

## **Supporting Statement Service Annual Survey**

### B. Collections of Information Employing Statistical Methods

#### 1. Description of Universe

The SAS is a sample survey of 74,000 firms having one or more service establishments. The sample size differs from the number of reporting units because we will make use of administrative data for firms with an estimated measure of size below certain levels. The sample represents a universe of approximately three million establishments, based on the Census Bureau's Business Register and economic census records.

#### 2. Sampling Methodology and Estimating Procedures

3. We will select the SAS sample every five years. The current samples were drawn from establishments on the Business Register (BR) and are updated with a stratified sampling of new businesses that have obtained Federal Employer Identification numbers after the initial sample selection. The BR consisted of two lists. One list contained all EINs for businesses with at least one quarter of reported payroll. The second list consisted of all locations of multi-establishment companies. These lists contained information on payroll, employment, name and address, kind-of-business classification, and so forth.

Before the sampling frame was available, a study based on 2002 Economic Census data was conducted to determine the stratum bounds, sample size, and allocation of the sample size into the strata to meet specified sampling variability objectives for the revenue of different kind-of-business groups. Results of the study were applied to sampling units created from the 2003 BR.

The sampling units consist of both companies and EINs. If a company had total revenue (estimated from payroll) above the corresponding cutoff for its major kind of business or above the corresponding cutoff for any of its minor kinds of business, the company was selected with certainty. The company, which might consist of many EINs, was then the sampling unit. Any new service establishments that the company might acquire, even under new or different EINs, are in the sample with certainty. The EINs were the sampling unit for all single-establishment companies, whether selected with certainty or not, and all multi-establishment companies not selected with certainty.

To be eligible for the initial sample, an EIN had to be active (for example, had

payroll for the most recent year available and be on the latest available IRS active mailing list for FICA taxpayers). The EINs were then stratified according to their major kind of business, and their estimated revenue (based on payroll). Within each stratum, a simple random sample of EINs was selected.

For all EIN "births" (new EINs recently assigned by the IRS and on the latest IRS mailing list for FICA taxpayers) after the initial sampling, a two-phased selection procedure is used. In the first phase, births are arranged by kind of business and size (expected employment and payroll). A relatively large sample is drawn and canvassed in order to obtain a more reliable measure of size (two recent months of revenue) and a more detailed kind-of-business description. Using this more reliable information, the births selected in phase one are subjected to probability proportional-to-size sampling with overall probabilities equivalent to those used in drawing the initial sample. The birth selection procedure is carried out quarterly. Approximately 1.5 percent of all new births are added to the sample.

b. Estimation Procedure

Estimates will be developed from the summation of weighted data reported by the selected sampling units. The assigned weights are the inverse of the probability of selection (or sampling rate) of the sampling units.

Missing data will be imputed to provide reliable estimates for the entire universe of employer firms.

c. Measurable Accuracy

The accuracy of the survey results are determined by the joint effect of sampling variability and nonsampling errors. Sampling variability results because observations are being made on a sample of firms and not on the entire sampling frame. Because all employer firms with one or more service establishments had a chance of being selected in the sample, and because the probability of selection for each firm was known, it is possible to estimate the sampling variability of the estimate from the sample.

Nonsampling errors can result from many sources:

- Inability to obtain information from all cases in the sample
- Response errors
- Definitional difficulties
- Misinterpretation of questions
- Mistakes in recording or coding data obtained
- Other errors of collection, response, coverage, and estimation of missing

data

Although no direct measurement of the biases due to nonsampling errors will be obtained, precautionary measures will be taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influences.

To further minimize nonsampling errors, all questionnaires will be reviewed for completeness and consistency. Extreme or unusual data (falling outside predetermined levels, ratios of year-to-year change, and so forth) will be verified and corrected if necessary.

d. Problems Requiring Specialized Reporting Arrangements

Some multi-establishments firms are engaged in multiple service activities. These firms were subjected to sampling using their primary kind-of-business (that accounted for the largest proportion of their estimated service receipts) but with a measure of size for sampling that reflected their total receipts for all service establishments. We have identified selected firms of this type and, where these multiple activities are significant, we mail separate questionnaires to obtain data covering each of the firms' service activities.

3. Efforts to Maximize Response

The following actions have or will be taken to maximize response rates:

- Customized mailing arrangements for some large firms;
- Conducted outside consultations;
- Customized computer-imprinted instructions to clarify reporting criteria for selected industries;
- Planned follow-up actions to contact delinquent firms;
- Providing the option for firms to FAX their report;
- Providing a toll-free number that firms can call for assistance;
- Free copy of survey results available to survey respondents;
- Mandatory response.

In instances when the survey coverage requires our obtaining data from various subsidiaries or operating units of the company, specialized arrangements have been established to mail separate forms to each subsidiary or operating unit of the firm. Customized mailings of this type have proven to be effective in obtaining more timely response and thus reducing follow-up costs, minimizing errors in reporting that result from coverage problems and reducing respondent burden.

Through our contacts, we have confirmed that the data being requested were available from existing company records or could be easily estimated, that

reporting instructions were clear and helpful, and that terminology used on the questionnaires conformed to industry usage. Through these consultations, we were also able to establish an estimate of the number of hours necessary for a company to complete the survey.

The follow-up actions listed below with approximate dates will be taken for delinquent firms in the SAS. (Dates assume an initial mailout in January).

- First reminder letter with form-- mid-March
- Second reminder letter with form-- mid-April
- Telephone follow-up-- May

Mandatory response provides an incentive for firms otherwise reluctant to provide the required information in the SAS. Experience has shown that mandatory authority yields a report response of approximately 90 percent in the SAS.

4. Tests of Procedures or Methods

Since a considerable amount of information exists for previous canvasses of the SAS, no testing was conducted or is currently planned.

5. Contacts for Statistical Aspects and Data Collection

Questions regarding the sample design and statistical methodology used for this survey should be directed to Ruth Detlefsen, Assistant Division Chief for Research and Methodology, Service Sector Statistics Division, U.S. Census Bureau, (301) 763-5171. Planning and implementation of this survey are under the direction of Jeff Barnett, Chief, Information and Business Services Branch, Service Sector Statistics Division, U.S. Census Bureau (301) 763-2787 and Ron Farrar, Chief, Health Care and Consumer Services Branch, Service Sector Statistics Division, U.S. Census Bureau, (301) 763-6782.

List of Attachments

6. Survey Form Descriptions and Representative Selection of SAS Forms
7. Cover Letters
8. Total Respondent Burden Hours
4. Current Publishable NAICS Industries