

Nonsampling Errors

Nonsampling errors can be attributed to many sources: for example, inability to obtain information about all cases in the sample, difficulties in precisely stating some definitions, differences in the interpretation of questions, inability or unwillingness on the part of the respondents to provide correct information. Other types of errors may take place in recording, coding, or processing the data; in estimating values for missing data; in biases resulting from the differing recall periods caused by the rotation pattern used; or because of undercoverage.

Undercoverage in the SPD results from missed living quarters and missed people within sample households. It is known that undercoverage varies with age, race, and gender (Martin and de la Puente 1993). Generally, undercoverage is larger for males than for females and larger for Blacks than for non-Blacks. Ratio estimation to independent age-race-gender population controls (benchmark estimates) partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that people in missed households or missed people in interviewed households have characteristics different from those of interviewed people in the same age-race-gender group. In addition, the independent population controls used have not been adjusted for undercoverage in the decennial census.

The Census Bureau has used complex techniques to adjust the weights for nonresponse. For an explanation of the techniques used, see the "Non-response Adjustment Methods for Demographic Surveys at the U.S. Bureau of the Census," November 1988, Working Paper 8823, by R. Singh and R. Petroni. An example of successfully avoiding bias can be found in "Current Non-response Research for the Survey of Income and Program Participation" (paper by Petroni, presented at the Second International Workshop on Household Survey Non-response, October 1991). The procedure for calculating the longitudinal person weights on the first SPD longitudinal file was derived based on such complex techniques.