

Appendix C.

Methodology

SOURCES OF THE DATA

For this sector, large- and medium-size firms, plus all firms known to operate more than one establishment, were sent report forms to be completed for each of their establishments and returned to the Census Bureau. For most very small firms, data from existing administrative records of other federal agencies were used instead. These records provide basic information on location, kind of business, revenue, payroll, number of employees, and legal form of organization.

Firms in the 2002 Economic Census are divided into those sent report forms and those not sent report forms. The coverage of and the method of obtaining census information from each are described below:

1. Establishments sent a report form:
 - a. Large employers, i.e., all multiestablishment firms, and all employer firms with payroll above a specified cutoff. (The term “employers” refers to firms with one or more paid employees at any time during 2002 as shown in the active administrative records of other federal agencies.)
 - b. A sample of small employers, i.e., single-establishment firms with payroll below a specified cutoff in classifications for which specialized data precludes reliance solely on administrative records sources. The sample was stratified by industry and geography.
2. Establishments not sent a report form:
 - a. Small employers, i.e., single-establishment firms with payroll below a specified cutoff, not selected into the small employer sample. Although the payroll cutoff varies by kind of business, small employers not sent a report form generally include firms with less than 10 employees and represent about 10 percent of total revenue of establishments covered in the census. Data on revenue, payroll, and employment for these small employers were derived or estimated from administrative records of other federal agencies.
 - b. All nonemployers, i.e., all firms subject to federal income tax with no paid employees during 2002. Revenue information for these firms was obtained from administrative records of other federal agencies. Although consisting of many firms, nonemployers account for less than 10 percent of total revenue of all establishments covered in the census. Data for nonemployers are not included in this report, but are released in the annual *Nonemployer Statistics* series.

The report forms used to collect information for establishments in this sector are available at help.econ.census.gov/econhelp/resources/.

A more detailed examination of census methodology is presented in the *History of the Economic Census* at www.census.gov/econ/www/history.html.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

The classifications for all establishments are based on the *North American Industry Classification System, United States, 2002* manual. There were no changes between the 2002 edition and the 1997 edition affecting this sector. Tables at www.census.gov/epcd/naics02/ identify all industries that changed between the 1997 North American Industry Classification System (NAICS) and 2002 NAICS.

The method of assigning classifications and the level of detail at which establishments were classified depends on whether a report form was obtained for the establishment.

1. Establishments that returned a report form were classified on the basis of their self-designation, product line revenue, and responses to other industry-specific inquiries.
2. Establishments without a report form:
 - a. Small employers not sent a form were, where possible, classified on the basis of the most current kind-of-business classification available from one of the Census Bureau's current sample surveys or the 1997 Economic Census. Otherwise, the classification was obtained from administrative records of other federal agencies. If the census or administrative record classifications proved inadequate (none corresponded to a 2002 Economic Census classification in the detail required for employers), the firm was sent a brief inquiry requesting information necessary to assign a kind-of-business code.
 - b. Nonemployers were classified on the basis of information obtained from administrative records of other federal agencies.

RELIABILITY OF DATA

All data compiled in the economic census are subject to nonsampling errors. Nonsampling errors can be attributed to many sources during the development or execution of the census:

- inability to identify all cases in the actual universe;
- definition and classification difficulties;
- differences in the interpretation of questions;
- errors in recording or coding the data obtained; and
- other errors of collection, response, coverage, processing, and estimation for missing or misreported data.

Data presented in the Miscellaneous Subjects and the Product Lines reports for this sector are subject to sampling errors, as well as nonsampling errors. Specifically, these data are estimated based on information obtained from census report forms mailed to all large employers and to a sample of small employers in the universe. Sampling errors affect these estimates, insofar, as they may differ from results that would be obtained from a complete enumeration.

The accuracy of these tabulated data is determined by the joint effects of the various nonsampling errors or by the joint effects of sampling and nonsampling errors. No direct measurement of these effects has been obtained except for estimation for missing or misreported data; however, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors.

The Census Bureau obtains limited information extracted from administrative records of other federal agencies, such as gross revenue from federal income tax records and employment and payroll from payroll tax records. This information is used in conjunction with other information available to the Census Bureau to develop estimates for nonemployers, small employers, and other establishments for which responses were not received in time for publication.

Key tables in this report include a column for "Percent of revenue from administrative records." This includes revenue information obtained from administrative records of other federal agencies. The "Percent of revenue estimated" includes revenue information that was imputed based on historic company ratios or administrative records, or on industry averages.

The Census Bureau recommends that data users incorporate this information into their analyses, as nonsampling error and sampling error could impact the conclusions drawn from economic census data.

TREATMENT OF NONRESPONSE

Census report forms included two different types of inquiries, “basic” and “industry-specific.” Data for the basic inquiries, which include location, kind of business or operation, revenue, payroll, and number of employees, were available from a combination of sources for all establishments. Data for industry-specific inquiries, tailored to the particular kinds of business or operation covered by the report form, were available only from establishments responding to those inquiries.

Data for industry-specific inquiries in this sector were expanded in most cases to account for establishments that did not respond to the particular inquiry for which data are presented. Unless otherwise noted in specific reports, data for industry-specific inquiries were expanded in direct relationship to total revenue of all establishments included in the category. In a few cases, expansion on the basis of the revenue item was not appropriate, and another basic data item was used as the basis for expansion of reported data to account for nonrespondents.

All reports in which industry-specific data were expanded include a coverage indicator for each publication category, which shows the revenue of establishments responding to the industry-specific inquiry as a percent of total revenue for all establishments for which data are shown. For some inquiries, coverage is determined by the ratio of total payroll or employment of establishments responding to the inquiry to total payroll or employment of all establishments in the category.

CONCENTRATION CATEGORIES

Concentration categories are based on aggregate revenue of all establishments operated by the same firm in a given kind-of-business classification or group for which data are presented. For example, a firm operating three transportation and warehousing establishments – a freight forwarding service (NAICS 488510), a packing and crating service (NAICS 488991), and a general merchandise warehousing and storage facility (NAICS 493110) – would be treated as three one-establishment firms at the most detailed NAICS level, as a two-establishment firm in NAICS 488 and a one-establishment firm in NAICS 493, and as a single three-establishment firm in Transportation and Warehousing totals (NAICS 48-49).

DISCLOSURE

In accordance with federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or business. However, the number of establishments in a kind-of-business classification is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at www.census.gov/epcd/ec02/disclosure.htm.