

**Department of Commerce  
U.S. Census Bureau  
OMB Information Collection Request  
Annual Wholesale Trade Survey  
OMB Control No. 0607-0195**

**PART B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS**

**1. Universe and Respondent Selection**

**Sampling Frame:** The sampling frame used for the AWTS 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 wholesale trade sector as defined by the 2012 NAICS. For these establishments we extract sales, end-of-year inventories, payroll, employment, name and address information, wholesale type of operation code (TOC), as well as primary identifiers and associated Employer Identification Numbers (EINs). We use the TOC to distinguish between three different types of wholesale establishments: (1) merchant wholesale establishments, excluding manufacturers’ sales branches and offices; (2) manufacturers’ sales branches and offices; and (3) agents, brokers, and business electronic markets. To create the sampling units, we sum the establishment data for all wholesale establishments associated with the same firm identifier. In some cases, a multi-unit firm has establishments active in more than one wholesale TOC. In these situations, we create firm-level sampling units for each type of operation. 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 AWTS consists of three separate samples – one for each wholesale TOC. The AWTS uses a stratified, one-stage design with primary strata defined by industry. There are 83 primary strata: 56 from the merchant wholesale establishments, excluding manufacturers’ sales branches and offices; 19 from the manufacturers’ sales branches and offices sample; and 8 from the agents, brokers, and business electronic markets sample. 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 sales and end-of-year inventories estimates we select “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 and end-of-year inventories 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 and end-of-year inventories estimates for different industry groups. The size substrata and sampling rates are later updated through analysis of the sampling frame.

**Sample Selection:** The first step in the sample selection is to identify firms selected with certainty. If a firm’s annual sales or end-of-year inventories are greater than the corresponding certainty cutoff, we select that firm into the AWTS sample with certainty.

All firms not selected with certainty we subject to sampling. 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. We conduct this process separately for each wholesale TOC.

**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 AWTS 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. 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:** We impute data using survey data and administrative data for unit non-response, item non-response, and for responses that fail computer or analyst edits.

**Estimation procedures:** We compute totals 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 AWTS sample. We adjust the estimates using the results of the most recent economic census. We calculate variances using the method of random groups.

**Benchmarking:** We perform benchmarking in two situations: when a new sample is introduced to link the new and prior samples to maintain the consistency of the time series and when the latest results from the Economic Census become available as described on our website located at [https://www.census.gov/wholesale/www/how\\_surveys\\_are\\_collected/annual\\_methodology.html](https://www.census.gov/wholesale/www/how_surveys_are_collected/annual_methodology.html).

## 2. **Procedures for Collecting Information**

There were approximately 8,432 firms selected in the latest AWTS sample: 6,703 merchant wholesale companies, excluding manufacturers' sales branches and offices; 1,029 manufacturers' sales branches and offices; and 700 agents, brokers, and business to business electronic markets. However, the mail count will vary for the 2017, 2018, and

2019 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 canvassing companies that are out-of-business, out-of-scope, or merged with other firms. Typically, the mail count decreases each year of the sample. For example, the mail counts for the most recent completed surveys decreased over time as shown below:

	year	count	% change
new sample	2016	8,981	
	2015	7,062	-0.81%
	2014	7,120	-2.71%
	2013	7,318	-3.85%
	2012	7,611	-12.46%
new sample	2011	8,694	

We typically mail an initial letter (Attachment 2-1) a few weeks after the data year ends. The letter provides the login information, directs the firm to the electronic instrument, explains the necessity and uses of the data, and provides the due date and mandatory status of the survey.

We perform an analysis of the data received, which might require an analyst to contact the firm to discuss. Examples of analysis conducted include the following: a comparison of the current annual data to prior years, current annual data to monthly estimates produced by the Monthly Wholesale Trade Survey, and comparison of annual ratios such as inventory-to-sales.

### 3. **Methods to Maximize Response**

We send a due date reminder letter approximately 3 weeks after the initial mail. We send a follow-up letter to non-respondent firms via first class mail approximately 3 weeks after the due date reminder (6 weeks after initial mail). We send another follow-up letter to any remaining non-respondent firms via certified mail one month later. Any remaining non-respondent firms we telephone 1 month after the last certified mailing.

We give firms at least 30 business days to respond to the initial mailing, and we give extensions 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>
2016	75.7%*	
	2015	81.1%
	2014	81.9%
	2013	80.2%

\*As of 8/21/17, collection period ends December 2017

We analyze unit and dollar volume response rates prior to closeout to ensure we meet publication requirements. If we fail to meet those publication requirements we may perform additional follow-up with non-respondent companies.

#### **4. Testing of Procedures**

We test procedures in every phase of the AWTS – from mailout and data capture to editing and publication. We test the systems to ensure that they are programmed to our specifications. We test our logic to ensure that it is still relative and in line with expected wholesale trends. We test our data publication to ensure that data is captured accurately and no suppressions are revealed.

#### **5. Contacts for Statistical Aspects and Data Collection**

Direct questions regarding the planning and implementation for this survey to Susan Pozzanghera, Chief of the Wholesale Trade Branch, Economy-Wide Statistics Division, U.S. Census Bureau, 301-763-7169, Susan.K.Pozzanghera@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 Initial and Follow-up Letters
3. Screenshot of Respondent Portal
4. Copy of Respondent Worksheets