Appendix D. Data Quality

Two major determinants of the quality of data collected in household surveys are the magnitude of the missing responses and the accuracy of the responses provided. This appendix provides information on the imputation procedure along with imputation rates for selected items from the "Support for Nonhousehold Members" module of the 1987 Panel of the Survey of Income and Program Participation (SIPP). It provides a comparison of the various SIPP data sets, showing the types of providers and recipients of support. Also comparable child and spousal support estimates from both the SIPP and the Current Population Survey (CPS) are evaluated for data quality.

Imputation Procedure

Imputed responses refer either to missing responses for specific questions or items on the questionnaire or to responses rejected during the editing process because of improbable or inconsistent answers. An example of the latter is a never-married respondent who reports making support payments to an ex-spouse.

The estimates in this report are produced after all items have been edited and imputed whenever necessary. Missing or inconsistent responses to specific questions are assigned a value in the imputation phase of the data processing operation. The procedure used to assign or impute most responses for missing or inconsistent data for SIPP is commonly referred to as the "hot deck" imputation method. This process assigns item values reported in the survey by respondents to nonrespondents. The respondent from whom the value is taken is called the "donor." Values from donors are assigned by controlling for demographic and economic data available from both donors and nonrespondents. The control variables used for this module's items generally included the respondent's age, sex, race, marital status, and monthly household income.

Imputation Rates

The imputation rates for selected items are shown in table D-1. These rates are calculated by dividing the number of missing or inconsistent responses by the total number of responses that should have been provided. In general, the imputation rates are of reasonable magnitude. For example, the imputation rate for the initial question as to whether support was provided was 5 percent. The next three questions concerning support for children had similar rates of 6 to 7 percent. Imputation rates for questions on the amount of financial support provided were higher. For the amount of child support question, it was 11 percent and 17 percent for the question on the amount of support for the first person. Higher rates were also noticed in reference to the second person supported: relationship of that person, 22 percent; living arrangement, 24 percent; and the amount of support for that person, 33 percent.

Table D-1. **Imputation Rates for Selected Items on Support for Nonhousehold Members**

Question	Unweighted cases	Percent imputed
1. Did . . . make any regular or lump-sum payments for support of someone outside the household?	22,509	5.1
3a. Were any payments made for children under 21?	917	6.2
3b. For how many children did . . . make support payments?	508	6.7
3c. Were any payments the result of a court-order or other written agreement?	508	7.3
3i. How much did . . . pay in child support based on recent agreement?	395	11.4
5a. Did . . . make regular payments for support of any other person outside the household?	508	6.5
5b. How many other persons supported?	464	8.0
5c. What is relationship of first person supported?	464	7.5
What is relationship of second person supported?	97	21.6
5d. Living arrangement of first person supported	464	7.8
Living arrangement of second person supported	94	23.7
5e. Amount of support for first person	464	16.6
Amount of support for second person	97	33.0
6. Amount of support for all other persons	266	34.6

Comparison of SIPP Data Sets

In the 1987 Panel Wave 6, approximately 5.4 million persons (3 percent of all persons 18 years and over) provided regular financial support to about 8.4 million nonhousehold members (table D-2). Of all regular providers, about 63 percent provided support to children

only and 30 percent provided support to adults only. Regular providers of both children and adults represented the remaining 7 percent of providers. Generally, the results from previous periods were consistent, ranging from 5.2 to 6.3 million regular providers (3 or 4 percent of the 18 years and over population). The 6.3 million estimate in the 1984 Panel Wave 5, the first data collection period, was slightly higher, but may have contained an unknown number of persons providing lump-sum only payments. Of these providers, 62 to 68 percent provided support to children only; about 27 to 32 percent provided support to adults only; the remaining 5 to 7 percent provided support to both children and adults.

When examining the most recent data (1987 Panel Wave 6), table D-2 shows that of the 8.4 million persons receiving regular support most were children under 21 years of age. Children constituted about 70 percent of regular support recipients and adults received about 30 percent. Of the 2.5 million adults who received support, 830,000 or 33 percent were parents of the provider; 583,000 or 23 percent were spouses or ex-spouses; 341,000 or 14 percent were children over 21 years of age; and 490,000 or 20 percent were other relatives of the provider. In general, these results were consistent with previous wave results. Approximately 8 to 10 million received regular support payments, of which 69 to 74 percent were children under 21 years of age and 26 to 31 percent were adults.

It should be noted that information collected for the first data set on support for nonhousehold members (1984 Panel Wave 5) differed from later waves in the content and design of the questionnaire. In 1984 Panel Wave 5, the initial screening question directly asked about regular payments, but the interviewers were to include any lump-sum or irregular payments which were reported. Information on whether they were regular or lump-sum was not collected. In the later waves, the screener question specifically asked for regular or lump-sum payments, and a follow-up question obtained information on which type of payment (regular, lump-sum, or both) was made. As a result, the 1987 Panel Wave 6 estimates shown in table D-2 do not include an additional 1.8 million persons who made lump-sum only payments and 805,000 who made both regular and lump-sum payments.

Comparison of SIPP and CPS

Shown in table D-3 are estimates of the number of men making support payments to children and separated or ex-wives. Estimates of women receiving child support are from both the SIPP and the CPS. Estimates of women receiving support payments from separated or ex-husbands were collected from CPS. The SIPP estimates cover all men providers 18 years of age and over and women 18 years and over who received child support payments. Estimates from CPS are more restrictive in coverage. These estimates are based on information collected from never-married women 18 years and over who received child support payments and payments to ever-married women from the last divorce or separation.

Perhaps the more restricted universe accounts for the generally lower child support estimates from the CPS compared with those from the SIPP. For example, the SIPP 1987 Panel shows 4.2 (wave 3) and 4.0 (wave 6) million men making child support payments, compared to 4.3 (wave 3) and 3.6 (wave 6) million

Table D-2. **Persons Providing and Receiving Regular Support Payments, by Relationship to the Provider**

Characteristic	1987 Wave 6		1987 Wave 3		1986 Wave 6		1986 Wave 3		1985 Wave 6		1984 Wave 5	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All persons 18 years and over	179,324	100.0	177,179	100.0	176,210	100.0	174,672	100.0	174,731	100.0	171,290	100.0
Persons providing support	5,372	3.0	5,460	3.1	5,218	3.0	5,603	3.2	5,258	3.0	6,275	3.7
Persons providing support	5,372	100.0	5,460	100.0	5,218	100.0	5,603	100.0	5,258	100.0	6,275	100.0
For children only	3,377	62.9	3,508	64.2	3,289	63.0	3,490	62.3	3,553	67.6	3,959	63.1
For adults only	1,633	30.4	1,559	28.6	1,624	31.1	1,782	31.8	1,439	27.4	1,949	31.1
For both children and adults	362	6.7	394	7.2	305	5.8	331	5.9	266	5.1	366	5.8
Persons receiving support	8,410	100.0	8,502	100.0	8,032	100.0	9,062	100.0	8,394	100.0	9,914	100.0
Children	5,917	70.4	5,952	70.0	5,628	70.1	6,241	68.9	6,246	74.4	7,050	71.1
Adults	2,492	29.6	2,551	30.0	2,404	29.9	2,821	31.1	2,148	25.6	2,864	28.9
Parents	830	9.9	860	10.1	695	8.7	857	9.5	706	8.4	918	9.3
Spouse	157	1.9	171	2.0	157	2.0	273	3.0	85	1.0	202	2.2
Ex-spouse	426	5.1	397	4.7	360	4.5	313	3.4	300	3.6	412	4.2
Children 21 years and over	341	4.1	426	5.0	413	5.1	452	5.0	352	4.2	495	5.0
Other relative	490	5.8	367	4.3	430	5.4	561	6.2	391	4.7	566	5.7
Nonrelative	77	0.9	140	1.6	161	2.0	88	1.0	165	2.0	130	1.3
Not ascertained	170	2.0	190	2.2	188	2.3	278	3.1	148	1.8	138	1.4

Table D-3. **Comparison of SIPP and CPS Estimates**

Estimates	Numbers	Mean amount (1988 dollars)
Men making child support payments:		
SIPP-1987 Wave 6	4,002	$2,883
SIPP-1987 Wave 3	4,226	3,005
SIPP-1986 Wave 6	3,947	3,239
Women receiving child support payments:		
CPS 1989	3,725	2,845
CPS 1987	3,685	3,070
CPS 1985	3,243	2,808
SIPP-1987 Wave 6	3,626	2,593
SIPP-1987 Wave 3	4,280	2,734
SIPP-1986 Wave 6	4,862	2,497
Men making support payments to separated or ex-wives:		
SIPP-1987 Wave 6	701	4,671
SIPP-1987 Wave 3	632	5,895
SIPP-1986 Wave 6	601	6,504
Women receiving support payments from separated or ex-husbands:[1]		
CPS 1985	616	4,106
CPS 1983	608	4,932

[1]These type of estimates were not updated because they are no longer collected in the CPS.

women receiving such payments. Results from the CPS show 3.2 (in 1985) and 3.7 (in 1987 and 1989) million women receiving child support.

Generally, the level of payments reported by men in the SIPP were similar to those received by women in the CPS. However, they were higher than those reported by women in the SIPP. In the SIPP (1987 Panel) men reported making average annual child support payments of $3,005 (wave 3) and $2,883 (wave 7), and in the CPS women received child support payments of $3,070 (in 1987) and $2,845 (in 1989), while women in the SIPP (in 1987 Panel) reported receiving annual child support of $2,734 (wave 3) and $2,593 (wave 7).

Data from the SIPP 1987 Panel also show that 632,000 men in wave 3 and 701,000 men in wave 6 made average annual support payments of $5,894 and $4,671, respectively, to either an ex-wife or a wife not living with them. These estimates are similar to those from the CPS (1983 and 1985) which show 608,000 and 616,000 women receiving average annual alimony or maintenance payments of $4,932 and $4,106.

It should also be mentioned that the quality of these estimates could have been further enhanced through merging the 1987 Panel Wave 6 file with the 1988 Panel Wave 3 file. Merging these files would have increased the size of the sample and reduced the size of the standard errors. However, the 1988 Panel Wave 3 file was not available at the writing of this report.