

**Department of Commerce
U.S. Census Bureau
OMB Information Collection Request
Annual Retail Trade Survey
OMB Control No. 0607-0013**

PART B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Universe and Respondent Selection

Sampling Frame: The sampling frame used for the ARTS consists of firms. The firms consist of one or more establishments. We create these sampling units from data collected as part of the 2012 Economic Census and from establishment records contained in the Census Bureau’s Business Register as of October 2015.

To create the sampling frame, we extract the records for all employer establishments located in the United States and classified in the Retail Trade or Accommodations and Food Services sectors as defined by the 2012 NAICS. For these establishments we extract sales, payroll, employment, name and address information, as well as primary identifiers and, for establishments owned by multi-unit firms, associated Employer Identification Numbers (EINs). To create the sampling units, we aggregate the economic data the establishment data for all retail establishments associated with the same firm identifier. No aggregation is necessary to put single-unit establishment information on a firm basis. Thus, the sampling units created for single-unit firms simultaneously represent establishment and firm information.

Stratification: The sample for ARTS uses a stratified, one-stage design with primary strata defined by industry. There are 85 primary strata. We further stratify the sampling units within industry group by a measure of size (substratify) related to their annual sales. Sampling units expected to have a large effect on the precision of the estimates are selected “with certainty.” This means they are sure to be selected and will represent only themselves (i.e., have a selection probability of 1 and a sampling weight of 1). Within each industry stratum we determine a substratum boundary (or cutoff) that divides the certainty units from the noncertainty units. We base these cutoffs on a statistical analysis of data from the 2012 Economic Census. Accordingly, these values are on a 2012 sales basis. We also use this analysis to determine the number of size substrata for each industry stratum and to set preliminary sampling rates needed to achieve specified sampling variability constraints on sales estimates for different industry groups. The size substrata and sampling rates are later updated through analysis of the sampling frame.

Sample Selection: Sample selection is a two-step process and begins by identifying the firms selected with certainty. If a firm's annual sales or end-of-year inventories are

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greater than the corresponding certainty cutoff, that firm is selected into the ARTS sample with certainty.

In the second step, all firms not selected with certainty are subjected to. To be eligible for the initial sampling, a firm had to have nonzero payroll in 2014. We stratify the firms according to their major industry and their estimated sales (on a 2012 basis). Within each noncertainty stratum, we select a simple random sample of firms without replacement.

Sample Maintenance: We update the sample to represent EINs issued since the initial sample selection. These new EINs, called births, are EINs, recently assigned by the Internal Revenue Service (IRS), that have an active payroll filing requirement on the IRS Business Master File (BMF). An active payroll filing requirement indicates that the EIN is required to file payroll for the next quarterly period. The Social Security Administration attempts to assign industry classification to each new EIN.

EINs with an active payroll filing requirement on the IRS Business Master File we refer to as “BMF active,” and EINs with an inactive payroll filing requirement as “BMF inactive.”

We sample EIN births on a quarterly basis using a two-phase selection procedure. To be eligible for selection, a birth must either have no industry classification or be classified in an industry within the scope of the Service Annual Survey, the Annual Wholesale Trade Survey, or the Annual Retail Trade Survey, and it must meet certain criteria regarding its quarterly payroll. In the first phase, we stratify births by broad industry groups and a measure of size based on quarterly payroll. We select and canvas a relatively large sample to obtain a more reliable measure of size, consisting of sales in two recent months and a new or more detailed industry classification code. We contact births by telephone if they have not returned their questionnaire within 30 days.

Using this more reliable information, in the second phase we subject the selected births from the first phase to probability proportional-to-size sampling with overall probabilities equivalent to those used in selecting the initial ARTS sample from the October 2015 Business Register. Because of the time it takes for a new employer firm to acquire an EIN from the IRS, and because of the time needed to accomplish the two-phase birth-selection procedure, we add births to the sample approximately nine months after they begin operation.

In general, we will include any new establishments that a firm acquires—even if under new or different EINs—into sample with the same sampling status as the original firm.

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Similarly, each quarter, we check against the current Business Register to determine if any EINs on the survey have become BMF inactive. Typically, we do not canvass BMF inactive EINs during the reference year. Likewise, if any EIN on the survey was BMF inactive in a previous reference year is now BMF active on the current Business Register, we again include these EINs in the canvass. In both cases, we only tabulate data for that portion of the reference year that these EINs reported payroll to the IRS.

Non-Response: Data are imputed using survey data and administrative data as input for unit non-response, item non-response, and for responses that fail computer or analyst edits.

Estimation procedures: Totals are computed as the sum of weighted data (reported and imputed) for all selected sampling units that meet the sample canvass and tabulation criteria given above. The weight for a given sampling unit is the reciprocal of its probability of selection into the ARTS sample. The estimates are adjusted using the results of the most recent economic census. Variances are estimated using the method of random groups.

Benchmarking: There are two situations when benchmarking is performed for the ARTS. Benchmarking is used when a new sample is introduced to link the new and prior samples and maintain the consistency of the time series. Also, published estimates from the ARTS are benchmarked using the latest results from the Economic Census as they become available as described on http://www.census.gov/retail/arts/how_surveys_are_collected.html

2. Procedures for Collecting Information

There were approximately 16,400 firms selected in the latest ARTS sample. However, the mail count will vary for the 2014, 2015, and 2016 survey years. It will increase due to the quarterly birth process (see “Sample Maintenance” in Part B, Section 1). It may also increase if we require, or if firms request, that reporting responsibility be broken out by different locations or type of activity. It will decrease due to not canvassed companies that are out-of-business, out-of-scope, or merged with other firms. Typically, the mail count decreases or remains flat each year of the sample. For example, the mail counts for the most recent completed surveys were flat and then increased with the introduction of the new sample in 2016 as shown below:

<u>Year</u>	<u>Mail Count</u>	<u>% Change</u>
2016	20,067	+14.9% ¹

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2015	17,060	+ < 0.1% ²
2014	17,051	N/A

(1) 2016 Denotes start of new ARTS sample that excludes sector 72 data.

(2) For comparison purposes, 2014 and 2015 mail counts have the sector 72 data removed from the total actual mail-out

The initial letter (Attachment 3a.) is typically mailed 3 months after the data-year ends. The letter directs them to the electronic instrument, where the respondent will login using their E-mail address and a self-created password. It also explains the necessity and use of the data and provides the due date and mandatory status of the survey.

Analysis of the data received is performed which might require an analyst to contact the firm for further discussion. An example of analysis conducted would be a comparison of the current annual data to prior years, or current annual data to monthly estimates produced by the Monthly Retail Trade Survey.

3. Methods to Maximize Response

The ARTS utilizes two follow-up mailings for delinquent cases. The first follow-up is sent via regular mail two months after the initial mail-out. The second follow-up is sent via certified mail approximately one month after the first follow-up. Delinquent cases are followed up by telephone approximately one month after the second follow-up mail has been sent. Targeted telephone follow-up of delinquent companies will be conducted over a 4 to 6 week span.

Firms are given at least 30 business days to respond to the initial mailing and are given extension dates upon request. The Census Bureau also provides a telephone number for assistance with any questions or concerns about the survey. The unit response rates for the most recent completed surveys are:

<u>Year</u>	<u>Unit Response Rate</u>
2015	76.7%
2014	79.2%
2013	79.8%

Unit and dollar volume response rates are analyzed prior to closeout to ensure publication requirements are met. If any fail to meet those publication requirements additional follow-up with delinquent companies may be performed.

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4. Testing of Procedures

U.S. Census Bureau staff test procedures in every phase of the Annual Retail Trade Survey – from mail-out and data capture to editing and publication. Census staff provide requirements for applicable systems and then test the systems to ensure that these are programmed to specifications. Tests are performed on editing and estimation logic to ensure that it is still relative and in line with expected retail industry trends. All publications are reviewed and tested in advance of release to ensure that data are captured and tabulated properly and that appropriate suppressions are applied to the data.

5. Contacts for Statistical Aspects and Data Collection

Direct questions regarding the planning and implementation for this survey to Chris Savage, Chief of the Retail Trade Branch, Economy-Wide Statistics Division, U.S. Census Bureau, 301-763-4834, John.C.Savage@census.gov.

Direct questions regarding methodology for this survey to Deanna Weidenhamer, Chief of Retail and Wholesale Surveys Statistical Methods Branch, Economic Statistical Methods Division, U.S. Census Bureau, 301-763-7186, Deanna.L.Weidenhamer@census.gov.

Attachments

1. BEA Support Letter
2. Copy of Reporting Worksheets
3. Copy of Letters to Respondents
4. Screen Shot of Respondent Portal