Supporting Statement – Part B
U.S. Department of Commerce
U.S. Census Bureau
Survey of Housing Starts, Sales, and Completions (SOC-QI)
OMB Control No. 0607-0110

B. Collection of Information Employing Statistical Methods

1. Description of Universe and Respondent Selection

Annually, we sample approximately 21,600 residential buildings. We contact home builders, real estate agents, rental agents, and new home owners to obtain information about those buildings. The residential buildings for which the respondents are interviewed are selected in two ways. First, in a sample of approximately 950 of the 20,000 jurisdictions requiring building permits, FRs visit building permit offices at the beginning of each month to list and select a sample of buildings for which permits were issued in the previous month.

The basic sampling rate is an overall rate of 1 in 50. Buildings with 1 to 4 units are selected with probability proportional to the number of units; that is, buildings with more units have a greater probability of selection. To equalize the sample size from each permit office, we use variable rate sampling patterns dependent upon the monthly construction activity in a permit office. There are eight sampling patterns with sampling rates ranging from 1 in 25 to 1 in 200. The use of these patterns increases the sample size when the activity is small and decreases the sample size when activity is large. All buildings with five or more units are selected. Second, a sample of 75 small land areas that do not require permits is canvassed by interviewers each month to locate new construction. Generally, response rates are about 95 percent or higher.

2. Statistical Methodology - Estimation Procedures

The Census Bureau updated the sample design for SOC in January 2005. The design of the SOC sample is a stratified multistaged cluster design. It is a sub-sample of the Current Population Survey (CPS) areas.

The CPS strata are defined as counties and independent cities within each state that were grouped based on metropolitan status, labor force characteristics such as number of male and female unemployed, race-ethnic origins, population change, and family and housing characteristics. There are 820 of these strata. One area from each of these strata was selected with probability proportional to the number

of persons 16 and older.

These 820 areas were further grouped into 169 strata, according to census division, metropolitan status, weighted building permit activity between 1999 and 2002, and 16+ populations (persons 16 and older). One area was selected (for SOC) from each of these 169 strata with probability proportional to the weighted measure of building permit activity and using a maximum overlap algorithm to maximize overlap with the old SOC sample areas.

Each of the permit-issuing places in the 169 selected areas was assigned to one of six classes based on activity. A systematic sample of these places was selected from each area. Places were selected at different sampling rates in each of the size classes so that larger proportions of the places were selected from the more active size classes. For example, all places in the most active size classes fell into the sample whereas only an expected one in 50 of the places in the least active size class fell into sample. Approximately 950 permit-issuing places were selected.

Non-permit areas were identified based on the 2000 Census geography definitions. After stratifying the non-permit SOC population according to housing unit population, a systematic sample of approximately 75 non-permit segments was selected.

The estimation procedures for all the statistics produced from the SOC are essentially the same. The following is the procedure for housing starts:

> The estimation of the housing starts series is a multi-stage process. First, an estimate is made monthly of housing units in buildings for which building permits have been issued in all permit-issuing places. Second, for the buildings selected from the 900 permit-issuing places, inquiries are made of the respondents to determine in which month and year the buildings were started. In case the units authorized by permits in a particular month are not started by the end of the month, follow-up is made in successive months until the units are actually started. From this sample of buildings, ratios are calculated for the estimated number of units in those buildings started to the estimated number of units covered by permits; separate ratios are calculated from permits of the current month and of each preceding month. These ratios, or start rates, are then applied to the appropriate estimate of units authorized by permits provided by the Building Permits Survey and then summed to provide estimates of units started. Third, units identified as started in the monthly canvass of nonpermit-issuing areas are weighted appropriately to provide an estimate of total housing starts in areas not covered by building-permit systems.

Addition of this estimate of starts in nonpermit areas to the estimate of starts in permit-issuing places results in an estimate of total private housing units started.

3. Efforts to Maximize Responses

To increase response rates, FRs mail a letter and a copy of the questionnaire to the respondent and then attempt to collect the data by telephone or personal interview. If the respondent should have more than one building in sample, the interviewer attempts to gather information for all buildings with one telephone call. If a contact cannot be made by telephone, the interviewer will visit the respondent or, if necessary, the building site to obtain the information by observation.

4. Tests of Methods

In 2020, data collection software was upgraded to the Census Bureau's standard Mobile Case Management interface. Included in this upgrade, we made several improvements to our data collection process. We added an instrument to capture details on the contact history with each respondent. We added an automatic process to capture the latitude and longitude of each project. The survey instrument questionnaire streamlined several questions to provide Field Representatives improved choice categories and capture any changes in previously recorded answers. Several iterations of testing was conducted on all changes to ensure respondent burden is minimal.

5. Contacts

The contact person for questions relating to the statistical aspects of the survey is Ms. Amy Newman-Smith, Assistant Division Chief for Research and Methodology. She can be reached on (301) 763-6595.

The contact person for questions relating to the collection and analysis of the data is Mr. William M. Abriatis, Assistant Division Chief for Construction Indicator Programs. She can be reached on (301) 763-5161.

Attachments

A. SOC-QI/SF.1 (facsimile of questions asked in electronic questionnaire for single-family houses)
B. SOC-QI/MF.1 (facsimile of questions asked in electronic questionnaire for multi-family buildings)
C. SOC-QI.1(L) (letter to new respondents)
D. BEA Letter of Support
E. Legal Authority