current system of imputation in the panel file. It would investigate such things as how sensitive results of the Census Bureau's longitudinal analyses are to the longitudinal imputation system. (Kasprzyk, 1990.)

Imputation for Interest and Dividends - The Census Bureau revised the Current Population Survey (CPS) hot deck impuation procedure for interest income to make

use of data from the Internal Revenue Service (IRS) Individual Master File. The revision significantly increased the CPS interest aggregate. (U.S. Department of Commerce, 1984.) Since nonresponse rates for interest and dividend income are high for the SIPP, research could be done to operationalize a similar procedure for the SIPP. Because of its more complete reporting of Social Security Numbers, the SIPP is in an even stronger position then the CPS to make use of an IRS linkage. (Kasprzyk, 1990.)

Variables for Longitudinal Nonresponse Adjustment Cells - We would extend research on variables for cross-sectional nonresponse adjustment to longitudinal adjustment. Additionally, migration estimates based on adjustment for mover's status in the SIPP would be compared to migration estimates from an independent source to evaluate whether the mover adjustment improves the SIPP migration estimates. (Singh, 1990.) Prior to implementation, suggested changes would be evaluated to see if bias reductions result.

Follow-up Study of SIPP Nonrespondents - This project would involve doing a thorough follow-up study of SIPP household nonrespondents. It would track mover and nonmover nonrespondent households and attempt to administer the questionnaire. Doing this study for several panels would give a sufficient number of cases to assess how different these cases are after they leave the panel. This would provide information on how to adjust for attrition. (Kasprzyk, 1990.)

Extend Close-out for Nonrespondent Households - About 10% of persons in the panel sample miss one interview during the life of the panel (Singh, et.al., 1990). It has been suggested that in such cases the entire wave of missing data be imputed so that these cases can be included in longitudinal weighting and estimation.[2] An alternative is to try to collect data from these nonrespondents. This could be done through extension of the close-out period to give more time for converting and tracing these cases. This project would first investigate how large a difference extension of the close-out date could make in terms of the number of cases missing only one wave in the panel. (Kasprzyk, 1990). If the investigation suggests it could make a large difference, the operational feasibility of doing it would be investigated.

Interviewer/Respondent Incentives for Panel Maintenance - To maintain the representativeness of the SIPP panel sample, we have tried respondent incentives (e.g. giving a small calculator as a token gift) to keep them engaged in the survey. (Petroni, et.al., 1989). This research would be extended to developing ways to further motivate the interviewers to maintain and improve on high response rates and the respondents to maintain and increase their interest in the survey. (Kasprzyk, 1990.)

The research described in sections III through IV, along with the research which is done from section V is expected to result in improved cross-sectional and longitudinal estimates for the SIPP.

Footnotes:

1 Variances were calculated using SIPP generalized variance parameters (GVP). GVPs for W2/W2 estimates were obtained by adjusting the SIPP 1985 panel Wave 2 GVPs to account for the sample cut. GVPs for W2/W6 estimates were obtained by adjusting the W2/W2 GVPs to account for the additional sample loss occurring between Waves 2 and 6. Correlation between the households in common was estimated to be 7500/8400 where, for the three rotations of Wave 2, 7500 and 8400 are respectively the number of Wave 2 households classified as interviewed at Wave 6 and the number interviewed at Wave 2. (Approximately 11,000 households were eligible for interview at Wave 2.)

2 The current longitudinal weighting procedures gives positive weights only to persons interviewed at each interview of the longitudinal reference period.

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Table 1. Monthly Cash Income For Households (HHs), Second Quarter 1985

	Number of HHs (In Thousands)		Mean Income		Median Income	
	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6
All Races	85823	85744	2335	2346	1821	1842 *
White	74150	74201	2430	2438	1914	1935 *
Black	9484	9461	1593	1595	1266	1297 *
Hispanic (1)	4757	4730	1815	1806	1475	1495
"Low" Income (LI)	11275	10881 *	405	408	357	358
1.00 to 1.24 LI	4459	4416	721	726	622	622
1.25 to 1.49 LI	5011	4992	953	958	832	834
1.50 to 1.99 LI	8992	8919	1237	1244	1089	1098
2.00 + LI	56087	56535 *	3151	3142	2586	2584
Wages and Salaries	59655	60005 *	2299	2316 *	2300	2319 *
Social Security	23780	23919	583	582	1191	1200
AFDC	2769	2757	359	361	528	526
Federal SSI	3111	3294 *	261	263	592	576
Means Tested Bene.	7422	7547	904	918	599	592
Family Households (HHs)	61540	61564	2665	2679	2165	2180 *
Married-Couple HHs	49244	49195	2916	2930	2398	2410
Other Family HHs	6061	6164	2100	2134	1733	1759
FHHer NSPWC (2)	6236	6204	1230	1233	907	917
Nonfamily Households	NA	NA	NA	NA	NA	NA
Male Householder	10268	10178	1989	1973	1489	1510
Female Householder	14015	14002	1144	1152	821	835
Metropolitan	67194	66844 *	2460	2479 *	1940	1975 *
>1,000,000	42174	41471 *	2581	2608 *	2049	2087 *
<1,000,000	25020	24472 *	2255	2268	1762	1773
Nonmetropolitan	18629	18900 *	1887	1875	1531	1532

W2/W2 = Wave 2 estimate based on the actual Wave 2 household interview status.

W2/W6 = Wave 2 estimate treating households which were interviewed at Wave 2, but not interviewed at Wave 6 as noninterviews, as well as Wave 2 noninterviews.

* W2/W2 and W2/W6 estimates are significantly different at the 10 percent significance level.

NA = Not available.

(1) Hispanics are also included in White or Black.

(2) FHHer NSPWC = Female householder, no spouse present, with own children under 18 years of age.

Table 2. Receipt of Benefits, Second Quarter 1985

	Number of Households (In Thousands)		Percent in HHs Receiving Benefits from Means Tested Programs							
			Unemployment Comp.		Total		Cash Benefits		Food Stamps	
	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6
All Races	85823	85744	2.7	2.6	18	18.1	8.6	8.8 *	7	7.1
White	74150	74201	2.6	2.7	14.6	14.8	6.8	6.9	4.9	5
Black	9484	9461	3.2	2.3 *	41.4	41.2	21.3	21.6	21	21.5
Hispanic (1)	4757	4730	6.6	5.5 *	35.7	37.6 *	18.1	18.5	15.4	15.4
Family Households (HHs)										
Married-Couple HHs	49244	49195	3.1	3	11.6	11.6	4.6	4.8 *	3.1	3.2
Other Family HHs	6061	6164	3.2	3.4	28.7	28.2	17.8	16.9 *	10.9	9.6 *
FHHer NSPWC (2)	6236	6204	3.3	3.4	55.2	55	32.5	33.3	36.6	37.3
Nonfamily Households										
Male Householder	10268	10178	2.5	2 *	12.4	12.9	5.6	5.3	4.3	4.4
Female Householder	14015	14002	1	1	23.1	23.9 *	10.4	11.1 *	7.9	8.4 *
Metropolitan	67194	66844 *	2.5	2.4	17.3	17.3	8.6	8.7 *	6.8	6.9
>1,000,000	42174	41471	2.7	2.5 *	17.3	17	8.9	9	6.7	6.7
<1,000,000	25020	25373 *	2.2	2.2	17.3	17.7	8.2	8.4	7	7.2
Nonmetropolitan	18629	18900 *	3.5	3.7	20.4	20.9	8.6	9 *	7.7	7.9

W2/W2 = Wave 2 estimate based on the actual Wave 2 household interview status.
W2/W6 = Wave 2 estimate treating households which were interviewed at Wave 2 but not interviewed at Wave 6 as noninterviews, as well as Wave 2 noninterviews.
* W2/W2 and W2/W6 estimates are significantly different at the 10 percent significance le
(1) Hispanics are also included in White or Black.
(2) FHHer NSPWC = Female householder, no spouse present, with own nder 18 years of age.

Table 3. Mean Monthly Income for Persons 16+, Second Quarter 1985

	Total Persons (In Thousands)		Mean Monthly Income		Median Monthly Income	
	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6
Total						
White	149674	149823	2812	2824 *	2260	2274 *
Black	19281	19279	1911	1899	1614	1612
Hispanic (1)	11371	11403	2226	2182 *	1754	1730
Males						
White	71763	71806	3000	3010	2447	2457
Black	8654	8671	2096	2075	1815	1792
Hispanic (1)	5515	5545 *	2391	2358	1891	1825
Females						
White	77911	78017 *	2638	2653	2097	2114 *
Black	10627	10608	1760	1754	1453	1469
Hispanic (1)	5856	5858	2072	2016	1648	1629 *
"Low" income (LI)	18612	18014 *	472	474	399	398
1.00 to 1.24 LI	7581	7557	830	839 *	733	743 *
1.25 to 1.49 LI	9405	9421	1077	1089 *	988	1003 *
1.50 to 1.99 LI	17849	17768	1397	1402	1265	1273
2.00 + LI	120881	121435 *	3497	3495	2902	2893
White						
Some L. F. Activity (2)	99313	99643 *	3170	3182	2641	2653 *
No L. F. Activity (2)	50361	50180 *	2105	2114	1551	1553
Black						
Some L. F. Activity (2)	12506	12357	2220	2217	1915	1917
No L. F. Activity (2)	6775	6922 *	1341	1331	978	987
Hispanic						
Some L. F. Activity (2)	7619	7632	2573	2508 *	2084	2052 *
No L. F. Activity (2)	3752	3771	1523	1523	1103	1114

W2/W2 = Wave 2 estimate based on the actual Wave 2 household interview status.
W2/W6 = Wave 2 estimate treating households which were interviewed at Wave 2 but not interviewed at Wave 6 as noninterviews, as well as Wave 2 noninterviews.
* W2/W2 and W2/W6 estimates are significantly different at the 10 percent significance level.
(1) Hispanics are also included in White or Black.
(2) L.F. = Labor Force.

Table 4. Percent of Persons 16+ Receiving Benefits and in Households with Low Monthly Income, Second Quarter 1985

	Total Persons (In Thousands)		Unemployment Comp.		Percent in HHs receiving Benefits from Means Tested Programs: Total		Cash Benefits		Noncash Benefits: Total		Food Stamps		HHs w/ Low Monthly Income Cash Only	
	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6	W2/W2	W2/W6
Total	174328	174195	1.4	1.4	17.7	17.7	8.7	8.8	16.6	16.7	6.3	6.4	10.7	10.3 *
White	149674	149823	1.4	1.4	14.1	14.3	6.7	6.8	13	13.2	4.5	4.5	8.7	8.4 *
Black	19281	19279	1.7	1.2 *	41.7	41.3	21.4	21.6	40.7	40.4	18.1	18.5	23.6	23.2
Hispanic (1)	11371	11403	3.5	3.2	38.2	40.2 *	18	18.6	37.5	39.4 *	13.5	13.6	21.3	21.5
Males	83001	82957	1.7	1.7	15	15.1	7.1	7.2	13.9	14.1	4.6	4.7	8.5	8.2 *
Females	91328	91238	1.1	1.1	20.1	20.1	10.1	10.2	19	19	7.9	8	12.7	12.3 *
With Work Disability	14989	14846	1	1	37.1	37.8	24.2	24.6	33.8	34.6	15.9	16.4	20.3	20.4
Retire. or Disab. Income	6894	7043 *	0.2	0.2	44.3	45.1	33	33.5	38.8	40	14.6	15.3	16.9	17.7 *
Spouse in Marr. Couple Fam.	98479	98390	1.3	1.3	11.6	11.6	4.6	4.8 *	10.4	10.4	3.1	3.2	6.9	6.6 *
FaHHer NSP (2)	12296	12369	1.8	1.7	42.2	41.6	25.3	25.1	41.5	41	23.9	23.5	28.1	27.4 *
Other Family Member	33186	33170	1.5	1.6	25	25.1	14.1	14	23.9	24	8.4	8.3	10.1	10.1
Not a Family Member	30367	30266	1.4	1.3	19.3	19.9	9.2	9.4	18.5	19	7.4	7.7	16.4	15.9

W2/W2 = Wave 2 estimate based on the actual Wave 2 household interview status.
W2/W6 = Wave 2 estimate treating households which were interviewed at Wave 2 but not interviewed at Wave 6 as noninterviews, as well as Wave 2 noninterviews.
* W2/W2 and W2/W6 estimates are significantly different at the 10 percent significance level.
(1) Hispanics are also included in White or Black.
(2) FaHHer NSP = Family householder, no spouse present.

Table 5. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 3

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
MARITAL STATUS1,2,3,4,5	34116	31291	29200	2091	2825	2219	606
married with spouse	19777	58.5	59.5	45.5	52.5	56.3	38.9
married no spouse	177	.5	.5	.8	.8	.6	1.5
widowed	2451	7.3	7.6	3.5	5.0	5.8	2.0
divorced	2367	6.8	6.5	10.5	8.0	6.3	13.8
separated	800	2.3	2.2	3.6	3.1	2.2	6.3
never married	8544	24.6	23.7	36.1	30.1	28.6	37.3
EDUCATION1,2,3,4,5	34183	31327	29227	2100	2856	2222	634
< 8 years	3569	10.7	11.1	5.7	7.7	7.8	7.3
9-11 years	5814	16.8	16.8	17.4	18.9	17.1	25.1
12 years	12377	36.1	36.1	36.8	36.9	36.9	36.9
13+ years	12423	36.3	36.1	40.1	36.5	38.2	30.8
CASH BENEFITS1,2,4,5	34378	31512	29405	2107	2866	2230	636
received	2940	8.7	8.5	10.8	7.0	5.4	12.9
not received	31438	91.3	91.5	89.2	93.0	94.6	87.1
AGE1,2,4,5	34378	31512	29405	2107	2866	2230	636
15 to 24	7885	22.6	21.3	41.3	26.6	23.2	38.5
25 to 34	7431	21.6	20.8	33.1	21.4	18.3	32.1
35 to 44	5516	16.1	16.4	12.0	15.7	16.3	13.5
45 to 64	8640	25.0	26.2	8.9	26.1	29.7	13.5
65+	4906	14.6	15.4	4.7	10.2	12.5	2.4
POVERTY1,3,4,5	34191	31360	29256	2104	2831	2220	611
<75%	2437	6.9	6.4	13.1	9.8	7.5	18.2
75 to 99%	1381	4.0	4.0	4.4	4.0	2.8	8.2
100 to 149%	3202	9.2	9.2	9.5	10.7	9.9	13.4
150 to 249%	7120	21.0	20.8	23.7	18.7	18.2	20.3
250% +	20051	58.8	59.5	49.4	56.9	61.5	39.9

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.

Table 5. cont. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 3

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
TENURE1,4,5	33538	30737	28698	2039	2801	2187	614
owner	23938	71.9	74.3	38.7	65.2	73.4	35.7
not owner	9600	28.6	25.7	61.3	34.8	26.6	64.3
EMPLOYMENT STATUS1,4,5	34378	31512	29405	2107	2866	2230	636
with job	20938	60.9	60.5	65.6	61.1	60.6	62.7
no job	1644	4.6	4.3	9.0	6.8	4.9	13.2
not in labor force	11796	34.5	35.2	25.3	32.1	34.4	24.1
NON-CASH BENEFITS2,4,5	34378	31512	29405	2107	2866	2230	636
Food Stamps	2339	6.8	6.5	12.1	6.5	3.9	15.6
Other	2921	8.4	8.0	13.1	9.9	8.7	14.3
None	29118	84.8	85.5	74.8	83.6	87.4	70.1
HOURS WORKED WEEKLY TOTAL4	34378	31481	29378	2103	2865	2229	636
No hours	12495	36.5	37.0	29.9	34.7	35.9	30.3
< 20 per week	1760	5.1	5.1	5.3	5.1	5.6	3.6
20 to 34	3070	8.8	8.7	9.4	10.7	10.0	12.9
35 to 40	12129	35.3	35.0	39.6	35.4	34.5	38.4
> 40 per week	4892	14.3	14.1	15.8	14.1	13.9	14.8
INCOME MONTHLY4	34378	31512	29405	2107	2866	2230	636
< 300	9438	27.1	26.7	31.6	31.8	30.5	36.0
300 to 599	5422	15.8	16.0	13.9	15.0	14.1	18.1
600 to 899	4386	12.7	12.6	14.0	13.0	12.9	13.4
900 to 1199	3606	10.6	10.5	11.8	9.7	9.6	9.9
1200 to 1599	3626	10.6	10.5	11.6	10.0	10.6	8.0
1600 to 1999	2472	7.3	7.3	7.0	6.3	6.7	4.7
2000 to 2999	3234	9.5	9.8	6.2	8.1	8.7	5.8
3000 to 3999	1147	3.4	3.4	2.4	3.1	3.1	3.0
4000+	1047	3.0	3.2	1.5	3.1	3.6	1.1

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.

Table 5. cont. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 3

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
COMMUNITY SIZE1,2,4 (in thousands)	34378	31512	29405	2107	2866	2230	636
not an SMSA	8748	25.9	26.0	24.4	20.1	19.1	23.6
under 100	438	1.3	1.2	2.0	1.2	0.9	2.0
100-249	3167	9.4	9.4	10.0	7.2	6.7	8.6
250-449	3185	9.4	9.4	9.3	8.0	8.4	6.8
500-999	4586	13.2	13.2	14.6	14.3	14.9	12.4
1000-2999	8390	24.1	23.8	27.7	28.2	27.8	29.7
3000-14999	5864	16.7	17.0	12.0	21.1	22.3	16.8
RACE	34378	31512	29405	2107	2866	2230	636
White	29833	87.0	86.9	88.3	84.4	84.9	82.9
Black	3646	10.4	10.5	8.7	12.8	12.8	13.1
Native American	142	.4	.4	.7	.5	.3	1.4
Asian	757	2.2	2.2	2.2	2.2	2.1	2.7
ETHNICITY3,5	34378	31512	29405	2107	2866	2230	636
Spanish	1901	5.4	5.4	5.8	6.5	4.8	12.3
Non-Spanish	32477	94.6	94.6	94.2	93.5	95.2	87.7

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.

Table 6. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 7

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
MARITAL STATUS1,2,3,4,5	31737	28512	26685	1827	3225	2554	671
married with spouse	18712	59.6	60.5	47.3	52.4	56.8	36.3
married no spouse	151	.5	.4	.8	.7	.5	1.2
widowed	2369	7.7	8.1	3.1	4.7	5.1	3.3
divorced	2304	7.3	7.1	10.3	6.9	6.0	10.4
separated	793	2.4	2.3	4.0	3.6	2.9	6.1
never married	7408	22.4	21.6	34.5	31.6	28.7	42.7
EDUCATION1,2,4	31921	28634	26793	1841	3287	2581	706
< 8 years	3228	10.5	10.7	7.2	8.1	7.9	8.8
9-11 years	5272	16.6	16.7	15.8	17.5	17.1	19.1
12 years	11468	36.1	36.2	35.8	37.9	37.9	38.0
13+ years	11615	36.8	36.5	41.2	36.5	37.1	34.0
CASH BENEFITS5	31921	28634	26793	1841	3287	2581	706
received	2714	8.6	8.6	8.8	7.9	7.0	11.3
not received	29207	91.4	91.4	91.2	92.1	93.0	88.7
AGE1,2,4,5	31921	28634	26793	1841	3287	2581	706
15 to 24	7432	22.7	21.3	42.3	28.6	25.3	40.7
25 to 34	7036	22.1	21.6	29.4	21.7	20.0	28.2
35 to 44	5198	16.2	16.4	13.3	17.0	17.6	14.7
45 to 64	7932	24.9	25.9	10.3	24.8	27.9	13.5
65+	4323	14.2	14.8	4.8	7.9	9.3	3.0
POVERTY1,2,4,5	31805	28560	26729	1831	3245	2568	677
<75%	1992	6.0	5.8	9.3	8.7	7.4	13.9
75 to 99%	1295	4.2	4.1	5.1	2.9	2.5	4.1
100 to 149%	3045	9.6	9.6	10.4	9.3	9.1	10.0
150 to 249%	6538	20.6	20.7	20.4	19.5	18.4	23.8
250% +	18935	59.4	59.9	54.7	59.6	62.6	48.2

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.

Table 6.cont. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 7

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
TENURE1,4,5	30983	27780	26007	1793	3203	2526	677
owner	22232	72.2	74.3	42.2	67.7	75.7	38.0
not owner	8751	27.8	25.7	57.8	32.3	24.3	62.5
EMPLOYMENT STATUS1,2,4,5	31921	28634	26793	1841	3287	2581	706
with job	19849	61.8	61.2	70.7	65.6	65.5	65.9
no job	1308	3.8	3.6	6.4	6.7	5.7	10.3
not in labor force	10764	34.4	35.2	23.0	27.8	28.9	23.8
NON-CASH BENEFITS2,4,5	31921	28634	26793	1841	3287	2581	706
Food Stamps	1980	6.3	6.0	10.2	5.4	4.0	10.9
Other	3219	10.1	10.3	8.6	9.6	9.1	11.0
None	26722	83.6	83.7	81.3	85.0	86.9	78.0
HOURS WORKED WEEKLY TOTAL1,2,4	31880	28597	26756	1841	3287	2581	706
No hours	11176	35.5	36.2	25.7	31.1	31.4	29.7
< 20 per week	1454	4.5	4.5	5.1	5.0	5.1	4.7
20 to 34	2847	8.8	8.7	10.7	9.8	10.3	8.0
35 to 40	11571	35.9	35.5	40.9	39.9	39.2	42.3
> 40 per week	4832	15.3	15.1	17.7	14.3	14.0	15.5
INCOME MONTHLY1,2	31921	28634	26793	1841	3287	2581	706
< 300	7803	23.9	23.7	26.7	29.5	28.8	32.0
300 to 599	4907	15.6	15.7	14.9	13.1	13.1	13.0
600 to 899	4102	12.8	12.7	13.7	13.6	12.8	16.4
900 to 1199	3405	10.6	10.6	10.9	10.9	11.0	10.5
1200 to 1599	3566	11.2	11.2	10.7	11.2	11.2	10.9
1600 to 1999	2448	7.7	7.7	7.7	7.2	7.5	6.2
2000 to 2999	3401	10.9	11.0	9.3	8.5	9.0	7.1
3000 to 3999	1163	3.7	3.8	3.3	2.9	3.0	2.5
4000+	1126	3.6	3.6	2.8	3.0	3.5	1.3

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.

Table 6.cont. Comparison for Evaluation of Mover Characteristics by Mover and Response Status for Interview 7

Characteristic	Total in Scope	Respondent			Nonrespondent		
		Total	Non-Mover	Mover	Total	Non-Mover	Mover
COMMUNITY SIZE1,2, (in thousands)	31921	28634	26793	1841	3287	2581	706
not an SMSA	8309	26.6	26.5	27.0	21.5	21.2	22.7
under 100	432	1.2	1.2	1.8	2.5	2.7	1.8
100-249	3049	9.6	9.5	9.9	9.5	9.7	8.8
250-449	2998	9.2	9.3	8.1	10.7	11.4	8.5
500-999	4127	13.0	13.0	12.9	12.1	12.0	12.5
1000-2999	7741	24.0	23.9	24.7	26.9	26.1	29.7
3000-14999	5864	16.5	16.5	15.6	16.8	17.0	16.0
RACE1,2,3	31921	28634	26793	1841	3287	2581	706
White	27770	87.5	87.5	87.9	82.5	83.3	79.7
Black	3335	10.0	10.1	8.9	14.5	14.1	15.9
Native American	135	.4	.4	.5	.5	.3	1.1
Asian	681	2.1	2.1	2.7	2.5	2.2	3.3
ETHNICITY5	31921	28634	26793	1841	3287	2581	706
Spanish	1679	5.3	5.3	5.8	4.9	4.3	7.2
Non-Spanish	30242	94.7	94.7	94.2	95.1	95.7	92.8

1 Distributions of respondents and nonrespondents significantly different at the 0.10 level.

2 Distributions of respondent nonmovers and nonrespondent nonmovers significantly different at the 0.10 level.

3 Distributions of respondent movers and nonrespondent movers significantly different at the 0.10 level.

4 Distributions of respondent nonmovers and respondent movers significantly different at the 0.10 level.

5 Distributions of nonrespondent nonmovers and nonrespondent movers significantly different at the 0.10 level.