

2010 Annual Retail Trade Survey

Summary of Changes

The following changes were made with the release of the 2010 ARTS estimates:

- With the release of the 2010 ARTS, estimates for 2009 and all previous years were revised to reflect improvements in the coverage of nonemployer businesses (i.e., businesses with no paid employees) that were implemented with the release of the 2009 Nonemployer Statistics. For additional information on these improvements and their effect on the nonemployer totals, see the Nonemployer Statistics home page at <http://www.census.gov/econ/nonemployer/index.html>
- ARTS estimates were revised to reflect historical corrections to current sample data. Corrections are made to replace previously reported data with more accurate data received at a later date or to replace imputed data with reported data obtained from the company. For more information, refer to the Benchmarking section of the Annual Methodology link located at http://www.census.gov/retail/arts/how_surveys_are_collected.html

Annual Retail Trade Survey Methodology

Overview

The Census Bureau introduced a new sample with the 2005 Annual Retail Trade Survey (ARTS). This new sample is designed to produce estimates based on the 2002 North American Industry Classification System (NAICS).

The U.S. Census Bureau conducts the Annual Retail Trade Survey (ARTS) to produce national estimates of total annual sales, e-commerce sales, end-of-year inventories, inventory-to-sales ratios, purchases, total operating expenses, inventories held outside the United States, gross margins, and end-of-year accounts receivable for retail businesses and annual sales and e-commerce sales for accommodation and food service firms located in the United States. Estimates are summarized by industry classification based on the North American Classification System (NAICS) and are released approximately 15 months after the reference year. Firms without paid employees, or nonemployers, are included in the estimates through imputation or administrative data provided by other federal agencies.

Sampling Frame

The sampling frame used for the ARTS has two types of sampling units: Employer Identification Numbers (EINs) and large, multiple-establishment firms. Both sampling units represent clusters of one or more establishments owned or controlled by the same firm. The information used to create these sampling units was extracted from data collected as part of the 2002 Economic Census and from establishment records contained on the Census Bureau's Business Register as updated to December 2004. The next few paragraphs give details about the Business Register; the distinction between firms, EINs, and establishments; and the construction of the sampling units. Though important, they are not essential to understanding the basic sample design and readers may continue to the Stratification, Sampling Rates, and Allocation section.

The Business Register is a multi-relational database that contains a record for each known establishment that is located in the United States or one of its territories and has paid employees. An establishment is a single physical location where business transactions take place and for which payroll and employment records are kept. Groups of one or more establishments under common ownership or control are firms. A single-unit firm owns or operates only one establishment. A multiunit firm owns or operates two or more establishments. The treatment of establishments on the Business Register differs according to whether the establishment is part of a single-unit or multiunit firm. In particular, the structure of an establishment's primary identifier on the Business Register differs depending on whether it is owned by a single-unit firm or by a multiunit firm.

A single-unit firm's primary identifier is its EIN. The Internal Revenue Service (IRS) issues the EIN, and the firm uses it as an identifier to report social security payments for its employees under the Federal Insurance Contributions Act (FICA). The same act requires all employer firms to use EINs. Each employer firm is associated with at least one EIN and only one firm can use a given EIN. Because a single-unit firm has only one establishment, there is a one-to-one

relationship between the firm and the EIN. Thus the firm, the EIN, and the establishment all reference the same physical location and all three terms can be used interchangeably and unambiguously when referring to a single-unit firm.

For multiunit firms however, a different structure connects the firm with its establishments via the EIN. Essentially a multiunit firm is associated with a cluster of one or more EINs and EINs are associated with one or more establishments. A multiunit firm consists of at least two establishments. Each firm is associated with at least one EIN and only one firm can use a given EIN. However, one multiunit firm may have several EINs. Similarly, there is a one-to-many relationship between EINs and establishments. Each EIN can be associated with many establishments but each establishment is associated with only one EIN. Because of the possibility of one-to-many relationships, we must distinguish between the firm, its EINs, and its establishments. The multiunit firm that owns or controls a particular establishment is identified on the Business Register by way of the establishment's primary identifier.

The primary identifier of an establishment owned by a multiunit firm consists of a unique combination of an alpha number and a plant number. The alpha number identifies the multiunit firm, and the plant number identifies a particular establishment within that firm. All establishments owned or controlled by the same multiunit firm have the same alpha number. Different multiunit firms have different alpha numbers, and different establishments within the same multiunit firm have different plant numbers. The Census Bureau assigns both the alpha number to the multiunit firm and plant numbers to the corresponding establishments based on the results of the quinquennial economic census and the annual Company Organization Survey.

To create the sampling frame, we extract the records for all employer establishments located in the United States and classified in the Retail Trade sector as defined by the 2002 NAICS. For these establishments we extract sales, payroll, employment, name and address information, as well as primary identifiers and, for establishments owned by multiunit firms, associated EINs. To create the sampling units for multiunit firms, we aggregate the economic data of the establishments owned by these firms to an EIN level by tabulating the establishment data for all retail establishments associated with the same EIN. Similarly, we aggregate the data to a multiunit firm level by tabulating the establishment data for all retail establishments associated with the same alpha number. No aggregation is necessary to put single-unit establishment information on an EIN basis or a firm basis. Thus, the sampling units created for single-unit firms simultaneously represent establishment, EIN, and firm information. In summary, the sampling frame is a complex amalgam of establishments, EINs, and firms.

Stratification, Sampling Rates, and Allocation

The primary stratification of the sampling frame is by industry group based on the detail required for publication. 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 2002 Economic Census. Accordingly, these values are on a 2002 sales basis. We also used 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

The first step in the sample selection identified firms selected with certainty. If a firm's annual sales or end-of-year inventories were greater than the corresponding certainty cutoff, that firm was selected into the ARTS sample with certainty.

All firms not selected with certainty were subjected to sampling on an EIN basis. If a firm had more than one EIN, we treated each of its EINs as a separate sampling unit. To be eligible for the initial sampling, an EIN had to have nonzero payroll in 2003. The EINs were stratified according to their major industry and their estimated sales (on a 2002 basis). Within each noncertainty stratum, a simple random sample of EINs was selected without replacement. The selected noncertainty EINs were divided into two approximately equal groups. One group is canvassed for both the monthly and the annual survey, the other group is canvassed for only the annual survey.

Sample Maintenance

Periodically, we update the sample to represent EINs issued since the initial sample selection. These new EINs, called births, are EINs, recently assigned by the 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 are considered to be "BMF active" and EINs with an inactive payroll filing requirement are said to be "BMF inactive."

EIN births are sampled 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, births are stratified by broad industry groups and a measure of size based on quarterly payroll. A relatively large sample is selected using equal probability systematic sampling within the payroll strata. The selected births are canvassed to obtain a more reliable measure of size, consisting of sales in two recent months, company affiliation information, and a new or more detailed industry classification code. Births that have not returned their questionnaire after 30 days are contacted by telephone.

Using this more reliable information, the selected births from the first phase are subjected to probability proportional-to-size sampling with overall probabilities equivalent to those used in

drawing the initial ARTS sample from the 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, births are added to the samples approximately nine months after they begin operation.

Births that are selected in the quarterly birth-selection procedure in November of the annual survey reference year are included in the initial mailing of the annual survey questionnaires in January of the following year. To better represent all EIN births in the reference year, and specifically to account for the lag between the time a business starts operation and the time it takes to acquire an EIN and identify and select the EIN into the ARTS sample, births are added to the annual survey sample that are selected in February, May, and August of the year following the annual survey reference year. We mail annual survey forms to these births in June and August to supplement the initial annual survey mailings.

To be eligible for the sample canvass and tabulation, an EIN selected in the noncertainty sampling operations must meet both of the following requirements:

- It must have an active payroll filing requirement on the IRS Business Master File.
- It must have been selected from the Business Register in either the initial sampling or during the quarterly birth-selection procedure.

If a firm was selected with certainty and had more than one establishment at the time of initial sampling, any new establishments that the firm acquires, even if under new or different EINs, are included in the sample with certainty. However, if a single-unit firm was selected with certainty, only future establishments associated with that firm's originally-selected EIN are included in the sample with certainty; any new EINs that might later be associated with that firm are subjected to sampling through the quarterly birth-selection procedure.

Each quarter, we check against the current Business Register to determine if any EINs on ARTS have become BMF inactive. Typically, we do not canvass BMF inactive EINs during the reference year. Likewise, if any EIN on ARTS that 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.

Singleunit EINs selected into the sample with certainty are not dropped from canvass and tabulation if they are no longer on the IRS mailing list. Rather, the firm that used the EIN is contacted, and if a successor EIN is found, it is added to the survey. For both inactive and reactivated EINs, data are tabulated for only the portion of the reference year that these EINs reported payroll to the IRS.

Estimation and Sampling Variance

Total estimates are computed using the Horvitz-Thompson estimator (i.e., as the sum of weighted data (reported or imputed) for all selected sampling units that meet the sample canvass and tabulation criteria). The weight for a given sampling unit is the reciprocal of its probability

of selection into the ARTS sample. These estimates are input to a benchmarking procedure, as described below. Variances are estimated using the method of random groups and are used to determine if measured changes are statistically significant.

Historical Estimates

Annual estimates prior to 1999 are derived from data that were collected and published based on the Standard Industrial Classification (SIC) system. For a description of how these estimates were derived, see: <http://www2.census.gov/retail/releases/benchmark/annpub00.pdf>

Because of the method used to derive annual estimates prior to 1999, these estimates should be used with caution. It is expected that for estimates for NAICS codes, that, by definition, are the same or nearly the same as a given SIC code, the quality of the estimates will be similar to that of the estimates released on an SIC basis. Estimates may be of less quality for NAICS codes that consist of more than one SIC component. Additionally, for reference years further from 1997, estimates are likely of less quality than for those years close to 1997. Note, however, that estimated year-to-year changes for 1992 through 1998 are dependent on the underlying SIC-based year-to-year changes. Year-to-year changes for 1999 and subsequent years are derived from data collected on a NAICS basis.

Special caution should be exercised when using the end-of-year retail inventory estimates prior to 1999. Retail inventory data has historically been analyzed at much broader industry levels than for sales. Determining clear relationships between NAICS and SIC codes was much more difficult at broader levels.

Non-employers

With the release of the 2010 ARTS, estimates of sales, end-of-year inventories, purchases, and gross margin for 2009 and all previous years are revised to reflect improvements in the coverage of nonemployer businesses (i.e., businesses with no paid employees) that were implemented with the release of the 2009 Nonemployer Statistics. The nonemployer portion of the ARTS estimates is revised by multiplying the nonemployer total for each year by a ratio of the revised to the original nonemployer sales at detailed industry levels for reference year 2008. The new methodology results in a decrease in the nonemployer component of the ARTS estimate for many industries. ARTS estimates of total and detailed expenses and accounts receivable are not affected by this revision as these estimates are derived only from employer businesses. For additional information on these improvements and the comparative table for reference year 2008, see the Nonemployer Statistics home page at <http://www.census.gov/econ/nonemployer/index.html>.

Benchmarking

Final results of the 2007 Economic Census are used to benchmark the ARTS sales estimates. Prior to benchmarking to final 2007 Economic Census results, two operations are performed:

- Historical corrections are made to current sample data back to 2004. Corrections are made to replace previously reported data with more accurate data received at a later date or to replace imputed data with reported data obtained from the company.
- Sales estimates from the current sample are linked to the published census-adjusted estimates from the prior sample. For a given detailed industry based on the 2002 North American Industry Classification System (NAICS), the linking is performed by multiplying the sample-based sales estimate by a ratio. The numerator and denominator of the ratio are as follows:
 - The numerator is the 2004 published census-adjusted sales estimate for the industry from the prior sample.
 - The denominator is the 2004 sales estimate for the industry from the current sample.

The resulting sales estimates (call these "modified" sales estimates) for 2002 through 2010 are input to the benchmarking program. Using this program, the modified sales estimates for 2002 through 2010 are revised in a manner that:

- Uses the 2002 and 2007 Economic Census sales totals as constraints.
- Minimizes the sum of squared differences between the year-to-year changes of the input and revised estimates for 2003 through 2010.

Refer to the estimates output from the benchmarking operation as "benchmarked."

A method similar to the one for benchmarking sales is used to benchmark end-of-year inventories and purchases estimates. First, the sample-based inventories and purchases estimates for each detailed industry for 2004 and subsequent years are multiplied by the sales ratio described above, resulting in modified estimates for these years. Then, the published adjusted estimates for 1998 through 2004 from the prior sample are input to the benchmarking program. Using this program, the estimates for 1999 through 2004 are revised in a manner that:

- Uses the published adjusted estimate for 1998 from the prior sample as a constraint, resulting in no revision to the published 1998 estimate.
- Uses the modified estimate for 2004 from the current sample as a constraint.
- Minimizes the sum of squared differences between the year-to-year changes of the input and revised estimates for 1999 through 2004.

The resulting modified inventories and purchases estimates for 1997 through 2010 are input to the benchmarking program. Using this program, the modified estimates for 1997 through 2010 are revised in a manner that:

- Uses 1997, 2002, and 2007 constraints for inventories and purchases, where the constraints are calculated by multiplying the modified inventories and purchases estimates just calculated by the ratio of the benchmarked-to-modified sales.

- Minimizes the sum of squared differences between the year-to-year changes of the input and revised estimates for 1998 through 2010.

Modified total expenses and foreign inventories estimates are calculated by multiplying the sample-based estimates for each year by the sales ratio described above for each detailed industry. Then, benchmarked total expenses estimates for 2006 and subsequent years are calculated by multiplying the modified estimates of total expenses by the ratio of the benchmarked-to-modified sales estimates for the corresponding year. Benchmark foreign inventories estimates for 2004 and subsequent years are calculated by multiplying the modified estimates of foreign inventories by the ratio of the benchmarked-to-modified total inventories estimates for the corresponding year.

Benchmarked e-commerce estimates are produced in a manner similar to that used for inventories and purchases, except 1998 is used as a constraint because e-commerce was not collected prior to 1998.

For the Electronic Shopping and Mail Order Houses industry group (NAICS 4541), modified merchandise lines sales estimates for 1999 and subsequent years are obtained using methodology similar to that used for inventories and purchases. Benchmark merchandise lines sales are calculated by multiplying the modified estimates of merchandise lines sales by the ratio of the benchmarked-to-modified sales estimates for the corresponding year. Benchmark merchandise lines e-commerce estimates are created using the same method, but the ratio of the benchmarked-to-modified estimates is based on e-commerce instead of sales.

Benchmarked estimates at aggregate industry levels are computed by summing the benchmarked estimates for the appropriate detailed industries comprising the aggregate.

Reliability of the Estimates

The published estimates may differ from the actual, but unknown, population values. For a particular estimate, statisticians define this difference as the total error of the estimate. When describing the accuracy of survey results, it is convenient to discuss total error as the sum of sampling error and nonsampling error. Sampling error is the error arising from the use of a sample, rather than a census, to estimate population values. Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate. The sampling error of an estimate can usually be estimated from the sample; whereas, the nonsampling error of an estimate is difficult to measure and can rarely be estimated. Consequently, the actual error in an estimate exceeds the error that can be estimated. Further descriptions of sampling error and nonsampling error are provided in the following sections. Data users should take into account the estimates of sampling error and the potential effects of nonsampling error when using the published estimates.

Sampling Error

Because the estimates are based on a sample, exact agreement with results that would be obtained from a complete enumeration of firms on the sampling frame using the same

enumeration procedures is not expected. However, because each firm on the sampling frame has a known probability of being selected into the sample, it is possible to estimate the sampling variability of the survey estimates.

The particular sample used in this survey is one of a large number of samples of the same size that could have been selected using the same design. If all possible samples had been surveyed under the same conditions, an estimate of a population parameter of interest could have been obtained from each sample. For the parameter of interest, estimates derived from the different samples would, in general, differ from each other. Common measures of the variability among these estimates are the sampling variance, the standard error, and the coefficient of variation (CV). The sampling variance is defined as the squared difference, averaged over all possible samples of the same size and design, between the estimator and its average value. The standard error is the square root of the sampling variance. The CV expresses the standard error as a percentage of the estimate to which it refers. For example, an estimate of 200 units that has an estimated standard error of 10 units has an estimated CV of 5 percent. The sampling variance, standard error, and CV of an estimate can be estimated from the selected sample because the sample was selected using probability sampling. Note that measures of sampling variability, such as the standard error and CV, are estimated from the sample and are also subject to sampling variability. (Technically, we should refer to the estimated standard error or the estimated CV of an estimator. However, for the sake of brevity we have omitted this detail.) It is important to note that the standard error and CV only measure sampling variability. They do not measure any systematic biases in the estimates.

The Census Bureau recommends that individuals using published estimates incorporate this information into their analyses, as sampling error could affect the conclusions drawn from these estimates.

The estimate from a particular sample and its associated standard error can be used to construct a confidence interval. A confidence interval is a range about a given estimator that has a specified probability of containing the average of the estimates for the parameter derived from all possible samples of the same size and design. Associated with each interval is a percentage of confidence, which is interpreted as follows. If, for each possible sample, an estimate of a population parameter and its approximate standard error were obtained and using a t-statistic with 15 (16 random groups - 1) degrees of freedom, then:

1. For approximately 90 percent of the possible samples, the interval from 1.75 standard errors below to 1.75 standard errors above the estimate would include the average of the estimates derived from all possible samples of the same size and design.
2. For approximately 95 percent of the possible samples, the interval from 2.13 standard errors below to 2.13 standard errors above the estimate would include the average of the estimates derived from all possible samples of the same size and design.

To illustrate the computation of a confidence interval for an estimate of total sales, assume that an estimate of total sales is \$10,750 million and the CV for this estimate is 1.8 percent, or 0.018. First obtain the standard error of the estimate by multiplying the total sales estimate by its CV. For this example, multiply \$10,750 million by 0.018. This yields a standard error of \$193.5

million. The upper and lower bounds of the 90-percent confidence interval are computed as \$10,750 million plus or minus 1.75 times \$193.5 million. Consequently, the 90-percent confidence interval is \$10,411 million to \$11,089 million. If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 9 out of 10 (90 percent) of these intervals would contain the average of the estimates derived from all possible samples.

Nonsampling Error

Nonsampling error encompasses all other factors, other than sampling error, that contribute to the total error of a sample survey estimate and may also occur in censuses. It is often helpful to think of nonsampling error as arising from deficiencies or mistakes in the survey process. Nonsampling errors are difficult to measure and can be attributed to many sources: the inclusion of erroneous units in the survey (overcoverage), the exclusion of eligible units from the survey (undercoverage), nonresponse, misreporting, mistakes in recording and coding responses, misinterpretation of questions, and other errors of collection, response, coverage, or processing. Although nonsampling error is not measured directly, the Census Bureau employs quality control procedures throughout the process to minimize this type of error.

A potential source of bias in the estimates is nonresponse. Nonresponse is defined as the inability to obtain all the intended measurements or responses about all selected units. Two types of nonresponse are often distinguished. Unit nonresponse is used to describe the inability to obtain any of the substantive measurements about a sampled unit. In most cases of unit nonresponse, the questionnaire was never returned to the Census Bureau after several attempts to elicit a response. Item nonresponse occurs either when a question is unanswered or the response to the question fails computer or analyst edits.

Economic surveys at the Census Bureau are required to compute two different types of response rates: a unit response rate and weighted item response rates.

The next few paragraphs provide details about the types and status of units used to collect and tabulate data. Though important, they are not essential to understanding the response rate measures and readers may continue to the description of the two types of response rates.

A **survey unit** is an entity selected from the underlying statistical population of similarly-constructed units. Examples of survey units for different economic programs include establishments, Employer Identification Numbers (EIN), firms, state and local government entities, and building permit-issuing offices. For ARTS, the survey unit is either an EIN or company, either of which can be comprised of one or more establishments owned or controlled by the same firm. The survey unit may change in composition over time, perhaps due to mergers, acquisitions, or divestitures.

A **reporting unit** is an entity about which data are collected. Reporting units are the vehicle for obtaining data and may or may not correspond to a survey unit for several reasons. First, the composition of the originally-sampled entity can change over the sample's life cycle, as noted above. Second, for some surveys, an entity may request (or the Census Bureau may ask the entity) to report data in several separate pieces corresponding to different parts of the business or other entity type. For

example, a large, diverse company in a company-based collection may request a separate form for each region or kind of business in which it operates or may ask to report separately for each of its establishments to align with their record keeping practices. For ARTS, reporting units are usually created to facilitate the collection and tabulation of data by industry.

A **tabulation unit** houses the data used for estimation (or tabulation, in the case of a census). As with reporting units, the tabulation units may not correspond to a survey unit. Some programs consolidate establishment or plant-level data to a company level to create tabulation units, so that the tabulation unit is often equivalent to the survey unit. Other programs create artificial units that split a reporting unit’s data among the different industries in which the reporting unit operates. In this case, the tabulation unit represents a portion of a survey unit. For ARTS, the tabulation unit is either a reporting unit or an artificial unit created to split the reporting unit’s data among the different in-scope industries in which the reporting unit operates.

For each survey, the **statistical period** describes the reference period for the data collection. For example, an annual program might collect data on the prior year’s business activity; the statistical period refers to the prior year, but the data are collected in the current calendar year.

During a given statistical period, all three types of units can be active, inactive, or ineligible. An **active** unit is in business and is in-scope for the program during the statistical period. An **inactive** unit is not operating or is not in-scope during the statistical period but is believed to have been active in the past and can potentially become active and in-scope in the future. Finally, a survey unit may become **ineligible** and excluded from subsequent computations due to a change in industry classification or ceasing to conduct business operations. All units are considered active until verified evidence otherwise is provided.

For additional information about response rates, see the Census Bureau’s Statistical Quality Standard D.3., Appendix B: Requirements for Calculating and Reporting Response Rates for Economic Surveys.

Two Types of Response Rates

The Unit Response Rate (URR) is defined as the percentage of active reporting units in the statistical period, based on unweighted counts, that were eligible for data collection or of unknown eligibility that responded to the survey. URRs are indicators of the performance of data collection for obtaining usable responses. To be classified as a response, the respondent for the reporting unit must have provided sufficient data and the data must satisfy all the edits. To be considered a respondent in ARTS, a respondent must provide sales, end-of-year inventories, purchases, or total expenses or, e-commerce sales, if the reporting unit’s activity is 100 percent e-commerce. Responses may be obtained by mail, telephone, facsimile, or Internet. The URR for the 2010 ARTS are:

Kind of Business	Unit Response Rate
Retail Trade and Accommodation and Food Services	81.1
Retail Trade and Food Services	81.3
Retail Trade	82.1
Accommodation and Food Services	77.0

The Total Quantity Response Rate (TQRR) is defined as the percentage of the estimated (weighted) total of a given data item reported by the active tabulation units in the statistical period or from sources determined to be equivalent-quality-to-reported data. The TQRR is an item-level indicator of the “quality” of each estimate. In contrast to the URR, these weighted response rates are computed for individual data items, so that a survey may produce several TQRRs per statistical period and release. The TQRR is a weighted measure that takes the size of the tabulation unit into account as well as the associated sampling parameters. To compute the TQRR for a particular estimate, it is necessary to determine the source of the final tabulated value of the associated data item for each tabulation unit. This value could be directly obtained from respondent data, indirectly obtained from other equivalent quality data sources (e.g., administrative data obtained from other federal agencies), or imputed. The TQRRs for select data items for the 2010 ARTS are as follows:

Total Quantity Response Rate

Kind of Business	Sales	Operating Expenses	Inventories	Purchases	Foreign Inventories	Accounts Receivables
Retail Trade and Accommodation and Food Services	92.9	84.5	NA			
Retail Trade and Food Services	93.4	86.7				
Retail Trade	93.7	87.1	93.1	80.0	83.2	71.6
Accommodation and Food Services	87.3	78.9	NA			

NA- Not applicable

An estimate with a coefficient of variation (CV) greater than 30 percent or with a total quantity response rate (TQRR) less than 50 percent has been suppressed from publication, unless the estimate has consistently been published for prior years and the CV and TQRR are acceptably close to the thresholds. A suppressed estimate and its corresponding measure of sampling variability has been replaced with an "S" in the published tables. For a description of **the Census Bureau's standards for Releasing Information Products**, see <http://www.census.gov/quality/standards/standardf1.html>

Further explanation of the quality of the data and the estimates can be made available upon request.