Appendix C. Source and Accuracy of Estimates

SOURCE OF DATA

The SIPP universe is the noninstitutionalized resident population living in the United States. This population includes persons living in group quarters, such as dormitories, rooming houses, and religious group dwellings. Crew members of merchant vessels, Armed Forces personnel living in military barracks, and institutionalized persons, such as correctional facility inmates and nursing home residents, were not eligible to be in the survey. Also, United States citizens residing abroad were not eligible to be in the survey. Foreign visitors who work or attend school in this country and their families were eligible; all others were not eligible. With the exceptions noted above, persons who were at least 15 years of age at the time of the interview were eligible to be interviewed in the survey.

The 1985, 1986, and 1987 panel SIPP samples are located in 230 primary sampling units (PSU's) each consisting of a county or a group of contiguous counties. Within these PSU's, expected clusters of two to four living quarters (LQ's) were systematically selected from lists of addresses prepared for the 1980 decennial census to form the bulk of the sample. To account for LQ's built within each of the sample areas after the I980 census, a sample was drawn of permits issued for construction of residential LQ's up until shortly before the beginning of the panel. In jurisdictions that do not issue building permits, small land areas were sampled and the LQs within were listed by field personnel and then subsampled. In addition, sample LQ's were selected from a supplemental frame that included LQs identified as missed in the 1980 census and group quarters.

The first interview of each panel was conducted during February, March, April, and May of that particular year. Approximately one-fourth of the sample was interviewed in each of these months. These four subsamples are called rotation groups 1, 2, 3, and 4. One rotation group was interviewed each month. Each sample person was visited every 4 months thereafter for roughly 2 1/2 years. At each interview the reference period was the 4 months preceding the interview month. In general, one cycle of four interviews covering the entire sample, using the same questionnaire, is called a wave. The exceptions were Wave 2 of the 1985 panel and Wave 3 of the 1986 panel which covered three interviews.

Approximately 17,800, 16,300, and 16,700 living quarters were originally designated for the 1985, 1986, and 1987 samples, respectively. At the first interview, interviews were obtained from the occupants of about 13,400 of the 17,800 designated LQ's for the 1985 panel, 11,500 of the 16,300 designated LQ's for the 1986 panel, and 11,700 for the 16,700 designated LQs for the 1987 panel. Most of the remaining 4,400, 4,800, and 5,000 LQ's in the 1985, 1986, and 1987 panels respectively, were found to be vacant, demolished, converted to nonresidential use, or otherwise ineligible for the survey. However, approximately 1,000 of the 4,400 LQ's for the 1985 panel, 900 of the 4,800 LQ's for the 1986 panel, and 800 of the 5000 LQ's for the 1987 panel were not interviewed because the occupants refused to be interviewed, could not be found at home, were temporarily absent, or were otherwise unavailable. Thus, occupants of about 93 percent of all eligible living quarters for all three panels participated in the first interview of the survey.

For subsequent interviews, only original sample persons (those interviewed in the first interview) and persons living with them were eligible to be interviewed. With certain restrictions, original sample persons were followed if they moved to a new address. When original sample persons moved to remote parts of the country and no telephone number was available, moved without leaving a forwarding address or refused to be interviewed, additional noninterviews resulted.

As part of most waves, subjects were covered that do not require repeated measurement during the panel and are of particular interest cross-sectionally for research purposes. A specific set of topical questions are referred to as a topical module. For this report the topical modules analyzed included questions on child care. They were implemented in Wave 6 of the 1985 panel, Wave 3 and 6 of the 1986 panel and Wave 3 of the 1987 panel.

Wave 6 of the 1985 panel and Wave 3 of the 1986 panel cover the common interview months of October, November, and December 1986. Likewise, Wave 6 of the 1986 panel and Wave 3 of the 1987 panel cover the common interview months of October, November, and December 1987. The data for concurrent time periods were combined and analyzed as a single data set. The primary motivation for combining this data is to obtain an increase in sample size in conjunction with a reduction in time in sample bias, if any, due to repeated interviews and nonresponse over the life of a panel.

Noninterviews. Tabulations in this report were drawn from interviews conducted from October through December 1986 for fall 1986 estimates and from October through December 1987 for fall 1987 estimates. Table C-1 summarizes information on nonresponse for the interview months in which the data used to produce this report were collected.

Table C-1. **Combined 1985-86 and 1986-87 Household Sample Size, by Month and Interview Status**

Month	Eligible	Interviewed	Noninterviewed	Nonresponse rate (percent)
October 1986	6,700	5,500	1,200	18
November 1986	6,600	5,500	1,200	18
December 1986	6,600	5,400	1,200	18
October 1987	6,700	5,500	1,200	18
November 1987	6,700	5,500	1,200	18
December 1987	6,500	5,400	1,100	17

* Due to rounding of all numbers to 100, there are some inconsistencies. The percentage was calculated using unrounded numbers.

Some respondents do not respond to some of the questions. Therefore, the overall nonresponse rate for some items such as income and money related items is higher than the nonresponse rates in table C-1.

ESTIMATION

The estimation procedure used to derive SIPP person weights in each panel involved several stages of weight adjustments. In the first wave, each person received a base weight equal to the inverse of his/her probability of selection. For each subsequent interview, each person received a base weight that accounted for following movers.

A noninterview factor was applied to the weight of every occupant of interviewed households to account for persons in noninterviewed occupied households which were eligible for the sample. (Individual nonresponse within partially interviewed households was treated with imputation. No special adjustment was made for noninterviews in group quarters.) A factor was applied to each interviewed person's weight to account for the SIPP sample areas not having the same population distribution as the strata from which they were selected. The Bureau has used complex techniques to adjust the weights for nonresponse, but the success of these techniques in avoiding bias is unknown.

An additional stage of adjustment to persons' weights was performed to reduce the mean square errors of the survey estimates. This was accomplished by bringing the sample estimates into agreement with monthly Current Population Survey (CPS) type estimates of the civilian (and some military) noninstitutional population of the United States by demographic characteristics including age, sex, race, and Hispanic ethnicity as of the specified control date. The CPS estimates by age, race, sex, and Hispanic origin were themselves brought into agreement with estimates from the 1980 decennial census which have been adjusted to reflect births, deaths, immigration, emigration, and changes in the Armed Forces since 1980. Also, an adjustment was made so that husbands and wives within the same household were assigned equal weights.

ACCURACY OF ESTIMATES

SIPP estimates are based on a sample; they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaire, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: nonsampling and sampling. We are able to provide estimates of the magnitude of SIPP sampling error, but this is not true of nonsampling error. Found in the next sections are descriptions of sources of SIPP nonsampling error, followed by a discussion of sampling error, its estimation, and its use in data analysis.

Nonsampling variability. Nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness on the part of the respondents to provide correct information, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, biases resulting from the differing recall periods caused by the interviewing pattern used, and failure of all units in the universe to have some probability of being selected for the sample (undercoverage). Quality control and edit procedures were used to reduce errors made by respondents, coders and interviewers. More detailed discussions of the existence and control of nonsampling errors in the SIPP can be found in the *Quality Profile for the Survey of Income and Program Participation,* SIPP Working Paper, July 1987, No. 8708 by King, Petroni, and Singh.

Undercoverage in SIPP results from missed living quarters and missed persons within sample households. It is known that undercoverage varies with age, race, and sex. Generally, undercoverage is larger for males than for females and larger for Blacks than for non-Blacks. Ratio estimation to independent age-race-sex population controls partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that persons in missed households or missed persons in interviewed households have characteristics different from those of interviewed persons in the same age-race-sex group. Further, the independent population controls used have not been adjusted for undercoverage.

Unique to the 1986 Panel, maximum telephone interviewing was tested in Waves 2, 3, and 4. Specifically, half of the sample in rotations 4 and 1 of Wave 2 and rotations 2 and 3 of Wave 3 (Phase I) and rotations 2, 3, and 4 of Wave 4 (Phase II) were designated for telephone interviews. Analysis (done by designated mode) of household nonresponse, item nonresponse rates for labor force and income core items, and selected cross-sectional estimates of recipiency, income, low income status, and selected topical module items gave no indication of an overall significant mode effect. However, analysis was restricted to a limited number and type of estimates. If differences between two time periods or differences in characteristics for demographic groups result in borderline significant differences, the significance may be due to bias from the use of the telephone mode. Similarly, borderline insignificant differences may also be due to this bias. Thus, although no overall significant mode effect was detected, the user should consider the possibility of mode effects while analyzing exclusively the 1986 Panel data or combined data involving the 1986 Panel after Wave 1, especially results based on Waves 2 through 4 data. Details on analyses are in "Preliminary Evaluation of Maximum Telephone Interviewing on the SIPP" (paper by Gbur and Petroni in the forthcoming 1989 Proceedings of the Survey Research Methods Section, American Statistical Association) and "SIPP 86: Telephone Experiment Preliminary Analysis" (internal Census Bureau draft memorandum from Waite to Davey, August 21, 1989).

Comparability with other estimates. Caution should be exercised when comparing data from this report with data from other SIPP publications or with data from other surveys. The comparability problems are caused by such sources as the seasonal patterns for many characteristics, different nonsampling errors, and different concepts and procedures.

Sampling variability. Standard errors indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The standard errors for the most part measure the variations that occurred by chance because a sample, rather than the entire population, was surveyed.

USES AND COMPUTATION OF STANDARD ERRORS

Confidence intervals. The sample estimate and its standard error enable one to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these being surveyed under essentially the same conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.

2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

Hypothesis testing. Standard errors may also be used for hypothesis testing, a procedure for distinguishing between population characteristics using sample estimates. The most common types of hypotheses tested are 1) the population characteristics are identical versus 2) they are different. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the characteristics are different when, in fact, they are identical.

All statements of comparison in the report have passed a hypothesis test at the 0.10 level of significance or better. This means that, for differences cited in the report, the estimated absolute difference between parameters is greater than 1.6 times the standard error of the difference.

To perform the most common test, compute the difference X_A - X_B, where X_A and X_B are sample estimates of the characteristics of interest. A later section explains how to derive an estimate of the standard error of the difference X_A - X_B. Let that standard error be s_{DIFF}. If X_A - X_B is between -1.6 times s_{DIFF} and +1.6 times s_{DIFF}, no conclusion about the characteristics is justified at the 10 percent significance level. If, on the other hand, X_A - X_B is smaller than -1.6 times s_{DIFF} or larger than +1.6 times s_{DIFF}, the observed difference is significant at the 10 percent level. In this event, it is commonly accepted practice to say that the characteristics are different. Of course, sometimes this conclusion will be wrong. When the characteristics are, in fact, the same, there is a 10 percent chance of concluding that they are different.

Note that as more tests are performed, more erroneous significant differences will occur. For example, if 100 independent hypothesis tests are performed in which there are no real differences, it is likely that about 10 erroneous differences will occur. Therefore, the significance of any single test should be interpreted cautiously.

Note concerning small estimates and small differences. Summary measures are shown in the report only when the base is 200,000 or greater. Because of the large standard errors involved, there is little chance that estimates will reveal useful information when computed on a base smaller than 200,000. Also, nonsampling error in one or more of the small number of cases providing the estimate can cause large relative error in that particular estimate. Estimated numbers are shown, however, even though the relative standard errors of these numbers are larger than those for the corresponding percentages. These smaller estimates are provided primarily to permit such combinations of the categories as serve each user's needs. Therefore, care must be taken in the interpretation of small differences since even a small amount of nonsampling error can cause a borderline difference to appear significant or not, thus distorting a seemingly valid hypothesis test.

Standard error parameters and tables and their use. Most SIPP estimates have greater standard errors than those obtained through a simple random sample because clusters of living quarters are sampled for the SIPP. To derive standard errors that would be applicable to a wide variety of estimates and could be prepared at a moderate cost, a number of approximations were required. Estimates with similar standard error behavior were grouped together and two parameters (denoted "a" and "b") were developed to approximate the standard error behavior of each group of estimates. Because the actual standard error behavior was not identical for all estimates within a group, the standard errors computed from these parameters provide an indication of the order of magnitude of the standard error for any specific estimate. These "a" and "b" parameters vary by characteristic and by demographic subgroup to which the estimate applies. Table C-2 provides parameters for fall 1986 estimates. Table C-3 provides parameters for fall 1987 estimates.

Table C-2. **SIPP Variance Parameters for Fall 1986 Child Care Estimates**

Characteristic	a	b	f
0-15 child care 1985 Wave 6/ 1986 Wave 3	-0.0001173	6,077	0.52
16+ income and labor force:			
Female	-0.0000679	6,075	0.52
All others:			
Both sexes	-0.0000958	22,092	1.00
Male	-0.0001982	22,092	1.00
Female	-0.0001855	22,092	1.00

Table C-3. **SIPP Variance Parameters for Fall 1987 Child Care Estimates**

Characteristic	a	b	f
0-15 child care 1986 Wave 6/ 1987 Wave 3	-0.0001110	5,772	0.52
16+ income and labor force:			
Female	-0.0000645	5,773	0.52
All others:			
Both sexes	-0.0000911	20,992	1.00
Male	-0.0001883	20,992	1.00
Female	-0.0001763	20,992	1.00

For those users who wish further simplification, we have also provided general standard errors in tables C-4, C-5, C-6, and C-7. Note that these standard errors must be adjusted by an "f" factor from table C-2 or C-3. The standard errors resulting from this simplified approach are less accurate. Methods for using these parameters and tables for computation of standard errors are given in the following sections.

Standard errors of estimated numbers. The approximate standard error, s_x, of an estimated number of persons shown in this report can be obtained in two ways.

It may be obtained by the use of the formula

$$s_x = fs \qquad (1)$$

where f is the appropriate "f" factor from table C-2 or C-3 and s is the standard error of the estimate obtained by interpolation from table C-4 or C-5.

Table C-4. **Standard Errors of Estimated Numbers of Persons for Fall 1986 Estimates**

(Numbers in thousands)

Size of estimate	Standard error	Size of estimate	Standard error
200	66	26,000	714
300	81	30,000	759
500	105	40,000	855
600	115	50,000	930
750	129	60,000	990
1,000	148	70,000	1038
2,000	209	80,000	1074
3,000	256	90,000	1101
5,000	329	100,000	1119
7,500	400	130,000	1119
8,000	413	135,000	1112
10,000	460	150,000	1076
11,000	481	160,000	1040
13,000	521	180,000	934
15,000	557	200,000	766
17,000	590	210,000	644
22,000	663	220,000	473
25,000	702	230,000	115

Table C-5. **Standard Errors of Estimated Numbers of Persons for Fall 1987 Estimates**

(Numbers in thousands)

Size of estimate	Standard error	Size of estimate	Standard error
200	65	26,000	696
300	79	30,000	740
500	102	40,000	833
600	112	50,000	907
750	125	60,000	965
1,000	145	70,000	1101
2,000	204	80,000	1047
3,000	249	90,000	1073
5,000	320	100,000	1090
7,500	390	130,000	1091
8,000	403	135,000	1083
10,000	448	150,000	1048
11,000	469	160,000	1013
13,000	507	180,000	909
15,000	543	200,000	745
17,000	575	210,000	625
22,000	646	220,000	457
25,000	684	230,000	95

Alternatively, s_x may be approximated by the formula

$$s_x = \sqrt{ax^2 + bx} \qquad (2)$$

Here x is the estimated number and "a" and "b" are the parameters associated with the particular type of characteristic being estimated. Use of formula (2) will provide more accurate results than the use of formula (1) above.

Illustration. The SIPP estimate of the total number of children under 15 years old living in the United States with working mothers in the fall of 1987 is 30,612,000 as indicated in table A of the report. The appropriate "a" and "b" parameters to use in calculating a standard error for the estimate are obtained from table C-3. They are a= -0.0001110 and b = 5,772, respectively. Using formula (2), the approximate standard error is

$$\sqrt{(-0.0001110)(30{,}612{,}000)^2 + (5{,}772)(30{,}612{,}000)} = 270{,}000$$

The 90-percent confidence interval as shown by the data is from 30,180,000 to 31,044,000. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 90 percent of all samples.

Using formula (1), the appropriate "f" factor (f=0.52) from table C-3, and the standard error of the estimate by interpolation using table C-5, the approximate standard error is

$$s_x = (0.52)(746{,}000) = 388{,}000$$

The 90-percent confidence interval as shown by the data is from 29,991,000 to 31,233,000.

Standard errors of estimated percentages. This section refers to the type of percentages presented in this report. These are the percentages of a group of persons possessing a particular attribute. An example of this type of percentage is the percentage of children under 15 years old who have working mothers. The reliability

Table C-6. **Standard Errors of Estimated Percentages of Persons for Fall 1986 Estimates**

Base of estimated percentage (thousands)	Estimated percentage					
	≤1 or ≥99	2 or 98	5 or 95	10 or 90	25 or 75	50
200	3.3	4.7	7.2	10.0	14.4	16.6
300	2.7	3.8	5.9	8.1	11.8	13.6
600	1.9	2.7	4.2	5.8	8.3	9.6
1,000	1.5	2.1	3.2	4.5	6.4	7.4
2,000	1.0	1.5	2.3	3.2	4.6	5.3
3,000	0.9	1.2	1.9	2.6	3.7	4.3
5,000	0.7	0.9	1.4	2.0	2.9	3.3
8,000	0.5	0.7	1.1	1.6	2.3	2.6
10,000	0.5	0.7	1.0	1.4	2.0	2.4
13,000	0.4	0.6	0.9	1.2	1.8	2.1
15,000	0.4	0.5	0.8	1.2	1.7	1.9
17,000	0.4	0.5	0.8	1.1	1.6	1.8
22,000	0.3	0.4	0.7	1.0	1.4	1.6
26,000	0.3	0.4	0.6	0.9	1.3	1.5
30,000	0.3	0.4	0.6	0.8	1.2	1.4
50,000	0.2	0.3	0.5	0.6	0.9	1.1
80,000	0.2	0.2	0.4	0.5	0.7	0.8
100,000	0.1	0.2	0.3	0.4	0.6	0.7
130,000	0.1	0.2	0.3	0.4	0.6	0.7
150,000	0.1	0.2	0.3	0.4	0.5	0.6
180,000	0.1	0.2	0.2	0.3	0.5	0.6
200,000	0.1	0.1	0.2	0.3	0.5	0.5
230,000	0.1	0.1	0.2	0.3	0.4	0.5

Table C-7. **Standard Errors of Estimated Percentages of Persons for Fall 1987 Estimates**

Base of estimated percentage (thousands)	Estimated percentage					
	≤1 or ≥99	2 or 98	5 or 95	10 or 90	25 or 75	50
200	3.2	4.5	7.1	9.7	14.0	16.2
300	2.6	3.7	5.8	7.9	11.5	13.2
600	1.9	2.6	4.1	5.6	8.1	9.4
1,000	1.4	2.0	3.2	4.3	6.3	7.2
2,000	1.0	1.4	2.2	3.1	4.4	5.1
3,000	0.8	1.2	1.8	2.5	3.6	4.2
5,000	0.6	0.9	1.4	1.9	2.8	3.2
8,000	0.5	0.7	1.1	1.5	2.2	2.6
10,000	0.5	0.6	1.0	1.4	2.0	2.3
13,000	0.4	0.6	0.9	1.2	1.7	2.0
15,000	0.4	0.5	0.8	1.1	1.6	1.9
17,000	0.3	0.5	0.8	1.1	1.5	1.8
22,000	0.3	0.4	0.7	0.9	1.3	1.5
26,000	0.3	0.4	0.6	0.9	1.2	1.4
30,000	0.3	0.4	0.6	0.8	1.1	1.3
50,000	0.2	0.3	0.4	0.6	0.9	1.0
80,000	0.2	0.2	0.4	0.5	0.7	0.8
100,000	0.1	0.2	0.3	0.4	0.6	0.7
130,000	0.1	0.2	0.3	0.4	0.6	0.6
150,000	0.1	0.2	0.3	0.4	0.5	0.6
180,000	0.1	0.2	0.2	0.3	0.5	0.5
200,000	0.1	0.1	0.2	0.3	0.4	0.5
230,000	0.1	0.1	0.2	0.3	0.4	0.5

of an estimated percentage, computed using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are over 50 percent. For example, the percent of children under 15 yeas old who have working mothers is more reliable than the estimated number of children under 15 years old who have working mothers. When the numerator and denominator of the percentage have different parameters, use the parameter (and appropriate factor) of the numerator. If proportions are presented instead of percentages, note that the standard error of a proportion is equal to the standard error of the corresponding percentage divided by 100.

For the percentage of persons, the approximate standard error, $s_{(x,p)}$, of the estimated percentage p can be obtained by the formula

$$s_{(x,p)} = fs \qquad (3)$$

where f is the appropriate "f" factor from table C-2 or C-3 and s is the standard error of the estimate obtained by interpolation from table C-6 or C-7. Alternatively, it may be approximated by the formula

$$s_{(x,p)} = \sqrt{\frac{b}{x} p(100-p)} \qquad (4)$$

Here x is the base of the percentage, p is the percentage ($0 < p < 100$), and b is the "b" parameter associated with the characteristic in the numerator. Use of this formula will give more accurate results than use of formula (3) above.

Illustration. The SIPP estimate for the number of children under 15 years old is 52,092,000 as indicated in table A of the report. Of these, 58.8 percent had working mothers in the fall of 1987. Using formula (4) and the "b" parameter of 5,772 (from table 3), the approximate standard error is

$$\sqrt{\frac{(5,772)}{(52,092,000)}(58.8)(100\text{-}58.8)} = 0.5 \textit{ percent}$$

Consequently, the 90-percent confidence interval as shown by these data is from 58.0 to 59.6 percent.

Using formula (3), the appropriate "f" factor (f=0.52) from table 3, and the appropriate s by interpolation using table C-7, the approximate standard error is

$$s_x = (0.52)(0.9) = 0.5 \text{ percent}$$

The 90-percent confidence interval shown by these data is from 58.0 to 59.6 percent.

Standard error of a difference. The standard error of a difference between two sample estimates, x and y, is approximately equal to

$$s_{(x\text{-}y)} = \sqrt{s_x^2 + s_y^2 - 2rs_xs_y} \qquad (5)$$

where s_x and s_y are the standard errors of the estimates x and y, and r is the correlation coefficient between the characteristics estimated by x and y. The estimates can be numbers, averages, percents, ratios, etc. Underestimates or overestimates of standard error of differences result if the estimated correlation coefficient is overestimated or underestimated, respectively.

Illustration. Suppose that we are interested in the difference in the percentage of children that receive primary child care in the child's home versus primary child care in another home in the fall of 1987. Of the 28,842,000 children with employed mothers, 18.7 percent were cared for in the child's home and 14.9 percent were cared for in another home (see table B of the report). Using parameters from table C-3, the standard errors of these percentages are approximately 0.6 percent for children cared for in the child's home and 0.5 percent for children cared for in another home.

Now, the standard error of the difference is computed using the above two standard errors. The correlation between these estimates is assumed to be zero. Therefore, the standard error of the difference is computed by formula (5):

$$\sqrt{(0.6)^2 + (0.5)^2} = 0.8 \text{ percent}$$

Suppose that it is desired to test at the 10 percent significance level whether the percentage of children cared for in the child's home differs significantly from the percentage of children cared for in another home. To perform the test, compare the difference of 3.8 percent to the product 1.6 x 0.8 percent = 1.3 percent. Since the difference is larger than 1.6 times the standard error of the difference, the data show that the estimates for the percentage of children cared for in the child's home and children cared for in another home differ significantly at the 10 percent level.