

History of the 2007 Economic Census

Issued September 2011

EC07-00R-HIST

2007 Economic Census



Acknowledgments

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Dedication

Bernard J. "B.J." Fitzpatrick

August 7, 1947–May 8, 2008

Many of the innovations and cost-saving measures described in this *History of the 2007 Economic Census* are directly attributable to the leadership and initiative of Bernard J. "B.J." Fitzpatrick, Assistant Division Chief of Collection Activities in the U.S. Census Bureau's Economic Planning and Coordination Division. B.J.'s unique combination of expertise, diligence, and creativity instilled confidence and admiration throughout all corners of the agency's Economic Directorate as he continually strove for smart, practical solutions to challenging problems. The data collection methods, techniques, and infrastructure used to conduct the census were, in essence, a product of B.J.'s vision, planning, and tireless drive. Although his guidance and commanding presence will certainly be missed, B.J.'s many contributions have undoubtedly created a foundation upon which the success of future economic censuses may be based.

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THE 2007 ECONOMIC CENSUS

Background Information

The 2007 Economic Census used direct data collection and administrative records to compile statistics on approximately 29 million business establishments in industries defined by the 2007 North American Industry Classification System (NAICS). In addition to the general enumeration of businesses, the 2007 census program included surveys of business owners and commodity flows.

Legal Authority

The U.S. Census Bureau conducts the economic census under the authority of Title 13, U.S. Code (sections 131, 191, and 224). Section 131 states that:

The Secretary [of Commerce] shall take, compile, and publish censuses of manufactures, of mineral industries, and of other businesses, including the distributive trades, service establishments, and transportation (exclusive of means of transportation for which statistics are required by law to be filed with, and are compiled and published by, a designated regulatory body), in the year 1964, then in the year 1968, and every fifth year thereafter, and each such census shall relate to the year immediately preceding the taking thereof.

Title 13, Chapter 1 (Administration) covers the collection and handling of census and survey data and the qualifications and duties of census supervisors and other employees. Section 5 of the chapter assigns to the Secretary of Commerce the responsibility for preparing census questionnaires and determining the number and type of inquiries included (the Secretary typically delegates this authority to the Director of the Census Bureau). Section 9 sets confidentiality requirements for census data and forbids the “use of information furnished . . . for any purpose other than the statistical purposes for which it was supplied. . . .” The section also restricts access to census questionnaires to persons sworn to uphold the confidentiality provisions of Title 13 and forbids publication of any information from the census or any survey that could be used to identify a specific person or business enterprise.

Chapter 5 (Censuses), section 131, directs the Census Bureau to carry out an economic census every 5 years, for years ending in “2” and “7.” Section 191 of the chapter establishes the geographic scope of the censuses and authorizes the Secretary of Commerce to use census data collected by the governor or highest federal official (if the data are collected in accordance

with plans approved by the Secretary) for the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, and “any possession or area not specifically designated in subsection (a) of this section.” Section 195 authorizes the use of sampling for carrying out the provisions of Title 13, “Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States”

Chapter 7 (Offenses and Penalties) establishes penalties for any Census Bureau or Department of Commerce staff member who discloses confidential data to any person other than a sworn Census Bureau or Department of Commerce employee, requires response to census inquiries, and establishes penalties for noncompliance.

For more detailed excerpts of Title 13, see Appendix A, “Provisions of Title 13, United States Code, Relating to the 2007 Economic Census.”

History of the Economic Census

The United States first collected information about the nation’s economic activity in conjunction with the 1810 census of population. The 1810 census asked for the number of establishments involved in manufacturing and the kind, quantity, and value of goods manufactured. The 1820 census asked a similar set of questions, but similar inquiries were omitted in 1830. The 1840 census restored the manufacturing inquiries and added questions on mineral industries and agriculture. The mineral industries items were dropped from the 1850 census, but by then a census of manufactures had become part of the decennial census.

After the establishment of a permanent Census Bureau in 1902, collection of data on the nation’s economic activities expanded rapidly, first through more frequent censuses—the Census Bureau carried out a census of manufactures every 5 years after 1905 (every 2 years from 1921 through 1939)—then by the addition of other economic sectors to the enumeration. The 1930 census included a census of distribution, covering retail and wholesale trade, and a census of construction industries. Enumeration of selected service industries began in 1933.

The Census Bureau added transportation industries to the census in 1963 with specific surveys: the Truck Inventory and Use Survey (later named the Vehicle Inventory and Use Survey), Passenger Transportation Survey, Commodity Transportation Survey, and Motor Carriers Survey. Coverage expanded again in 1992 to

include censuses of utilities; transportation industries; and finance, insurance, and real estate.

Increased interest about the economic pursuits of minority populations and women led to the first Survey of Minority-Owned Business Enterprises (SMOBE) in 1969 and the Survey of Women-Owned Business Enterprises (SWOBE) in 1972. The SMOBE became a regular part of the economic census in 1972, and the SWOBE followed in 1977. To augment the SMOBE/SWOBE series, the Census Bureau conducted the first Characteristics of Business Owners Survey (CBO) in 1982 to provide the only national data available for comparing selected economic, demographic, and sociological characteristics among minority, women, and nonminority male business owners and their businesses. In 1997, the SMOBE and SWOBE expanded to include all businesses participating in the economic census. In 2002, the Survey of Business Owners replaced the SMOBE, SWOBE, and CBO and featured the first reports on entrepreneurs who are military veterans and their businesses.

The Census Bureau conducted the first economic census in the “Island Areas” in 1909 with a special census of manufactures in Puerto Rico. The Census Bureau conducted censuses of manufactures in Puerto Rico every 10 years thereafter through 1949, after which the commonwealth was included in the quinquennial economic censuses. The agency extended coverage to include Alaska and Hawaii beginning with the 1939 Census of Manufactures. Coverage of Guam and the U.S. Virgin Islands began in 1958; the Commonwealth of the Northern Mariana Islands in 1982; and American Samoa in 2002. The Census Bureau began collecting data from construction industries in the economic census of Puerto Rico in 1967 and of Guam and the Virgin Islands in 1972.

INDUSTRY AND PRODUCT CLASSIFICATION

Background Information

Standardization of industrial classification originated with a recommendation on the subject at an interdepartmental conference on industrial classification held in 1934. This recommendation (transmitted to the federal government’s Central Statistical Board) suggested establishment of an ongoing committee to explore the

problems involved in developing an industrial classification of statistical data.¹

In 1937 the Central Statistical Board established the Interdepartmental Committee on Industrial Classification “to develop a plan of classification of various types of statistical data by industries and to promote the general adoption of such classification as the standard classification of the Federal Government.” At its first meeting on June 22, 1937, this committee established a Technical Committee to work on the preparation of the proposed standard classification of industries.²

The Technical Committee worked first on manufacturing industries and accepted a list of industries at a June 1938 meeting of the Interagency Committee. At the same meeting, the committee discussed coding problems in nonmanufacturing fields and decided to authorize the establishment of subcommittees of experts in various nonmanufacturing fields to prepare proposed classifications.

After the 1939 Standard Industrial Classification (SIC) was used and reviewed, the Bureau of the Budget (to which the Technical Committee had been transferred) printed the first editions of *Manufacturing Industries* in 1941 and *Nonmanufacturing Industries* in 1942. The dual editions were used until 1954, after which they were combined into a single edition of SIC codes covering both manufacturing and nonmanufacturing industries.³

The Census Bureau used the SIC codes, with occasional revisions, until the North American Industry Classification System (NAICS) replaced them in 1997. The Census Bureau introduced the NAICS in the 1997 Economic Census for the 50 states and the District

¹ Executive Order No. 6225 in July 1933 established the Central Statistical Board under the authority of Titles I and II of the National Industrial Recovery Act. The board was instructed “to formulate standards for and to effect the coordination of the statistical services of the federal government incident to the purpose of the National Industrial Recovery Act.” This order also authorized the board “to appraise and advise upon all schedules of Government agencies engaged in the primary collection of statistics required in carrying out the purposes of that act, to review plans, for tabulation and classification of such statistics, and to promote the . . . improvement of the statistical services involved.” *Journal of the American Statistical Association*, “The Central Statistical Board,” 1935, p. 714.

² Esther Pearce, “History of the Standard Industrial Classification,” July 10, 1957, <<http://www.census.gov/epcd/www/sichist.htm>> (December 19, 2007).

³ *Ibid.*

of Columbia and expanded coverage to the Island Areas and the Survey of Business Owners in the 2002 Economic Census. The 2002 census also introduced, on a preliminary basis, the North American Product Classification System (NAPCS) covering parts of the services industries.⁴

2007 Industry and Product Classification

The North American Industry Classification System (NAICS). The Office of Management and Budget (OMB) updates the NAICS every 5 years, with the most recent revisions incorporated in the 2007 NAICS. The Census Bureau collected, tabulated, and disseminated the 2007 Economic Census using the 2007 NAICS. Changes from NAICS 2002 were limited to the following six sectors:

- 31–33—Manufacturing
- 51—Information
- 52—Finance and Insurance
- 53—Real Estate and Rental and Leasing
- 54—Professional, Scientific, and Technical Services
- 56—Administrative and Support and Waste Management and Remediation Services

The number and types of changes (mostly minor) varied by sector and included deletion of NAICS 2002 classifications, creation of new NAICS 2007 classifications, movement of existing classifications, definition changes to existing classifications, and title changes. Although the majority of changes occurred within sector boundaries, the OMB made two exceptions:

- 1) It moved part of Real Estate Investment Trusts (REITs) from Sector 52 (Finance and Insurance) to Sector 53 (Real Estate and Rental and Leasing).
- 2) It moved executive search consulting services from Sector 54 (Professional, Scientific, and Technical Services) to Sector 56 (Administrative and Support and Waste Management and Remediation Services).⁵

⁴ The Island Areas covered in the 2002 Economic Census were Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, and American Samoa. For more information on the development of and transition to NAICS, see U.S. Census Bureau, *History of the 1997 Economic Census*, Chapter 3, "Introduction of the North American Industry Classification System (NAICS)," POL/00-HEC, July 2000, pp. 13–23.

⁵ Office of Management and Budget, *Federal Register*, "North American Industry Classification System—Revision for 2007; Notice," Vol. 71, No. 94, May 16, 2006, pp. 28531–28533.

Table 1-1.
Industry Scope for the 2007 Economic Census¹

NAICS code	North American Industry Classification System (NAICS) sector
21	Mining, Quarrying, and Oil and Gas Extraction
22	Utilities
23	Construction
31–33	Manufacturing
42	Wholesale Trade
44–45	Retail Trade
48–49	Transportation and Warehousing, excluding NAICS 482 (Rail Transportation) and NAICS 491 (Postal Service)
51	Information
52	Finance and Insurance, excluding NAICS 525 (Funds, Trusts, and Other Financial Vehicles)
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services excluding NAICS 6111 (Elementary and Secondary Schools); NAICS 6112 (Junior Colleges) and NAICS 6113 (Colleges, Universities, and Professional Schools)
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
81	Other Services (Except Public Administration), excluding NAICS 8131 (Religious Organizations), NAICS 81393 (Labor Unions and Similar Labor Organizations), NAICS 81394 (Political Organizations), and NAICS 814 (Private Households)

¹ U.S. Census Bureau, "2007 Economic Census Program Plan," Economic Programs Directorate, Version 1.0 (Final), September 19, 2005, p. 2.

As in 2002, the economic census in 2007 covered industries defined by the NAICS (see Table 1-1)⁶ in the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, the Virgin Islands of the United States, and American Samoa.⁷ In addition to the general enumeration of businesses, the 2007 census program included surveys of business owners and commodity flows.⁸

⁶ The 2007 Economic Census industry coverage excludes NAICS Sector 11 (Agriculture, Forestry, Fishing, and Hunting); a separate 2007 Census of Agriculture (conducted by the U.S. Department of Agriculture, National Agricultural Statistics Service) covers NAICS 111 (Crop Production) and NAICS 112 (Animal Production). Industry coverage also excludes NAICS Sector 92 (Public Administration), which is covered by the Census Bureau's 2007 Census of Governments.

⁷ Special agreements signed with each of the Island Areas governments authorized the Census Bureau to collect the economic data within those areas.

⁸ Thomas L. Mesenbourg, "Economic Programs Update," Census Advisory Committee of Professional Associations, April 19, 2007, p. 5.

The North American Product Classification

System (NAPCS).⁹ In 2002, the Census Bureau tested the NAPCS using new or revised inquiries for 86 services industries in NAICS Sectors 51 (Information), 52 (Finance and Insurance), 54 (Professional, Scientific, and Technical Services), and 56 (Administrative and Support and Waste Management and Remediation Services). For the 2007 Economic Census, the Census Bureau expanded the NAPCS to include portions of NAICS Sectors 48–49 (Transportation and Warehousing) and Sectors 51 to 81 (see Table 1-1).

RESPONSIBILITY FOR THE 2007 ECONOMIC CENSUS

The U.S. Census Bureau is administered by a director, deputy director, and several associate directors responsible for specific operational or administrative fields, including the agency's Economic Programs Directorate.¹⁰ Although the Director of the Census Bureau has overall responsibility for implementing the economic census, operational details and planning are delegated to the Economic Programs Directorate, which includes:¹¹

- *The associate director and assistant directors for Economic Programs.* The associate and assistant directors for Economic Programs have overall responsibility for the statistical programs that measure and profile U.S. businesses and government organizations.
- *Executive Steering Group.* This group is composed of the associate director and assistant directors for Economic Programs, and chiefs of the Company Statistics Division (CSD), Economic Planning and Coordination Division (EPCD), Economic Statistical Methods and Programming Division (ESMPD), Manufacturing and Construction Division (MCD), and Service Sector Statistics Division (SSSD). It advised the associate and assistant directors on policies, priorities, and resource requirements; approved the "Economic Census Program Plan"; established project teams; and allocated resources to meet census objectives.
- *Census Managers Group.* The Census Managers Group consisted of the Executive Steering Group and the assistant division chiefs for each program

⁹ Information for this section was drawn from Michael F. Mohr, "North American Product Classification System (NAPCS): What's Been Done; What's Being Done; What's Next," presented at the Census Advisory Committee of Professional Associations Meeting, April 18–19, 2002.

¹⁰ For more information, see U.S. Census Bureau, "U.S. Census Bureau Staff Roster," Form BC-245, September 17, 2007, <<http://www.census.gov/acsd/www/bc245.pdf>> (December 11, 2007).

¹¹ For more detailed information about the responsibilities of the Census Bureau's Economic Programs Directorate, see U.S. Census Bureau, "2007 Economic Census Program Plan," Version 1.0 (Final), September 19, 2005.

component. The group met weekly to discuss subject-matter, technical, methodological, budget, and other program issues.

- *The Center for Economic Studies (CES).* The CES and its regional data centers (RDCs) provided special-sworn-status researchers access to economic data for use in research projects that benefit the economic census and surveys conducted under Title 13.
- *Company Statistics Division (CSD).* The CSD had program responsibility for the 2007 Economic Census of Puerto Rico and the Island Areas as well as for the Survey of Business Owners.
- *Manufacturing and Construction Division (MCD).* The MCD had program responsibility for planning, implementing, and managing the manufacturing, mining, and construction sectors of the 2007 Economic Census.
- *Service Sector Statistics Division (SSSD).* The SSSD had program responsibility for planning, implementation, and management of the economic census's services sector industries.
- *Economic Planning and Coordination Division (EPCD).* The EPCD provides centralized services for planning and conducting the census and coordinates development of processes and procedures for questionnaire design and development, data collection and processing, analysis, and dissemination.
- *Economic Statistical Methods and Programming Division (ESMPD).* The ESMPD maintains the complex computer systems used to prepare, collect, process, and tabulate census and related survey data at the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN; computer center in Bowie, MD; and headquarters.
- *Office of Statistical Methods and Research for Economic Programs (OSMREP).* The OSMREP advises the associate director on policies, statistical standards, and issues affecting economic census research and methodology. The OSMREP provides expertise in statistical methods and questionnaire testing for the economic census and related surveys.
- *Project teams.* The Economic Programs Directorate chartered project teams to study, make recommendations, and oversee aspects of the 2007 Economic Census planning and implementation. Project teams supported the census and associated surveys by focusing on specific census processes and/or operations, including questionnaire content and design, mailout, and data capture, editing, tabulation, disclosure review, and dissemination.¹²

¹² For more information, see U.S. Census Bureau, "2007 Census Team Structure Guide," undated, pp. 1–17.

CONSULTATION ON THE CENSUS

General Information

The Census Bureau values the feedback it receives from business respondents and data users and solicits their suggestions and feedback on an ongoing basis. While planning the 2007 Economic Census, the agency consulted more than 1,000 business associations; federal, state, and local agencies; and individual companies to request feedback on questionnaire content. It also engaged in ongoing conversations with data users and professional organizations via its public advisory committees. These advisory committees bring together industry experts, on a regular basis, to discuss changes, benefits, and trends that impact the economic census and surveys.¹³

Trade Associations and Federal Agencies

The Census Bureau frequently contacts federal agencies, trade associations, trade journals, and other organizations to request comments and suggestions regarding its censuses and surveys.

As early as 2005, the Census Bureau began soliciting public comments about proposed questionnaires via *Federal Register* notices. Additional notices followed, announcing the agency's plans to conduct the census in 2007, requesting comments on industry classification, etc. The Office of Management and Budget and the Census Bureau reviewed responses to the *Federal Register* notices, responded when necessary, and in some cases modified plans as a result.¹⁴

The Census Bureau also solicited feedback via direct mailings to a variety of stakeholders. More than 1,000 federal and state agencies, trade associations, industry-specific trade journals, and other organizations (including companies participating in the census) received requests for comments and suggestions on the census, methodology, and questionnaire content. Participants included the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS) as well as trade associations including the National Association of Manufacturers, National Association of Home Builders of the United States, and National Retail Federation.

Additionally, the Census Bureau received and responded to feedback informally through its ongoing

¹³ The Census Bureau also receives recommendations from its Race and Ethnic Advisory Committees (REACs); however, the REACs have generally focused their discussions on decennial census operations. For more information on the REACs, see U.S. Census Bureau, "Race and Ethnic Advisory Committees," <http://www.census.gov/cac/www/race_ethnic_advisory_committees/> (March 4, 2008).

¹⁴ For more information on changes to NAICS as a result of comments to the Census Bureau's *Federal Register* notices, see Chapter 2, "Industrial and Product Classification."

participation in trade shows and conferences attended by data users and representatives from industry, trade associations, and journals.

The Census Advisory Committee of Professional Associations

The Census Advisory Committee of Professional Associations operates under provisions of the Federal Advisory Committee Act (January 5, 1973) and its activities are governed by Executive Order 11769 (February 21, 1974) and OMB Circular A-63 Revised (March 27, 1974). Proposals and formal recommendations made by all the Census Bureau advisory committees are reported to the Secretary of Commerce, together with Census Bureau responses recommending what actions, if any, should be taken.

The Professional Advisory Committee's membership consists of non-Census Bureau members of the American Economic Association (AEA), the American Marketing Association (AMA), the American Statistical Association (ASA), and the Population Association of America (PAA). The president of each association appoints (with Census Bureau approval) all members, who serve for 3-year terms. During biannual meetings with Census Bureau staff, the committee makes recommendations concerning the scope, content, methodology, tabulations, and data releases for the economic census and surveys.¹⁵

MAJOR USES AND USERS OF ECONOMIC CENSUS DATA

The data collected, tabulated, and published by the economic census are critical to many of the functions of government, private business, and the general public. Major users of economic census data include:

- *The federal government.* The federal government uses census information as part of the input for composite measures such as the gross domestic product (GDP), input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.
- *State and local governments.* State and local governments use census data to assess business activities and tax bases within their jurisdictions, develop programs to attract new businesses, develop minority contracting guidelines, and design job-retraining programs.

¹⁵ For more information about the Census Advisory Committee of Professional Associations, including recommendations, see U.S. Census Bureau, "Census Advisory Committees," <<http://www.census.gov/cac/www/>> (April 2, 2009).

- *Manufacturers and distributors.* Companies that sell their products to (or through) other businesses use census data to evaluate markets and plan sales strategies and territories; locate plants, warehouses, and stores; and make economic or sales forecasts.
- *Small businesses.* Small businesses use census data to learn about their markets and to improve their business opportunity presentations to bank officers and venture capitalists when seeking funds for expansion.
- *Academic institutions.* Colleges and universities use census data in teaching marketing, business management, and general economics.
- *Research institutions.* Researchers use census data in their studies of long-term economic trends.
- *Business and trade associations, business journals, and the daily press.* These institutions use economic census data as technical background for articles and to disseminate relevant interpretations of the data to the specific industries they represent.

SCOPE AND COVERAGE OF THE 2007 ECONOMIC CENSUS

The 2007 Economic Census covered the majority the U.S. economy in its basic compilation of business statistics, measuring the activity of approximately 4.6 million establishments via direct collection. The remaining establishments—generally very small single-establishment companies—did not receive a questionnaire. The Census Bureau enumerated these companies using administrative records from other federal agencies, primarily the Internal Revenue Service, with additional information from the Social Security Administration and Bureau of Labor Statistics.

Although the Census Bureau mailed questionnaires to select large companies as early as October 2007, approximately 3.5 million establishments received questionnaires in December 2007.¹⁶ More than 500 versions of the economic census questionnaire—each customized to a particular industry or group of related industries—had return-by dates of February 12, 2008.

Respondents also had the ability to supply their data electronically. Following the 2002 Economic Census, the Census Bureau conducted usability testing that involved the people at companies who are responsible for responding to census questionnaires. In response to their recommendations, the agency made usability and performance improvements to its Surveyor electronic

¹⁶ The Census Bureau mailed an additional 200,000 questionnaires to “third-quarter birth” establishments (i.e., establishments opened in the third quarter) in March 2008.

reporting software. These improvements and the Census Bureau’s promotion of the electronic response option resulted in approximately 54 percent of companies with more than one establishment (multiestablishment) and 29 percent of all respondents (multiestablishments combined with single-unit establishments) opting to supply their data electronically. For more information on the electronic response, see Chapter 6, “Data Collection and Processing.”

CHANGES TO THE 2007 ECONOMIC CENSUS

Content Changes

The economic census is constantly evolving to account for the ever-changing U.S. economy and economic activity. For the 2007 Economic Census, the Census Bureau asked a number of new questions, streamlined data collection methodology, and continued the expansion and evolution of the North American Industry Classification System (NAICS) and the North American Product Classification System (NAPCS). Some noteworthy changes in 2007 included:

Addition of relevant content. The Census Bureau discontinued collection of data related to supply chain and leased employees and added inquiries on franchising, outsourcing, and employers’ expenses for health and pension benefits to better measure changing business characteristics.¹⁷

More standardized product detail. More industries reported product lines sales and revenue sources according to the NAPCS, allowing the Census Bureau to produce more comparable product data across industries.¹⁸

Program Changes

Vehicle Inventory and Use Survey (VIUS). The Census Bureau conducted the Vehicle Inventory and

¹⁷ Data that differentiate costs for particular fringe benefits—health insurance, defined-benefit pensions, defined-contribution plans, and others—will be published at the national level for manufacturing in the *Industry Series* and *Summary Series* and for retail trade, wholesale trade, and service industries in related series. The Survey of Business Owners will identify the number of businesses providing various fringe benefits across all sectors. U.S. Census Bureau, “Guide to the 2007 Economic Census: What’s New for 2007,” <<http://www.census.gov/econ/census07/guide/index.html>> (December 18, 2007).

¹⁸ For 2007, industries in the following NAICS sectors reported product data according to a consistent scheme using the NAPCS: 48–49 (Transportation and Warehousing); 51 (Information); 52 (Finance and Insurance); 53 (Real Estate and Rental and Leasing); 54 (Professional, Scientific, and Technical Services); 55 (Management of Companies and Enterprises); 56 (Administrative and Support and Waste Management and Remediation Services); 61 (Educational Services); 62 (Health Care and Social Assistance); 71 (Arts, Entertainment, and Recreation); 72 (Accommodation and Food Services); and 81 (Other Services ([Except Public Administration])).

Use Survey from 1963 to 2002.¹⁹ The VIUS provided data on the physical and operational characteristics of the nation's private and commercial truck fleet. Its primary goal was to produce national and state-level estimates of the total number of trucks. However, as a result of a rescission to the Census Bureau's budget in fiscal year (FY) 2006, the agency cancelled the 2007 VIUS.²⁰

Additional follow-up mailing. An additional follow-up mailing to nonrespondents included a cover letter from the chief counsel for Economic Affairs, Office of the General Counsel, U.S. Department of Commerce. This letter advised the businesses that response to the economic census is required by Title 13, U.S. Code, and that the names of those who fail to respond may be forwarded to the U.S. Department of Justice for further action. (For more information on follow-up operations, including mailout of letters from the chief counsel for Economic Affairs, see Tables 7-2 and 7-3 in Chapter 6, "Data Collection and Processing.")

Electronic dissemination. The Census Bureau disseminated all 2007 Economic Census data products via the agency's American FactFinder (AFF) Web site. No CD-ROMs, DVD-ROMs, portable document format (PDF), or printed reports were published. This shift to AFF as the sole source for economic census data products has several advantages, including cost savings and earlier publication of data (when compared to 2002).²¹

Local area data. For the 2002 and prior economic censuses, data were available only for incorporated places (cities, towns, townships, boroughs, etc.). For the 2007 Economic Census, the Census Bureau also published economic census data for selected "unincorporated places" known as census designated places (CDPs). Uniform selection criteria were applied to incorporated places and CDPs: data were published if these places had 5,000 inhabitants or more or if they had 5,000 workers or more. Publication of CDP data ensures that data for all economically important places are available from the economic census. For example, Lake Buena Vista, FL, has thousands of workers, but only 16 residents as of the 2000 decennial census. The worker criterion is based on data from Census 2000 tabulated

by place of work, so that all NAICS sectors can be included.²²

PUBLIC AWARENESS PROGRAM

The goal of the 2007 Economic Census's data collection was to increase the overall census response rate from 84 percent in 2002 to 86 percent in 2007. Although response is required by law, some businesses either fail to respond or do so late in the census cycle. As a result, the Census Bureau must conduct costly follow-up operations to obtain the needed data (including additional letter and questionnaire mailing and telephone calling to encourage businesses to report).

The public awareness campaign helped reach the response goal by making data users and the public aware of the benefits and usefulness of economic census data and the importance of census response. The awareness campaign encouraged business people to watch for census forms and complete them promptly.

For more information on the public awareness campaign for the 2007 Economic Census, see Chapter 4, "Promoting the Census and Product Awareness."

DATA COLLECTION

Economic census data are generally collected on an "establishment" basis; that is, for a business or industrial unit at a single physical location that produces or distributes goods or that performs services. Each establishment is owned by a "company," and any given company may own one establishment (a "single-establishment" company) or many (a "multiestablishment" company). Further, a multiestablishment company's establishments may be spread across different geographic or political jurisdictions and may be involved in a variety of different business or industrial activities. Collecting data at the establishment level enables the Census Bureau to compile and publish detailed geographic and industry tabulations.

Prior to conducting the economic census, the Census Bureau attempted to classify the economic activity of each establishment in its Business Register (which is, essentially, its mailing list). The agency used this information to prepare, for each company, mailout packages that included one or more of the 500-plus industry-specific census questionnaires. The Census Bureau

¹⁹ Prior to 1997, the VIUS was named the Truck Inventory and Use Survey (TIUS).

²⁰ Correspondence from John Miller, U.S. Census Bureau, to Jason G. Gauthier, U.S. Census Bureau, regarding cancellation of the 2007 VIUS, February 13, 2006. See also, U.S. Census Bureau, "Legislative Summary, 109th Congress," January 30–February 3, 2006, p. 2.

²¹ U.S. Census Bureau, "Guide to the 2007 Economic Census: What's New for 2007."

²² Ibid. CDPs are defined by local statistical area committees and some CDPs, such as East Los Angeles, are quite large. The same 5,000 population/worker threshold will apply to all states. Note that the 5,000 threshold eliminates data for many small incorporated places, for which the previous threshold was 2,500 inhabitants. The 5,000 threshold increases the number of towns and townships shown in the 12 northern states with strong minor civil divisions; the previous threshold was 10,000 population.

mailed questionnaires to companies and requested basic business information for each of the company's establishments on the following subjects:

- Employer identification number
- Kind-of-business activity (except manufacturing and mining)
- Physical location
- Operational status
- Months in operation
- Dollar volume of business
- Number of employees
- Payroll

The Census Bureau also requested data on industry-specific subjects, depending on the particular industry of each establishment. Also, most forms collected data on sales, shipments, receipts, or revenue.

Although approximately 1,200 of the nation's largest companies and 900,000 establishments received their questionnaires (or classification forms)²³ in October 2007, the primary mailout for the 2007 Economic Census occurred in late December 2007, when the Census Bureau mailed approximately 3.5 million census questionnaires.²⁴ The agency asked these establishments to complete and return the questionnaires to the National Processing Center in Jeffersonville, IN, by February 12, 2008.²⁵ In lieu of returning paper questionnaires to the Census Bureau, approximately 3.5 million respondents had the option of reporting data electronically in a secure encrypted form after downloading the Census Bureau's Surveyor software. As noted, approximately 29 percent of all establishments responded electronically in 2007.

In addition to collecting data via direct mailout of questionnaires to establishments, the Census Bureau also obtained basic business data for approximately 3.1 million small employer businesses and 22 million nonemployer establishments²⁶ using administrative records provided by the Internal Revenue Service,

²³ Classification forms collect information on the industry in which a business operates. They collect the minimum amount of information necessary to properly classify businesses, while at the same time making the reporting process easier for respondents.

²⁴ The Census Bureau mailed an additional 200,000 questionnaires to "third-quarter birth" establishments (i.e., establishments opened in the third quarter) in March 2008.

²⁵ The National Processing Center (NPC) is the Census Bureau's primary center for collecting, capturing, and delivering timely, high-quality data products and services for surveys and censuses. Services provided include mail processing, data capture, statistical operations, geographic operations, and call center support.

²⁶ Nonemployer establishments are defined as businesses without paid employees that are subject to federal income tax. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income.

Bureau of Labor Statistics, and the Social Security Administration.²⁷

For more information on the use of administrative records, see Chapter 5, "Preparations for Data Collection."

GEOGRAPHIC COVERAGE

The Census Bureau published data from the 2007 Economic Census solely via the agency's American FactFinder Web site for each of 18 industrial sectors defined by the North American Industry Classification System and covered by the economic census. (Two NAICS sectors—the Agriculture, Forestry, Fishing, and Hunting sector and the Public Administration sector—are not covered by the economic census). As shown in Table 1-2, the Census Bureau did not publish data for all geographic levels for all sectors. The most detailed data are published for the United States, while key data are compiled/disseminated for states, metropolitan areas, counties, and for places with 5,000 or more inhabitants or workers. The agency published limited data by five-digit ZIP Code for selected sectors.²⁸

RELATED SURVEYS

The Census Bureau also conducts surveys in conjunction with the economic census to provide specialized data about specific subjects. These surveys use data collected during the economic census to identify establishments for further inquiries or supplement the census by collecting data that would otherwise not be collected in the general enumeration.

In conjunction with the 2007 Economic Census, the Census Bureau collected data via the following surveys:

Survey of Business Owners (SBO). The Survey of Business Owners (SBO), formerly known as the Surveys of Minority- and Women-Owned Business Enterprises (SMOBE/SWOBE) and Characteristics of Business Owners (CBO) Survey, provides data describing the characteristics of U.S. businesses by ownership category (i.e., by gender, ethnicity, and race of principal owners). These data are presented by geographic area at the national, state, and regional levels; by two-digit industry sector based on the 2007 NAICS; and by size of firm (employment and receipts). Survey data on business include the number of firms, sales and receipts, and annual payroll for firms in each ownership category. Other SBO data, published in the *Characteristics of Businesses* and *Characteristics of Business Owners* reports, identify

²⁷ Mesenbourg, "Economic Programs Update," p. 7.

²⁸ For more information about the geographic definitions used to tabulate the 2007 Economic Census data, see Appendix C, "Definitions and Descriptions of Geographic Areas."

Table 1-2.

Geographic Areas in the 2007 Economic Census

2007 Economic Census by NAICS sector	U.S.	State	MA ¹	County	Place	ZIP Code
Economy-wide statistics:						
Comparative statistics	X	X				
Nonemployer statistics	X	X	X	X		
Survey of Business Owners (minority- and women-owned business)	X	X	X	X	X	
Mining	X	X				
Utilities	X	X	X			
Construction	X	X				
Manufacturing	X	X	X	X	X	
Wholesale Trade	X	X	X	X	X	
Retail Trade	X	X	X	X	X	X
Transportation and Warehousing	X	X	X			
Information	X	X	X	X	X	
Finance and Insurance	X	X	X			
Real Estate and Rental and Leasing	X	X	X	X	X	
Professional, Scientific, and Technical Services	X	X	X	X	X	X
Management of Companies and Enterprises	X	X				
Administrative and Support and Waste Management and Remediation Services	X	X	X	X	X	X
Educational Services	X	X	X	X	X	X
Health Care and Social Assistance	X	X	X	X	X	X
Arts, Entertainment, and Recreation	X	X	X	X	X	X
Accommodation and Food Services	X	X	X	X	X	X
Other Services (Except Public Administration)	X	X	X	X	X	X

¹ Metropolitan statistical areas (MAs) are geographic entities defined by the U.S. Office of Management and Budget for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. An MA contains a core urban area of 50,000 or more population. Each MA consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

family- and home-based businesses; types of customers and workers; sources and purposes of financing; and owner's age, education level, veteran status, and primary function(s) in the business.

Economic policymakers in federal, state, and local governments use SBO data to understand conditions of business success and failure by comparing census-to-census changes in business performance and by comparing minority/nonminority-owned businesses and women/men-owned businesses.

For the 2007 SBO, the Census Bureau expanded collection of business and business-owner data to include:

- Totals for minority business owners. This was omitted in 2002, but had been collected previously.
- New data on owner characteristics (whether the owner was born in the United States, year and how the business was acquired, language(s) used for business transactions with customers, percentage of sales outside the United States, outsourcing to businesses outside the United States, use of the Internet and e-commerce, presence of different employee fringe benefits [health care, retirement, defined contribution plans, vacation/holiday pay]).

- Expansion of data in the *Characteristics of Businesses* and *Characteristics of Business Owners* reports to show the sales or receipts, payroll, and employment in each category. The 2002 reports included just the number of firms.

For more information about the 2007 SBO, see Chapter 8, "The 2007 Survey of Business Owners."²⁹

Commodity Flow Survey (CFS). The Census Bureau conducts the CFS through a partnership with the U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics. The CFS produces data on the movement of goods in the United States. The data are used by public policy analysts and for transportation planning and decision-making to assess the demand for transportation facilities and services, energy use, safety risks, and environmental concerns.³⁰

For more information about the 2007 CFS, see Chapter 9, "Commodity Flow Survey."

²⁹ U.S. Census Bureau, "Guide to the 2007 Economic Census: What's New for 2007."

³⁰ U.S. Bureau of Transportation Statistics, "Commodity Flow Survey," <http://www.bts.gov/programs/commodity_flow_survey> (December 18, 2007).

Business Expenses Supplement (BES). The BES (previously named the Business Expenses Survey until its integration into the Census Bureau's annual wholesale, retail, and services programs in 2006) provides periodic national estimates on operating expenses for merchant wholesale trade,³¹ retail trade, and selected service industries. The Census Bureau published the supplement's data in reports from the Annual Retail Trade Survey, the Annual Wholesale Trade Survey, and the Service Annual Survey.

For the 2007 BES, the Census Bureau added the collection and dissemination of data on employer costs for fringe benefits, with separate entries for health care, pensions (defined-contribution plans vs. defined-benefit plans), and "other."³²

OTHER ECONOMIC STATISTICS PROGRAMS

The economic census provides critical source data to federal programs that gauge the nation's economic performance—notably, estimates of gross domestic product, producer price indexes, and industrial production. Although limited discussion of the following programs is included in this *History of the 2007 Economic Census*, the economic census is closely linked to other economic statistics programs as described below:

Business Register (BR) Program. The Census Bureau's BR Program provides the mailing list (frame), data collection support, and front-end processing support for the economic census. Additionally, the BR program obtains administrative records and prepares them for use by the economic census and other authorized programs. The annual Company Organization Survey (COS), conducted as part of the BR program, collects data needed to maintain coverage of multiestablishment enterprises. For years ending in "2" and "7," the economic census incorporates the COS and supersedes COS inquiries for establishments that are in-scope to the census (the COS still sends inquiries to establishments that are out-of-scope to the census).

Current Survey Programs. The Census Bureau conducts a number of surveys that collect, compile, and publish annual, quarterly, or monthly data on subjects covered by the census, as authorized by Title 13, U.S. Code, Section 182. These include principal economic indicators for new construction put in place; new residential construction; retail sales; wholesale sales; manufacturers' shipments, inventories, and

³¹ Merchant wholesale trade excludes manufacturers' sales branches and offices by definition. It also excludes agents, brokers, and commission merchants.

³² Memorandum from Anne S. Russell, U.S. Census Bureau, to Thomas L. Mesenbourg, Jr., U.S. Census Bureau, "Business Expenses Survey (BES) Program Improvement Plan," January 23, 2007, pp. 1–4.

orders; business sales and inventories; service industry revenues; and corporate profits. Further, the Current Surveys Programs include annual or other periodic surveys (usually with larger samples) that provide added industry or product detail or other measures not available from indicator surveys. The economic census supplements BR data with characteristics that may be needed to construct effective current survey samples (e.g., data on value of shipments by product), and economic census data products provide benchmarks for current survey estimates.

County Business Patterns (CBP) Program. The Census Bureau has published the CBP series annually since 1964 and at irregular intervals dating back to 1946. CBP is an annual series tabulated from BR data originating from the COS and administrative records. It provides subnational economic data by industry.³³ The series is useful for studying the economic activity of small areas and analyzing economic changes over time. Businesses use the data for analyzing market potential, setting sales quotas, and developing budgets. Government agencies use the data for administration and planning.

The CBP Program covers most of the country's economic activity, excluding establishments without paid employees, employees of private households, railroad employees, agricultural production employees, and most government employees.³⁴

Nonemployer Statistics Program. While businesses without paid employees account for less than 4 percent of all receipts across all industries, they represent about three-quarters of all businesses. The Nonemployer Statistics Program publishes basic industry statistics and geographic area statistics for establishments without paid employees, obtained from administrative records data that are incorporated into the BR. For 2007, the data are published in the *Nonemployer Statistics Report* and the economy-wide key statistics data set.³⁵

Center for Economic Studies (CES) Research Program. The CES conducts and supports research using confidential microdata from the economic census, current economic surveys, and other Census

³³ The County Business Patterns Program has tabulated on a North American Industry Classification System (NAICS) basis since 1998. Data for 1997 and earlier years are based on the Standard Industrial Classification (SIC) System.

³⁴ U.S. Census Bureau, "County Business Patterns," <<http://www.census.gov/epcd/cbp/view/cbpview.html>> (December 18, 2007).

³⁵ For more information on the nonemployer data in the economy-wide key statistics data set, see the "2007 Economic Census User Guide," <http://www.census.gov/econ/census07/www/user_guide.html> (July 15, 2009).

Bureau collections for approved projects that benefit the Census Bureau and the programs it conducts under Chapter 5 of Title 13, U.S. Code. Further, this research produces data that inform policymakers and otherwise improve understanding of the economy.

The CES also works in partnership with academic and research institutions to operate a network of Research Data Centers where qualified research associates with Census Bureau special sworn status may carry out studies, and it develops and maintains economic micro-data for use in this research.³⁶

Census of Governments Program. The census of governments collects, compiles, and publishes data on governments, as directed by Title 13, U.S. Code, Section 161. The resulting data products complement economic census data on private businesses by providing information on government organization, public employment, and government finances.³⁷

Census of Agriculture. Since 1997, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) has collected, compiled, and published data on the nation's agricultural pursuits

³⁶ For more information about the CES, visit its Web site at <<http://www.ces.census.gov/>>.

³⁷ U.S. Census Bureau, "Census of Governments," <<http://www.census.gov/econ/overview/go0100.html>> (December 18, 2007).

at 5-year intervals that coincide with the economic census. Prior to 1997, the Census Bureau conducted the census of agriculture or collected agricultural data, with the earliest inquiry—whether engaged in agriculture—being asked during the 1810 population census.³⁸

EXPENDITURES

The 2007 Economic Census and its associated activities cost approximately \$515 million over fiscal years 2005 through 2011 for planning, carrying out the census, and publishing the results.³⁹ Census operations invariably overlap one another—one economic census is still being completed while the planning and preparations for the next begin. For example, preliminary work and planning for the 2007 Economic Census began only a short time after data collection for parts of the 2002 Economic Census were completed.⁴⁰

³⁸ For more information about the 2007 or earlier censuses of agriculture, visit the NASS Web site at <<http://www.nass.usda.gov/>>. Like the Census Bureau's economic census history program, NASS also publishes a procedural history of the agriculture census—the most recent being U.S. Department of Agriculture, *2002 Census of Agriculture: History*, Vol. 2, Subject Series Part 5, AC-02-S-5, January 2007.

³⁹ Part of the increased funding for the 2007 Economic Census, compared to the 2002 census, was a result of the improvements necessary for the American FactFinder (the primary source of 2007 data publication) and rent for offices in the new Census Bureau headquarters, completed in fiscal year 2007).

⁴⁰ U.S. Census Bureau, "2007 Economic Census Program Plan," p. 9.

Chapter 2: Industrial and Product Classification

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INTRODUCTION

The North American Industry Classification System (NAICS), developed in cooperation with Statistics Canada and the Instituto Nacional de Estadística, Geografía e Informática (INEGI) of Mexico, makes possible comparable statistics across the United States, Canada, and Mexico. The U.S. Office of Management and Budget (OMB) released the NAICS on April 9, 1997, and the U.S. Census Bureau introduced the system in the 1997 Economic Census. The NAICS replaced the previously used U.S. Standard Industrial Classification (SIC) System, which the Census Bureau began using in the 1947 Census of Manufactures.¹

Since the introduction of the NAICS in 1997, the OMB has periodically solicited comments and recommendations on changes to the classification system. The OMB reviews these recommendations and decides if changes are warranted to account for new and emerging industries and to improve international comparability.

Prior to the 2007 Economic Census, the OMB solicited comments and recommendations on the 2002 NAICS via a December 27, 2002, *Federal Register* notice.

¹ Developed in 1939, the SIC System promoted uniformity and comparability of data collected and published by federal and state agencies, trade associations, and research organizations. The SIC System classified each establishment according to its primary business activity. For more information on the SIC System, see Esther Pearce, "History of the Standard Industrial Classification," July 10, 1957, <<http://www.census.gov/epcd/www/sichist.htm>> (December 19, 2007).

Changes to the 2007 NAICS were relatively minor and included all of the OMB Economic Classification Policy Committee's (ECPC's)² recommendations for revision, along with changes to the treatment of real estate investment trusts (REITs).

When the statistical agencies of the United States, Canada, and Mexico undertook development of the NAICS, they agreed that adequate measurement of productivity, unit labor costs, and capital intensity of production required that information on outputs and inputs be used together. To achieve this, the participating agencies recognized that they needed to develop and implement a common product classification system that would be complementary to the industry classification system.

The progress and adoption of the NAICS emphasized the need for improved product classification. The ECPC first looked at the possibility of establishing a new product classification system as early as 1995. However, the new industry classification system was

² The OMB established the ECPC on July 14, 1992, in response to discussions encouraging a "fresh look" at the concepts, methodologies, procedures, and uses of economic data classifications for statistical purposes at the 1991 International Conference on the Classification of Economic Activity, held in Williamsburg, VA. Office of Management and Budget, "Economic Classification Policy Committee—Work Plan and Schedule," 7th Round Table, Copenhagen, Denmark, October 12–16, 1992, p. 2.

The ECPC is currently chaired by the Census Bureau, with representatives from the Bureau of Labor Statistics, Bureau of Economic Analysis, and, ex officio, the OMB.

considered a higher priority, and any further work on the product classification system was suspended while all available resources from the participating countries were devoted to the development and implementation of the NAICS as quickly as possible. By the beginning of 1999, the NAICS was being brought “on line,” allowing the ECPC and the statistical agencies to turn their attention and resources to the question of a new product classification system—the North American Product Classification System (NAPCS).³

THE NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS)

Background Information

The Office of Management and Budget (OMB) announced its intention to revise the U.S. Standard Industrial Classification (SIC) System for 1997 in a March 31, 1993, *Federal Register* notice. The announcement also established the Economic Classification Policy Committee (ECPC) and the process for revising the SIC System. Although the OMB revised the SIC System periodically to reflect changes in the economy, the latest version (1987) required a massive overhaul by the 1990s, particularly within the service sectors of the economy. Furthermore, the adoption of the North American Free Trade Agreement (NAFTA) on January 1, 1994, underscored the need to develop a new system developed cooperatively between the United States, Mexico, and Canada.⁴

In June 1994, the three NAFTA signatories announced a joint project to develop a new industrial classification system for use throughout the North American trade area that would provide comparable statistics for the countries.⁵ Adding to existing industrial classification systems (the SIC System and the United Nations International Standard Industrial Classification), the new system would identify new industries, as well as organize industries according to types of production

³ Michael F. Mohr, “North American Product Classification System (NAPCS): What’s Been Done; What’s Being Done; What’s Next,” presented at the Census Advisory Committee of Professional Associations Meeting; April 18–19, 2002, p. 2.

⁴ Office of Management and Budget, *Federal Register*, Vol. 58, No. 60, pp. 16990–17004; Carole A. Ambler, “NAICS and U.S. Statistics,” presented at the Annual Meeting of the American Statistical Association,” August 1998, pp. 1–2.

⁵ The North American Free Trade Agreement (NAFTA) went into effect January 1, 1994. The agreement immediately eliminated duties on half of all U.S. goods shipped to Canada, and gradually phased out other tariffs, over a period of 5 to 15 years. Restrictions were to be removed from many categories, including motor vehicles and automotive parts, computers, textiles, and agriculture. The treaty also protected intellectual property rights (patents, copyrights, and trademarks) and outlined the removal of investment restrictions among the three countries. Provisions regarding worker protection and environmental protection were added later as a result of supplemental agreements signed in 1993.

Table 2-1.

2007 North American Industry Classification System Sectors

NAICS code	NAICS sectors
11	Agriculture, Forestry, Fishing, and Hunting
21	Mining, Quarrying, and Oil and Gas Extraction
22	Utilities
23	Construction
31–33	Manufacturing
42	Wholesale Trade
44–45	Retail Trade
48–49	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
81	Other Services (Except Public Administration)
92	Public Administration

activities performed. It also would permit presentation of more detail on the rapidly expanding service sectors, which, by the mid-1990s, accounted for the majority of economic activity but only 40 percent of SIC System categories.

The cooperative efforts of the three signatories to NAFTA resulted in the creation of the NAICS, which the OMB introduced in 1997. The Census Bureau began classifying establishments using the NAICS in the 1997 Economic Census.⁶

Structure of the North American Industry Classification System

The NAICS identified 20 broad sectors (compared to 10 “divisions” in the old SIC System), and, initially, some 1,170 industries, of which 416 were service-related

⁶ The Census Bureau classified establishments in the 50 states and District of Columbia using the NAICS beginning with the 1997 Economic Census. The Census Bureau continued classifying establishments in the Island Areas (Puerto Rico, U.S. Virgin Islands, Guam, and the Commonwealth of the Northern Mariana Islands) using the SIC System to permit local governments more time to transition local surveys and statistics to the NAICS. The economic census introduced the NAICS for the Island Areas (including the addition of American Samoa) for the 2002 Economic Census. For more information on the development and implementation of the NAICS, see U.S. Census Bureau, Chapter 3, “Introduction of the North American Industry Classification System (NAICS),” *History of the 1997 Economic Census*, POL/00-HEC, July 2000, pp. 14–23.

(250 of these industries were newly defined for the NAICS).

The NAICS classifies industries using a six-digit system that provides for comparability among the three countries to the five-digit level (with a few exceptions).⁷ The first two digits identify the sector, adding a third provides the subsector, the fourth identifies the industry group, and the fifth digit represents the NAICS industry. A sixth digit identifies industries unique to one of the three NAICS-participating countries.⁸ The structure may be illustrated as shown in Table 2-2.

Table 2-2.

Six-Digit Structure of the North American Industry Classification System

NAICS level	NAICS code	Description
Sector	72	Accommodation and Food Services
Subsector	722	Food Services and Drinking Places
Industry group	7222	Limited-Service Eating Places
Industry	72221	Limited-Service Eating Places
U.S. industry	722211	Limited-Service Restaurants
	722212	Cafeterias, Buffets, and Grill Buffets
	722213	Snack and Nonalcoholic Beverage Bars

The 2007 North American Industry Classification System

The OMB announced its intention to review the 2002 NAICS via a December 27, 2002, *Federal Register* notice and solicited comments from the public. The ECPC reviewed and researched all comments and proposals received and published its recommendations in a March 11, 2005, *Federal Register* notice. The ECPC recommended several revisions to modify the structure and detail for telecommunications and other information industries based on recent and anticipated changes in the sector. The ECPC also recommended the creation of a new national industry for biotechnology research and development to reflect the growing importance of this activity in the economy in Sector 54 (Professional, Scientific, and Technical Services). Additional recommendations were to more adequately align the activities of producers in agriculture; manufacturing; and professional, technical, and scientific services.

⁷ The international NAICS agreement generally sets only the first five digits of the code. The sixth digit, where used, identifies subdivisions of NAICS industries that accommodate user needs in individual countries. Thus, six-digit U.S. codes may differ from counterparts in Canada or Mexico, but at the five-digit level they are generally standardized.

⁸ Paul T. Zeisset and Mark E. Wallace, "How NAICS Will Affect Data Users," February 23, 1998, <<http://www.census.gov/epcd/www/naicsusr.html>> (April 12, 2007), pp. 5-6.

Following publication of the ECPC's recommendations in March 2005, the National Association of Real Estate Investment Trusts (NAREIT) resubmitted its proposal to reclassify real estate investment trusts (REITs), which the ECPC had previously rejected. In response, the ECPC consulted further with the NAREIT and interested agencies, including representatives from the Department of the Treasury's Office of Tax Analysis, the Federal Reserve Board, and the Internal Revenue Service's Statistics of Income Division, to discuss the possible modification of REITs' classification.⁹

The OMB announced its final decisions to adopt the ECPC recommendations as well as the reclassification of REITs on May 16, 2006.¹⁰ The OMB made no other changes to the scope and substance of the NAICS.¹¹

THE NORTH AMERICAN PRODUCT CLASSIFICATION SYSTEM (NAPCS)

Background Information

In developing the North American Industry Classification System, the Census Bureau, Statistics Canada, and the Instituto Nacional de Estadística, Geografía e Informática agreed that:

[The] uses of industrial statistics which include measuring productivity, unit labor costs, and the capital intensity of production require that information on outputs and inputs be used together. Moreover, statistical agencies in the three countries expect to be called upon to produce information on inputs and outputs, industrial performance, productivity, unit labor costs, employment, and other statistics in

⁹ Office of Management and Budget, *Federal Register*, "North American Industry Classification System—Revision for 2007," Vol. 71, No. 94, May 16, 2006, pp. 28531-28533.

¹⁰ The OMB deleted NAICS 525930 (Real Estate Investment Trusts) from the classification, and portions were reclassified as follows: (1) equity REITs are classified in the Real Estate subsector in NAICS industry group 5311 (Lessors of Real Estate) under individual national industries based on the content of the portfolio of real estate operated by a particular REIT; and (2) mortgage REITs remain classified in the Finance sector but are moved from NAICS 525930 to NAICS 525990, (Other Financial Vehicles).

The OMB made several other changes to NAICS sector titles and wording. Among these changes were the title (not content) change of NAICS industry 561422, "Telemarketing Bureaus," to "Telemarketing Bureaus and Other Contact Centers" to more accurately reflect the content of the industry and the separation of employment placement agencies (NAICS 561311) and executive search service (NAICS 561312). A biotechnology research and development industry was created as NAICS 54711. For more information on similar changes in title or coding, see U.S. Census Bureau, "Appendix A: 2007 NAICS U.S. Matched to 2002 NAICS U.S.," <<http://www.census.gov/naics/2007/n07-n02.xls>> (September 24, 2007).

¹¹ For more information on the solicitation and recommendations to the 2007 NAICS, see Office of Management and Budget, *Federal Register*, "2007 North American Industry Classification System—Updates for 2007; Notice," Vol. 67, No. 249, December 27, 2002, pp. 79500-79506; *Federal Register*, Vol. 70, No. 47, March 11, 2005, pp. 12390-12399; and *Federal Register*, Vol. 71, No. 94, March 16, 2006, pp. 28532-28533.

order to analyze the effects of the North American Free Trade Agreement. An industry classification system erected on a production oriented, or supply-based, conceptual framework will assure maximum usefulness of industrial statistics for these and other purposes.¹²

The agreement also recognized a critical need for the development of a commodity classification system and noted that “market-oriented, or demand-based, groupings of economic data are required for purposes, including studies of market share, demands for goods and services, import competition in domestic markets, and similar studies.” The three statistical agencies agreed to work cooperatively to help improve existing commodity classification systems—the Harmonized System (HS) of the Customs Cooperation Council and the United Nations Provisional Central Product Classification (CPC) system—and to explore the possibility of developing a product system in common.¹³

The Office of Management and Budget Economic Classification Policy Committee (ECPC) began preliminary work on establishing a product classification system in 1995, but postponed further discussions or development of such a system until after the introduction of the NAICS. In February 1999, the ECPC and the statistical agencies again turned their attention and resources to the question of a new commodity classification system.¹⁴

Development of the North American Product Classification System

Following the introduction of the NAICS in 1997, the statistical agencies of Canada, Mexico, and the United States began a joint project to develop and implement a new product classification system—NAPCS. In agreeing to develop the NAPCS, these agencies along with ECPC agreed that a common product classification system for the three countries was a necessity to better understand industrial output.

¹² Office of Management and Budget, *Federal Register*, Vol. 59, No. 142, July 26, 1994, p. 38094.

¹³ For more information on the Harmonized System and Central Product Classification, see U.S. Census Bureau, “Introduction to the Central Product Classification System,” <<http://www.census.gov/eos/www/napcs/papers/cpcintro.pdf>> (April 4, 2007). See also Carole A. Ambler, “Developing a Product Classification System for the United States,” U.S. Census Bureau, mimeograph, June 1998.

¹⁴ Office of Management and Budget, “Initiative to Create a Product Classification System, Phase 1: Exploratory Effort to Classify Service Products,” *Federal Register*, Vol. 64, No. 73, April 16, 1999, pp. 18983–18989. See also Michael F. Mohr, “North American Product Classification System (NAPCS): What’s Been Done; What’s Being Done; What’s Next,” presented at the Census Advisory Committee of Professional Associations Meeting, April 18–19, 2002, p. 2.

Participants in the development of the NAPCS agreed that the new system should be a market-oriented, or demand-based, hierarchical classification system for products (goods and services) and that the system should:

- Not be industry-of-origin based, but be linkable to the NAICS industry structure.
- Be consistent across the three NAICS countries.
- Promote improvements in the identification and classification of service products across international classification systems, such as the Central Product Classification System of the United Nations.¹⁵

Implementation of the North American Product Classification System

In planning the NAPCS, the United States, Canada, and Mexico began with a consensus on the proposition that improved product data for service industries are critical to improving measurement of the growth in output, prices, productivity, and trade. As a result, much of the NAPCS focuses on identifying and defining the products produced by industries in the 12 NAICS service sectors from Sectors 48–49 through Sector 81 (see Table 2-3).

Table 2-3.

2007 North American Industry Classification System Service Sectors

NAICS code	NAICS sector
48–49	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
81	Other Services (Except Public Administration)

Following input by 13 trilateral working groups and extensive input from industry experts, NAPCS implementation was conducted in three phases:¹⁶

¹⁵ For more information, see Economic Classification Policy Committee, “Overview of NAPCS Objectives, Guidance, and Implementation Strategy and Goals: A United States Perspective,” Trilateral Steering Group Meeting, Washington, DC, May 5–9, 2003.

¹⁶ For more information on the history, development, and implementation of the NAPCS, see the Census Bureau’s NAPCS home page at <<http://www.census.gov/napcs>>.

Phase 1. Phase 1 was launched in early 1999 to explore the feasibility of identifying and defining service products in Canada, Mexico, and the United States, and focused on the products produced by industries in four NAICS service sectors—Information; Finance and Insurance; Professional, Scientific, and Technical Services; and Administrative and Support and Waste Management and Remediation Services.

Phase 1 generated 36 product lists that covered the final products produced by 117 U.S. service industries. Products from 26 of these lists were incorporated into the 2002 Economic Census, and some were incorporated into the 2001 and subsequent Service Annual Surveys (SAS).¹⁷

Phase 2. Launched in July 2001, Phase 2 of NAPCS implementation included the industries in five additional NAICS service sectors—Transportation and Warehousing; Educational Services; Health Care and Social Assistance; Arts, Entertainment and Recreation; and Accommodation and Food Services.

Phase 3. Phase 3, launched in May 2004, extended the NAPCS to industries not covered in the sectors addressed under Phases 1 and 2 and to industries in Sector 53 (Real Estate and Rental and Leasing), Sector 55 (Management of Companies and Enterprises), and Sector 81 (Other Services [except Public Administration]).

¹⁷ The SAS collects data from companies that primarily provide services to individuals, businesses, and governments (NAICS 51, 5231, 52392, 52393, 532, 54, 56, 62, 71, and 81). This survey also covers the Transportation and Warehousing sectors (NAICS 484, 492, and 493). Industry coverage and detail have been expanded since 1982 and include most personal, business, automotive, amusement and recreation, social, health, and other professional services.

The NAICS was used for the first time during the 1999 survey to collect data for the SAS. The scope of the survey has been broadened to encompass the old Annual Survey of Communication Services and the old Transportation Annual Survey. With the implementation of the NAICS, approximately 150 additional service industries are being covered.

The NAPCS was introduced for the first time with the 2001 survey year to include the Information sector (NAICS 51) and Computer System Design and Related Services (Industry Group 5415).

The NAPCS is expected to expand to include the products of industries in the NAICS sectors not yet covered—Agriculture, Forestry, Fishing and Hunting; Mining, Quarrying, and Oil and Gas Extraction; Utilities; Construction; Manufacturing; Wholesale Trade; and Retail Trade.

The 2007 North American Product Classification System

The statistical agencies of Mexico, Canada, and the United States currently have assembled the products developed under Phases 1 through 3 into 102 product lists that identify and define the significant products produced by about 370 U.S. service industries. Included among these lists are 97 that are expected to be finalized at the trilateral level; two at the bilateral level (U.S. and Mexico for NAICS 621210 [Offices of Dentists] and for NAICS 621610 [Home Health Care Services]); three at the U.S.-only level (includes a list for industry 533110 [Lessors of Nonfinancial Intangible Assets (except copyrighted works)]; a list for the industries in NAICS 55111 [Management of Companies and Enterprises]; and a list for health service industries in NAICS 621 and 622 [except 6212, 6216, and 6219]). Product lines developed from either draft or final versions of all 102 lists were incorporated into new product collection forms developed for the 2007 Economic Census. These have been incorporated incrementally into the SAS (beginning in 2001).

By the end of calendar year 2007, the three countries finalized 91 of the 99 bilateral/trilateral product lists, and the 8 remaining lists were finalized in early 2008. Thereafter, the three countries undertook a final review and editing process, with publication of the final products in mid-2008 on the Census Bureau's NAPCS home page <<http://census.gov/eos/www.napcs/napcs.htm>>. Finally, the three countries have begun drafting a demand-based classification structure for organizing and presenting the NAPCS; however, this work cannot be completed until the NAPCS expands to include goods as well as service products.

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INTRODUCTION

The 2007 Economic Census collected data on approximately 29 million business establishments, covering about 85 percent of all economic activity in the United States. To enumerate these establishments, the U.S. Census Bureau designed approximately 560 questionnaires to collect data from establishments in all or part of 18 North American Industry Classification System (NAICS)-defined business sectors (1,060 NAICS industries) in the 50 states, District of Columbia, Island Areas,¹ and offshore areas (for mining). The 2007 census also included surveys of business owners, commodity flow, and business expenditures.² (For more information on questionnaires by sector, see Appendix E, “2007 Economic Census Questionnaires by NAICS Sector.”)

¹ The Island Areas for 2007 consisted of Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, and American Samoa.

² Thomas L. Mesenbourg, “Economic Census Overview,” 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007, p. 3.

DEVELOPING QUESTIONNAIRE DESIGN AND CONTENT³

The Census Bureau determines the content of the economic census in consultation with other federal agencies, private industry, and the academic community. The specific data to be collected are governed by the chief purposes for conducting the economic census, including:

- Establishing the basic statistical framework for composite measures of the nation’s economic activity.
- Creating benchmarks and sample frames for monthly, quarterly, and annual surveys that provide measures of the nation’s economy between censuses.
- Collecting data for measuring growth and changes in the nation’s economy over time.

³ Information for this section was drawn from Judy M. Dodds, “Determining Economic Census Content,” *Government Information Quarterly*, Vol. 15, No. 3, 1998, pp. 247–262.

- Developing and analyzing federal economic policy.
- Planning and evaluating the results of a wide variety of federal agency programs.
- Creating geographic area statistics for local government use in planning, evaluating, and comparing their jurisdictions with others.
- Business planning (identifying plant or warehouse locations, measuring potential markets, defining sales territories, determining advertising budgets, etc.).

Questionnaire Content Requirements

The U.S. Office of Management and Budget (OMB) has ultimate authority over all economic census forms and content planned for mailout by the Census Bureau,⁴ but in practice, the Census Bureau and OMB jointly review data requests and approve them based on the following criteria:

1. *General purpose statistics.* The economic census collects statistics about the U.S. economy and disseminates them to users of economic data. Data benefitting only a single user, or a small number of data users, is generally not collected.
2. *Priority.* Requests for data from federal agencies are generally given higher priority than requests from private organizations. Specifically, requests from the Bureau of Economic Analysis (BEA) for data that will be used for the national accounts, benchmarking, or improving estimates of the gross domestic product (GDP) are considered most important. Requests from the Federal Reserve Board, the Bureau of Labor Statistics (BLS), and other federal agencies also receive a higher priority than nonfederal data requests.
3. *Cost.* The Census Bureau, like most federal agencies, must operate within an increasingly limited budget. Because each question on the census form incurs substantial costs (e.g., for mailout and follow-up operations, data entry and editing, processing, publication, and dissemination), these strictures at times require the Census Bureau to deny data requests or eliminate previous data collection efforts.
4. *Availability of the same or similar data from other sources.* Requests for data that are already available from another government agency or a private source are generally not approved. However, exceptions are made if available data are inadequate.
5. *Ability of companies to supply requested data.* Most of the questions asked during the economic census are designed so that the information can be provided from records that companies customarily maintain for accounting, tax reporting, or other purposes. A company that does not maintain the requested information in its records is asked to supply reasonable estimates.
6. *Respondent burden.* In response to concerns from small businesses about the increasing reporting burden imposed on them by federal agencies, Congress enacted the Paperwork Reduction Act (44 U.S.C. 3501) in 1980. Implementation of the act (that is, determining which data collection efforts should be curtailed or eliminated) is left to individual agencies and the OMB.⁵
7. *Comparability of data requests with administrative records.* Since administrative records are an integral part of the collection of economic data, census inquiries and definitions may be designed to assure that reporting is based upon the same definition used in the program from which administrative records are obtained. (For example, ensuring that the definition of “payroll” on the census forms is identical to that on the quarterly report [IRS Form 941] companies file when submitting federal payroll taxes withheld from employees’ salaries.) Doing this facilitates combining data from the two sources and can improve data quality for larger firms.
8. *Historical continuity.* The 1997 Economic Census is the most notable recent case where historical continuity affected the content of census questionnaires. The Census Bureau replaced the Standard Industrial Classification (SIC) System, which in various forms had been in use since the 1930s, with the North American Industry Classification System (NAICS) as the basis for categorizing the nation’s 1997 economic activities.

To simplify the transition between the two classification systems, the Census Bureau published “bridge tables” that presented the 1997 data cross-tabulated

⁵ Although the economic census did not suffer major cuts as a result of this act, the Census Bureau did substantially increase its use of administrative records as a source of information for small firms. Since 1980, the Census Bureau and OMB have been especially mindful of the burden and expense that proposed inquiries impose on the business community. “Response burden” (the measure of the total time required to complete a questionnaire multiplied by the number of respondents to whom the form is sent) and the Paperwork Reduction Act have become important considerations in determining if an inquiry will be included in the economic census. Further, any additional inquiries must, by law, be offset by reductions in other Census Bureau data collection programs. Dodds, “Determining Economic Census Content,” p. 251.

⁴ See Title 44, U.S. Code—Public Printing and Documents, Sections 3501–3502, 3504, and 3507.

by both the old and new classification systems. These bridge tables, which covered all U.S. industries at the national level, helped data users deal with breaks in time-series data.

The introduction of the NAICS also had consequences for questionnaire content and design resulting from industry reclassification. The Census Bureau made many additions and changes to the 1997 questionnaires to reclassify establishments under the NAICS. Because NAICS and SIC classifications differ in many areas, the Census Bureau added a number of special inquiries and check-box questions to questionnaires to collect classification data for later use during data editing and tabulation operations.

Consultation on the Questionnaire

Prior to submitting draft questionnaires to OMB for approval, the Census Bureau published a notice of its intention to carry out the economic census in the *Federal Register*. In the notice, the Census Bureau asked for public comments and suggestions on questionnaire content and design. In addition to the *Federal Register* notice, the agency sought feedback and suggestions from its advisory committees,⁶ other federal agencies (e.g., the Federal Reserve Board, the BLS, the Office of Trade and Economic Analysis, and the BEA⁷), industry groups, and professional and business associations.⁸

⁶ The Census Bureau Advisory Committee of Professional Associations (consisting of the American Economic Association, American Statistical Association, Population Association of America, and American Marketing Association subgroups) and Race and Ethnic Advisory Committee play important roles in reviewing proposed additions or subtractions of inquiries, provide research guidance on new inquiries, and offer recommendations of the benefits or justifications for data within the business and academic communities. For more information on the roles of these advisory committees, see Chapter 1, "Introduction."

⁷ Because of the critical importance of the economic census to the BEA, the Census Bureau accords special consideration to that agency's recommendations. Studies directed at improving estimates of the GDP, as well as the BEA's recommendation, directly resulted in the expansion of industry coverage beginning with the 1992 Economic Census. At the BEA's recommendation, the Census Bureau added these sectors to the economic census: Finance, Insurance, and Real Estate; Communications; Transportation; and Electric, Gas, and Sanitary Services. These changes, along with other long-term changes to the economic census, address the BEA's data needs for improvements to the national accounts.

⁸ The Census Bureau solicited comments and recommendations via mailing packages that contained a cover letter explaining the request for comments and referencing the "census comment" Web site. The packages were sent to hundreds of professional, industry, and business associations representing each NAICS sector covered by the economic census (e.g., the National Mining Association [Sector 21: Mining]; National Association of Home Builders of the United States [Sector 23: Construction]; Association of Home Appliance Manufacturers [Sectors 31–33: Manufacturing]).

Questionnaire Approval

Following a review of all public comments and recommendations received from other federal agencies, industry associations, and advisory committees, the Census Bureau published another *Federal Register* notice informing the public of any changes to the questionnaires. The agency drafted final wording for questions and any modifications to instructions or form layouts prior to submitting the questionnaires to the OMB for approval.

The OMB gave final approval of all census forms that requested data from individuals, businesses, and other organizations in the private sector. As part of its review of the 2007 Economic Census questionnaires, the OMB verified that the requested information would:

- Be necessary.
- Not be already available from other government or private sector sources.
- Be reportable from the records customarily maintained by respondents, or that reasonable estimates could be provided.
- Be collectable within the reporting burden control program (i.e., would not result in an overall increased reporting burden on the business community).

Following the OMB's review, modifications, and approval, the Census Bureau began finalizing and printing the questionnaires, cover letters, and instructions sent to all establishments participating in the economic census.⁹

THE 2007 ECONOMIC CENSUS QUESTIONNAIRES¹⁰

General Information

The Census Bureau's economic-subject divisions, assisted by the Economic Planning and Coordination Division and its Instrument Design and Metadata Branch, were responsible for the design and content of the census questionnaires. Work on the questionnaires formally began in October 2005.

Along with the Census Bureau's Administrative and Customer Services Division (ACSD), the following divisions and offices within the Economic Programs

⁹ Questionnaires are assigned a form number (e.g., AE-71303: Amusement Parks and Arcades; IN-51102: Book Publishing; RT-44101: Automobile Dealers).

¹⁰ Information for this section was drawn from Judy M. Dodds, "Determining Economic Census Content," pp. 247–262.

Directorate assisted with the design and review of the 2007 questionnaires:¹¹

- Company Statistics Division (CSD)
- Economic Planning and Coordination Division (EPCD)
- Economic Statistical Methods and Programming Division (ESMPD)
- Manufacturing and Construction Division (MCD)
- Office of Statistical Methods and Research for Economic Programs (OSMREP)
- Service Sector Statistics Division (SSSD)

Following creation of the 2007 questionnaires, Census Bureau headquarters staff electronically transmitted the questionnaires to the agency's National Processing Center (NPC) in Jeffersonville, IN, for print testing on the NPC's printers.¹² Additionally, the Census Bureau awarded contracts to private printers for mass printing and assembly of select 2007 questionnaire packages.¹³

Using Metadata for Questionnaire Design

The Census Bureau has been designing questionnaires with automated systems and metadata since the 2002 Economic Census. For 2007, the Economic Metadata Repository (EMR), the Questionnaire User Interface (QUI), and the Generalized Instrument Design System (GIDS) were redesigned to improve and streamline the effort necessary to produce both paper and electronic versions of the 2007 census forms.¹⁴ This redesign was required to address numerous lessons learned from the 2002 system and to ultimately improve the GIDS Surveyor software that was used to collect data from the respondents.

The redesigned system was called the Questionnaire User Interface–Generalized Instrument Design System (QUI–GIDS).

¹¹ U.S. Census Bureau, "Instrument Design and Metadata Branch: Monthly Activity Report, October 2005," October 30, 2005, pp. 2–3.

¹² U.S. Census Bureau, "Instrument Design and Metadata Branch: Monthly Activity Report, June 2007," June 29, 2007, p. 2.

¹³ Previously, the Census Bureau awarded a single contract to a commercial printer to print all economic census questionnaires. However, as a result of the fiscal year 2007 continuing resolution, the agency awarded two contracts to print questionnaires for the services sector in order to split the workload and meet the late September 2007 printing deadline. Edward D. Walker, "General Lessons Learned from the 2002 Economic Census," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007.

¹⁴ Sheila Proudfoot and Donna Lee Hambric, "Experiences with Developing and Using Metadata-Driven Processing Systems for the Economic Census," presented at the Third International Conference on Establishment Surveys, Montreal, Quebec, Canada, June 18–21, 2007.

Census Bureau staff created questionnaires, assigned questions, and maintained all questionnaire content in the QUI. Users created layout designs of each item variation (employer identification number, physical location, etc.) using GIDS. When questionnaire designs were completed and approved, the content was locked to prevent updates, and the questionnaires were loaded to the DocuPrint® equipment at the NPC and/or provided to the commercial printers.

Questionnaire Content

Because of the variety of activities within the economy, and within the major economic sectors, questionnaire content tends to be tailored by industry. (For example, the Census Bureau used 292 separate questionnaires to enumerate the Manufacturing sector.) Nevertheless, the questionnaires requested the following basic data items of all 2007 Economic Census participants:

- Employer identification number
- Kind-of-business activity (except Manufacturing and Mining)
- Physical location
- Operational status
- Months in operation
- Dollar volume of business
- Number of employees
- Payroll

The general instructions and certification (name, address, telephone number, etc., of the person completing the questionnaire) were similar for all questionnaires. Within each major economic sector, the Census Bureau customized the questionnaires to the greatest extent possible for ease of response, but the data requested varied enormously from sector to sector (see Appendix E, "2007 Economic Census Questionnaires by NAICS Sector").

Changes to the 2007 Questionnaires

The questionnaires' standardized appearance and design (implemented for the 2002 Economic Census) allowed the Census Bureau to use a common paper sheet-size of 8½ inches by 11 inches. The agency also incorporated consistent design and layout characteristics, including establishing a single "look and feel" that easily identified all questionnaires as part of the economic census, similar to those used in 2002.

Although the appearance of the questionnaires was virtually unchanged from 2002, the Census Bureau incorporated some improvements to ease respondents' burden. These included:

- *Updates to the agency's Surveyor software.* In response to 2002 census participants' suggestions, the agency enhanced its Surveyor software to make electronic reporting easier. With the 2007 version, respondents could more easily create and export spreadsheets, add new locations, choose multiple views of establishment-provided data, and speed up data download and submission times.
- *Changes in content.* The Census Bureau deleted inquiries about leased employment and payroll, supply chain, and e-commerce. Inquiries related to franchising, outsourcing, and expenses for health and other benefits were added to better measure changing business characteristics.
- *More standardized product detail.* Some industries reported product lines according to the new North American Product Classification System (NAPCS). The NAPCS allowed the Census Bureau to produce comparable product data across industries. (For more information on the introduction of the NAPCS, see Chapter 2, "Industrial and Product Classification Systems.")¹⁵

Specialized Inquiries

In addition to including questions for collecting core content from all establishments, the Census Bureau included specialized inquiries on selected questionnaires to collect data from particular sectors of the economy.¹⁶ These specialized inquiries were grouped into six general categories:¹⁷

Inventories. This category measures the tangible inventories owned by an establishment. The inventory data provide a benchmark for annual and monthly estimates of inventories during the years between the censuses and are one of the components of business

¹⁵ U.S. Census Bureau, "Introducing the 2007 Economic Census," EC07-PR-1a, <<http://bhs.econ.census.gov/BHS/ECAD/Introducingthe07EconomicCensus.pdf>> (July 11, 2007), p. 1.

¹⁶ For more information on questionnaire standardization, see U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, "Chapter 5: Questionnaire Development and Design," EC02-00R-HIST, September 2006, pp. 49–52.

¹⁷ These descriptions are drawn from U.S. Census Bureau, "Economic Census Questions on Forms for Selected Sectors Only," <<http://www.census.gov/epcd/ec02/ec02questions2.htm>> (April 14, 2004), pp. 2–11.

investments used in calculating the National Income and Product Accounts.

Assets and expenditures. The 2007 Economic Census asked for information on assets, capital expenditures, and depreciation; rental payments; and lease rents.

1. Assets, capital expenditures, and depreciation are key components in estimation of the nation's stock of tangible wealth—often referred to as "capital stock." The level of capital stock is an important component in determining the flow of capital services available to national production. Estimates of capital stock also are used for developing gross domestic product estimates and for computing labor and capital productivity.
2. Rental and lease payments allow consistent measurement of assets and capital expenditures (many firms prefer leasing over purchasing equipment or land). Responses to questions on these expenditures facilitate calculation of measures of capital investment for (1) rental and lease of equipment, tools, machinery, vehicles, and furniture; and (2) buildings, job-site trailers, and other structures.
3. Lease rents are asked for mineral properties and are used in computing measures of capital investment.

Costs and expenses. Two types of questions on the census questionnaires asked for information on costs and expenses of business operations:

1. *Selected expenses.* These include costs of materials, parts, and supplies; construction work subcontracted to others; electricity; and selected purchased services (e.g., maintenance and repair of buildings, legal services, leased employees, advertising, and promotion).
2. *Cost of detailed supplies (specific to industry) and fuels used.* Expenses data were used to compute the value added for an industry and are subtracted from the gross output (e.g., value of shipments) to ensure consistent measurement of the value added for establishments with similar levels of output, but different levels of input (i.e., supplies used and expenses).

Check-box inquiries. Check-box inquiries were used to collect relatively simple information on specific subjects that could be answered by checking off an appropriate box on the questionnaire. Two general

kinds of check-box inquiries were used in the 2007 Census:

1. *Kind of business/Type of operation.* “Kind of Business” was asked of all industries covered by the census except selected manufacturing establishments. “Type of Operation” was used on the wholesale and mining questionnaires. Data collected by this item were used to classify establishments by industry according to the NAICS and, in some cases, to provide additional detail beyond that required by the NAICS.¹⁸
2. *Method of selling.* This was asked of retail and wholesale trade industries only. Example of methods include electronic commerce, store or display room, mail order, direct selling, and vending machines.

Selected sections. These sections of the questionnaires included questions directed toward specific industries or industry groups. Question topics included:

1. Activity of operating establishments (asked of establishments providing enterprise support to businesses)¹⁹
2. Type of construction (i.e., building or nonbuilding, by respective type; this was used for the construction industry sector)
3. Shipping and handling (whether receipts for shipping and handling were received, the value of those receipts, and whether they were included in the sales and receipts totals reported elsewhere on the questionnaire)
4. Exported services

The type-of-construction section served much the same purpose for the construction industries as the kind-of-business check box did for the other NAICS sectors.²⁰ Specifically, data from the shipping and handling section were used to verify that receipts for those services were included in the total sales and receipts reported for individual establishments. Data collected on exports of goods and services were used to measure the level of exported goods and services for service industries. The latter information was intended

¹⁸ Construction industries were asked “Kind of Business” and “Type of Construction.” Mining industries were asked “Type of Operation” to determine the type of mining activities (surface, underground, etc.).

¹⁹ Respondents were asked to check off the primary kind of business or activity—e.g., manufacturing, educational services, transportation services, transportation and warehousing—of the establishments managed or serviced by the respondent. The information collected through this item was used to produce tabulations that more accurately linked inputs and outputs at broad industry levels.

²⁰ The “Type of Construction” and “Kind of Business” inquiries were used together to determine the classification for construction industries.

to complement the detailed statistics on merchandise exports compiled from customs data.

Special inquiries. Individual items that varied from industry to industry appeared on virtually all the questionnaires. The specific items were customized to the industry involved. Examples included “cost of electricity” and “exported energy” inquiries on questionnaire UT-22101 (Sector 22: Utilities—Electric, Gas, and Water Utilities) and “sales estimates” inquiries (by print, Internet, and electronic media) on questionnaire IN-51102 (Sector 51: Information—Book Publishing),²¹ and “class of customer” (e.g., household, individual, business, or government).²²

ELECTRONIC DATA COLLECTION

Background Information

The Census Bureau first offered an electronic reporting option (using magnetic computer tape) to a few large companies during the 1967 Economic Census. Broad use of electronic reporting began during the 1987 Economic Census. In the 1987 census, the agency offered to mail magnetic computer tapes to selected respondents—primarily large retail, food services, and hotel chain enterprises—requesting that establishments record their data and return the tapes to the Census Bureau. The Census Bureau continued using this method of electronic reporting until the 1997 Economic Census. At that time, the agency continued to allow response by magnetic tape and also offered selected industries the ability to respond via Computerized Self-Administered Questionnaires (CSAQ).²³ The CSAQ consisted of 21 retail census questionnaires on diskette for use with personal computers.²⁴

The Census Bureau further expanded the use of electronic reporting for the 2002 Economic Census—using Census Bureau–designed Surveyor software—to reduce respondent burden and increase electronic response.²⁵ The agency built upon the success of the 2002 experience by soliciting recommendations from business users who volunteered to review the Surveyor

²¹ View samples of the 2007 Economic Census questionnaires for each NAICS sector at the Census Bureau’s Business Help Site at <http://bhs.econ.census.gov/BHS/CEN_2007FORMS.html> (September 27, 2007)."

²² “Class of Customer” inquiries are used by the Bureau of Economic Analysis to calculate national income and product accounts.

²³ For details on the development of the CSAQ, see Chapter 4, “Technological Innovations and the Census.”

²⁴ In the 1997 census, the Census Bureau mailed 471 companies CSAQ diskettes, and 200 companies responded by computer tapes. These 671 companies represented more than 300,000 individual business establishments. *History of the 1997 Economic Census*, p. 74.

²⁵ U.S. Census Bureau, “2002 Electronic Collection and Customer Support Plan: Overview,” September 24, 1999, p. 4.

software.²⁶ The Census Bureau used suggestions from this review to improve the software, making it more user-friendly and further reducing respondent burden, with the result that an even greater number of respondents submitted their data electronically in 2007.²⁷

The Business Help Site (BHS)

Establishments receiving a 2007 Economic Census questionnaire via the U.S. Postal Service had two options for reporting their data:

1. Recording data on the paper questionnaire and mailing it to the Census Bureau's National Processing Center (NPC).
2. Visiting the Census Bureau's Business Help Site and supplying data electronically via a download of the agency's Surveyor software.²⁸

Additionally, the BHS allowed establishments to use their own computers to request administrative actions, read frequently asked questions, check their response status, download and print paper copies of questionnaires, and ask for assistance by visiting the BHS at <<http://www.census.gov/econhelp>>.

To report electronically or to access other online services, a respondent entered a username and password.²⁹ Businesses downloaded the required

²⁶ Surveyor underwent two phases of usability testing prior to development of the 2007 software. During the first phase, the Census Bureau visited 75 companies to inquire about past experience with Surveyor, past method of response, and expectations. The agency incorporated Phase 1 recommendations into a 2007 Surveyor prototype. Twenty-five companies participated in the second-phase usability testing of the 2007 prototype. A.E. Anderson and M.D. Harley, "Using Software to Collect Data Electronically for the Economic Census," presented at the Third International Conference on Establishment Surveys, Montreal, Quebec, Canada, June 18–21, 2007.

²⁷ Thomas L. Mesenbourg, "Economic Programs Update," Census Advisory Committee of Professional Associations, April 19, 2007, p. 7. See also, Thomas L. Mesenbourg, "Economic Census Overview," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007, p. 5.

²⁸ The Census Bureau encouraged electronic reporting not only for the cost-savings associated with handling fewer paper questionnaires at the NPC, but also because Surveyor reviewed data for missing or obviously erroneous information prior to a respondent submitting the questionnaire to the Census Bureau. Having establishments prompted to make corrections at the time of entry reduced the involvement of data analysts later, which was often needed with paper questionnaires.

²⁹ The Census Bureau identified each paper questionnaire mailed to an establishment via the establishment's user identification and password. Establishments supplied this information when logging in to report using the Surveyor software. After receiving a successfully completed electronic questionnaire, the Census Bureau could identify and reject the paper questionnaire as a duplicate should one also be mailed to the NPC for processing.

census software (Surveyor) and the necessary census questionnaire(s) and instructions from the BHS.³⁰

Once the questionnaires were completed, the Surveyor software reviewed data inconsistencies, and respondents made the necessary corrections, printed the data on forms for their records, and transmitted the completed and encrypted electronic questionnaires to Census Bureau analysts. These analysts would review the completed questionnaires prior to adding them to the Census Bureau's database. This avoided the time-consuming initial process of check-in, data keying, and initial data analysis (for inconsistent or blank entries) required of paper questionnaires.

Surveyor software. The Census Bureau's BHS served as a portal for downloading the 2007 version of the Surveyor software. Surveyor enabled businesses to complete electronic questionnaires and import information from establishment-maintained records instead of completing and mailing paper questionnaires.

If more than one type of questionnaire had to be completed (not counting the classification forms), a respondent could create:

1. Supplementary spreadsheets for those items not included on the majority of forms.
2. Separate spreadsheets to use for each separate type of establishment.
3. A general spreadsheet covering the data required for all establishments.

Once a respondent imported the data from the spreadsheet(s) into Surveyor for all establishments and made any corrections flagged by the software, the completed electronic questionnaires were submitted directly to the Census Bureau.³¹

³⁰ Instructions and other assistance for electronic respondents could be consulted online at the BHS (<http://www.census.gov/econhelp>). To report using the Census Bureau's electronic reporting software, respondents had to use Microsoft Windows 2000, XP, or Vista and any version of Microsoft Internet Explorer 6.0 or Netscape Navigator 7.0 or FireFox 1.5.0.7 or above (128-bit encryption).

³¹ For more information, see U.S. Census Bureau, "Electronic Reporting," <<http://bhs.econ.census.gov/ec07/electronic1.html>> (October 24, 2007).

Chapter 4: Promoting the Census and Product Awareness

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INTRODUCTION

The economic census is the major source of data about the structure and functioning of the nation's economy. Every 5 years, the economic census provides the industry and geographic detail that businesses and communities need to assess their performance, promote economic development, and identify business opportunities. Business establishments within the 50 states, District of Columbia, and Island Areas are required to participate in the economic census, when asked, under authority granted by Title 13, U.S. Code—Census.¹

Although response is required by law, a small but significant percentage of businesses either fail to respond or do so late in the data collection cycle. Nonresponse and late response require the U.S. Census Bureau to conduct costly follow-up operations (including additional questionnaire mailings and telephone calls) to obtain business responses.

Despite the Census Bureau's increasingly proactive efforts to reach nonrespondents, recent censuses have witnessed declines in participation. Response rates from the 2002 Economic Census declined relative to the 1997 Economic Census, which in turn declined from the peak response (92 percent) in the 1992 Economic Census. To reverse this negative trend, the Census Bureau developed and implemented a multifaceted awareness and promotion program that was intended both to increase response rates and to create awareness among data users about the value of the economic census and the information the census provides.²

PROMOTING RESPONSE TO THE CENSUS

Promotional Activities by Census Bureau Communications Offices³

The Census Bureau's office of the associate director and assistant directors for Economic Programs oversaw the 2007 Economic Census promotion and awareness campaign, with day-to-day operation of the campaign managed by the agency's Economic Planning and Coordination Division (EPCD). The following Census Bureau offices outside of the Economic Programs

Directorate also played vital roles in advertising and promoting the census:

Congressional Affairs Office (CAO). The CAO is responsible for maintaining contacts with and providing information and assistance to members of Congress and their staffs with respect to the activities and products of the Census Bureau. The CAO provided fact sheets for congressional offices to help them respond to inquiries from their constituents.

Marketing Services Office (MSO). The MSO provided guidance to the Economic Programs Directorate on product marketing activities.

Public Information Office (PIO). The PIO developed press releases and other notices and distributed them to a variety of media outlets. The PIO conducted video news conferences with officials from the Commerce Department and private sector, including one when the census was mailed and a second to mark the release of the *Advance Report*.⁴ The conferences highlighted the value of the economic census and the importance of responding to the census. The PIO also consulted with the Economic Programs Directorate while the directorate developed publicity and advertising strategies, themes, and messages.

Customer Liaison Office (CLO). The CLO served as the principal contact between the Census Bureau and its State Data Centers, Business and Industry Data Centers, and Census Information Centers, keeping the centers informed about plans for the 2007 census by holding direct briefings for center staff and preparing and maintaining mailing lists for the distribution of informational materials.

Economic Planning and Coordination

Division (EPCD). The EPCD developed and coordinated implementation of the overall strategy for promoting response. The strategy centered around a two-pronged program of information and assistance:

Large companies. The Census Bureau established an account manager program and assigned Census Bureau statisticians to work on a one-on-one basis with about 1,300 of the nation's largest companies. The agency also mailed advance information and exchanged contact information with all companies having 500 or more employees, about 15,000 companies in all.⁵

¹ The Island Areas include Puerto Rico, American Samoa, the U.S. Virgin Islands, Guam, and the Commonwealth of the Northern Mariana Islands.

² Paul Zeisset, "Promoting Business Response in the Economic Census: SDC Steering Committee," February 22, 2007, p. 2; U.S. Census Bureau, "2007 Economic Census Program Plan," Version 1.0 (Final), September 19, 2005, pp. 1–4.

³ Information for this section was drawn from U.S. Census Bureau, "2007 Economic Census Program Plan," and U.S. Census Bureau intranet, "Associate Directorate for Communications," June 4, 2007.

⁴ The *Advance Report* contains preliminary census data at the national level only, by sector and subsector.

⁵ The 15,000 total mailing of advance information packages included mailout to 13,000 companies and approximately 2,000 mailings to large companies that would require questionnaires to be sent to more than one address for completion.

Small- and medium-sized companies. The Census Bureau provided assistance to smaller businesses through its online Business Help Site and a toll-free help line. These resources provided assistance to all businesses that did not receive advance information or the services of an account manager. The Census Bureau also developed an advertising and promotion campaign that worked through news media, business associations, chambers of commerce, and other intermediaries to raise awareness of the census and the importance of census response.

Major Components of the Awareness/Promotion Campaign

For the 2007 Economic Census awareness/promotion campaign, the Census Bureau implemented lessons learned in prior censuses and accounted for changes in the business environment. These updates included:

- Greater reliance on electronic communication media. In focus groups, business people advised that they are less likely to read printed material and are more reliant on the Internet and electronic communications than in the past. Electronic communications take less time and cost to develop and can be changed and disseminated quickly.
- Increased focus on awareness of the census and its potential benefits for businesses, with communications that answered the question “What’s in it for me?”
- Development of a new Internet site, <<http://business.census.gov>>. The site provided access to industry snapshots, business performance measures, “Hot Reports” for approximately 2,000 industries or industry groups, and frequently asked questions (FAQs) about the census.
- Increased attention on intermediaries. Businesses reported that the Internet has made them more dependent on their trade associations, which serve as filters to highlight the most important messages for them. Trade association contacts were made (via e-mail “blasts” and one-on-one contacts) in conjunction with the U.S. Small Business Administration’s ombudsman.
- Sending letters to chief financial officers (CFOs) at large companies, in conjunction with the advance information mailing, to underscore the importance of the census. The letters identified the company contact and the account manager and asked CFOs to encourage and support census participation.

- Development of a Web site form to collect responses to the contact exchange card mailing.⁶ To improve response, the Web form was used as an option to the regular mailback postcard. Telephone follow-up was also planned. During the 2002 Economic Census, businesses that returned the card had a significantly higher response rate.
- Account manager software with simplified record keeping and improved information management.
- More hands-on training for account managers. Training covered the basics of census processing, the Surveyor and Remedy/Customer Relationship Management software programs for data collection, the Secure Message Center, and refusal avoidance techniques.
- Earlier identification of potential nonrespondents and targeting of top executives with express-mail letters from Census Bureau or Commerce Department leaders.

Publicity Contractors

The Census Bureau awarded two contracts for 2007 Economic Census promotion and advertising—the first to WB&A Market Research and the second to Grafik Marketing Communications. To evaluate publicity materials, messages, and strategies, the contractors conducted focus groups with potential respondents (personnel from small retail, service, or construction businesses who were responsible for responding to government questionnaires) and with the newsletter editors of chambers of commerce and trade associations. The contractors also developed informational materials.

WB&A Market Research. The WB&A Market Research contract called for the company to conduct focus group research to assist with the development of the 2007 advertising and communications plan.⁷

Grafik Marketing Communications. The Census Bureau awarded the contract for the 2007 Economic Census publicity and advertising campaign to Grafik

⁶ Contact exchange cards provided a company with the name and contact information of a Census Bureau account manager who would be available to assist company representatives through the reporting process. The contact exchange card also asked for mailback of a postcard to confirm or update the company’s mailing address and the name of a contact within the company who would be responsible for completing the questionnaires. Using information from the returned contact exchange cards, the agency updated its Business Register in time to correct names and addresses for the census mailouts.

⁷ U.S. Census Bureau, “Monthly Activity Report for September 2005 [EPCD],” October 13, 2005, p. 4.

Marketing Communications in September 2006. The company used the funds to develop a multiphased advertising and promotion campaign that included a strategy to raise general awareness of the economic census and to reach out to industries with historically low response rates.⁸ The company also assisted the Census Bureau in developing a communication strategy for disseminating census results.

Business census-response focus groups. WB&A Market Research conducted focus groups in late 2006 and early 2007. Focus group participants consisted of probable business respondents (based on size and industry criteria) and members of trade and business associations, the trade press, and chambers of commerce.

WB&A questioned focus group participants on a variety of topics, including their government reporting responsibilities, the roles of print and electronic media as information sources, and the importance of chambers of commerce, associations, and other organizations as information sources. The participants confirmed the importance of the “core” census messages:

- Census data are important and useful.
- Forms are due February 12, 2008.
- Response is required by law.

The focus groups revealed significant shifts in the way businesses receive information about federal data-collection activities and the manner in which vital information should be disseminated. The Census Bureau incorporated the following focus group observations into the 2007 promotion and advertising campaign:

- The Internet is now an important source of information for more business people than was the case with previous economic censuses.
- Although the Internet allows people to complete core duties more efficiently, some are becoming overloaded with information.
- Businesses increasingly look to their associations as information sources. Associations provide the filter business people need to eliminate extraneous information.

⁸ Industries with historically low response rates to the economic census include fast food restaurants, convenience stores, commercial printing, automotive repair facilities, and day care providers. U.S. Census Bureau, “Activity Report for CROB, September 2006,” p. 1; “Activity Report for CROB, October 2006,” November 3, 2006, p. 1; Grafik Marketing Communications, “Grafik Awarded Contract by Economic Census Bureau,” October 6, 2006, <http://www.grafik.com/flash/index.cfm?fuseaction=Our_Firm.News> (June 20, 2007).

- Businesses appear to better understand the value of the economic census when messages address the question, “What’s in it for me?”⁹

Publicity and Public-Service Advertising

General information. Results from the WB&A Market Research focus groups enabled the Census Bureau and its advertising contractor—Grafik Marketing Communications—to develop materials and messages that promoted early and complete response and that stressed the mandatory nature of the census and the due date for return of completed questionnaires (February 12, 2008).¹⁰

The work of both contractors resulted in an advertising and promotion plan that included a multifaceted, multiphased campaign incorporating partnerships and the Internet, mail, and e-mail distribution of messages and public service announcements (PSAs). The planned activities were timed to coincide with the phases of the census: before census mailout, to validate the importance of the economic census and create anticipation for questionnaires (April 2007 to October 2007); data collection (October 2007 to February 2008); and after the February 2008 deadline, to communicate that response was still important (March 2008 to June 2008).

Mail campaign. The Census Bureau’s Economic Programs Directorate has strong ties with many trade and business associations—intermediaries—that traditionally have been vital players in the review of census forms and dissemination of economic data to their members. Intermediaries also assist their members with questions and concerns about the census, explain the importance of the census, and provide useful links from their Web sites.

With the increased use of the Internet, intermediaries were in a better position to help get out information about the economic census. In the past, intermediaries relied more on print communications and were reluctant to sacrifice potential paid advertising space to provide free coverage for the economic census. Further, the long development cycle for print media made it difficult to coordinate message distribution with timetables for thousands of organizations, which hampered

⁹ WB&A Market Research, “U.S. Department of Commerce, Economic Census,” <<http://www.wbanda.com/index.cfm?fuseaction=services.cases&typeid=4F0D7366-1125-AADA-EA5EB8F220D3422F>> (December 7, 2006); Robert Marske, Michael J. Hartz, and Laurie Torene, “Promoting Business Response to the 2007 Economic Census,” background paper for Census Advisory Committee of Professional Associations Meetings, April 19–20, 2007, pp. 10–11.

¹⁰ Marske, Hartz, and Torene, “Promoting Business Response,” pp. 10–11.

Table 4-1.

Top 20 Nonresponding Industries From the 2002 Economic Census

NAICS code	Industry	Forms mailed	Outstanding forms
722110	Full-Service Restaurants	68,380	18,793
561730	Landscaping Services	67,395	10,306
722211	Limited-Service Restaurants	41,337	10,098
621111	Offices of Physicians	70,310	9,770
541110	Offices of Lawyers	75,877	8,319
721110	Hotels (Except Casino Hotels) and Motels	31,874	7,534
621210	Offices of Dentists	53,819	6,929
624410	Child Day Care Services	28,626	6,643
238210	Electrical Contractors	48,986	6,556
811111	General Automotive Repair	35,196	6,549
445110	Supermarkets and Other Grocery Stores	19,388	6,472
722410	Drinking Places (Alcoholic Beverages)	22,635	6,206
447110	Gasoline Stations with Convenience Stores	23,384	5,345
445120	Convenience Stores	12,545	5,311
238220	Plumbing, Heating, Air-Conditioning Contractors	65,235	5,260
812112	Beauty Salons	22,894	5,178
531210	Offices of Real Estate Agents and Brokers	31,120	4,952
531110	Lessors of Residential Buildings and Dwellings	22,945	4,690
722213	Snack and Nonalcoholic Beverage Bars	17,866	4,535
561720	Janitorial Services	22,107	4,446

Source: Robert Marske, Michael J. Hartz, and Laurie Torene, "Promoting Business Response to the 2007 Economic Census," background paper for Census Advisory Committee of Professional Associations Meetings, April 19–20, 2007, pp. 10–11

getting the right message into the media at the right time. The shift to electronic media also made it easy to change messages frequently. The Internet could deliver to each audience a tailored message that businesses could access easily, demonstrating the importance of census information in a unique way to each association and its members.

The Census Bureau initiated the first phase of its public mail campaign in October 2007 by mailing to intermediaries colorful brochures announcing the availability of the new Internet site, <<http://business.census.gov>>. These intermediaries represented about 10,000 organizations, including:

- Chambers of commerce
- Trade and professional associations
- National and regional business journals
- Major metropolitan newspapers
- Census Bureau–affiliated organizations (e.g., State Data Centers, Business and Industry Data Centers, and Census Information Centers)

For 2007, the Census Bureau focused additional efforts on a few organizations with particular potential to reach large numbers of respondents. These included organizations with extensive nationwide representation

of businesses in many industries.¹¹ For example, the Census Bureau struck a partnership with the American Payroll Association (APA). The APA is a particularly important partner because its members, human resources professionals, very often are responsible for preparing their company's responses to the economic census. Its members look to the APA for guidance on topics related to federal reporting. As part of this partnership, the Census Bureau supplied articles about the economic census for inclusion in the *APA Journal*; a senior APA official addressed account managers (see below) at the May 2007 account manager kick-off event; and Census Bureau staff made presentations at several APA conferences. Similar partnerships were struck with the U.S. Chamber of Commerce and the National Federation of Independent Business.¹²

The success of the Census Bureau–APA partnership led to the development of similar partnerships with other high-priority organizations. The agency developed important partnerships with associations representing industries that had a history of relatively low response rates (see Table 4-1). Outstanding forms from single-establishments in the 20 worst-responding industries,

¹¹ "In scope" businesses are those within the census mailout universe (i.e., businesses to which the Census Bureau mails census questionnaires).

¹² Marske, Hartz, and Torene, "Promoting Business Response," p.13.

taken together, accounted for nearly 3 percent of total census mailout in the 2002 Economic Census.

Information kits. In past censuses, the Census Bureau mailed paper “information kits” containing public service announcements (PSAs), news releases and sample articles, sample data, etc., to intermediaries. For 2007, the agency produced digital versions of the kits and announced their availability to intermediaries via the Census Bureau’s new business Web site. Organizations and associations were encouraged to incorporate the messages, articles, and PSAs into membership mailings, Web sites, and newsletters, and to provide links from their own Web sites.

Use of the Internet to disseminate the information kits allowed the Census Bureau to quickly update messages based upon the phases of census operations. Prior to the mailout of questionnaires, the brochure and Web site alerted visitors to the coming census and the importance of census data. During mailout and while questionnaires were in the field, e-mail alerts sent to intermediaries focused upon alerting establishments that the census was underway. As the February 12, 2008, deadline approached, messages reminded businesses of their obligation to respond to the census. Finally, in the weeks following the due date, messages reminded businesses that reporting was required even though the due date passed and that due date extensions could be requested for more time to complete the forms.¹³

Events, Special Topics, and Sample Articles

Special events. The Census Bureau held a video news conference in December 2007 to officially “kick-off” census data collection. Participants included representatives from the Census Bureau, Bureau of Economic Analysis, U.S. Chamber of Commerce, the U.S. Department of Commerce’s Economics and Statistics Administration, and the National Restaurant Association. Media outlets viewed the conference, which increased coverage of the economic census in local newspapers nationwide.

Special topic news releases. The Census Bureau’s Public Information Office issued news releases to call attention to the economic census. These included announcements of the launch of the business Web site, the December 2007 “kick-off,” and the passing of the February 2008 due date. In addition to these announcements, another release identified the leading industries in each state on a per-capita sales or revenue basis.

Each of these releases received coverage in daily newspapers and on Web sites.

Testimonials.¹⁴ Focus group participants told the Census Bureau that businesses wanted to be assured that the economic census is important and useful and that they are not wasting their time and resources by responding. The agency addressed this, in part, by compiling testimonials attesting to the value of the economic census and including these statements in promotional materials and on the Census Bureau’s Web site. For example, Ben Bernanke, chairman of the Federal Reserve Board of Governors, said:

The Economic Census is indispensable to understanding America’s economy. It insures the accuracy of the statistics we rely on for sound economic policy and for successful business planning. Returning your economic census form helps us all.

Thomas J. Donohue, president of the U.S. Chamber of Commerce stated that:

Sound and timely economic data are the fuel that powers economic decision making. Data are used by Congress, the Federal Reserve, regulatory agencies, and American businesses to formulate and evaluate fiscal, monetary, and regulatory policies and to develop business plans and financing strategies. Without sound economic data, policy makers in both the public and private sector would be flying blind.

Now, I know that the last thing businesses need is another form to fill out or questionnaire to answer, but the census data is not only important in its own right, but it is pivotal to the proper interpretation of a whole host of other statistics.

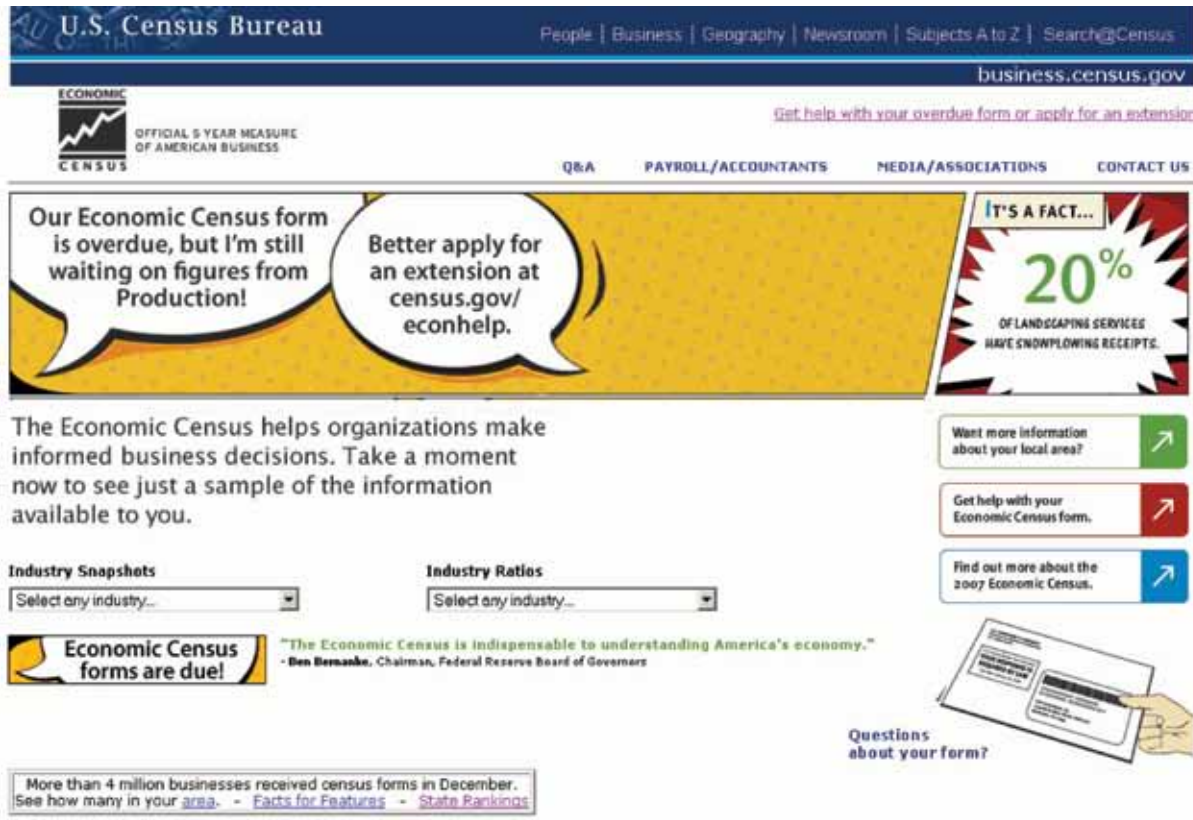
I urge all American businesses to participate in the census and to provide complete and accurate data. American businesses and the American people will be the benefactors.

Sample articles and other resources. The Census Bureau maintained a resource page for media and associations at its business Web site (<http://business.census.gov>). (See Figure 4-1.) These resources provided suggested text for news releases and editorials that the media and associations could use in articles and communications with businesses. The site also

¹³ Marske, Hartz, and Torene, “Promoting Business Response,” pp. 12–13; U.S. Census Bureau “Business Help Site,” <<http://bhs.econ.census.gov/BHS>> (June 25, 2007).

¹⁴ U.S. Census Bureau, “Business Leaders Speak Out About the Economic Census,” <<http://www.census.gov/econ/census07/testimonials.htm>> (June 27, 2007).

Figure 4-1.
2007 Economic Census Business Web Site



provided access to graphics (both Web- and publication-quality), including PSAs, logos, and icons, that organizations could use in their publications. One popular resource provided the number of businesses expected to receive a census questionnaire in each state, metropolitan area, county, and North American Industry Classification System (NAICS) sector.

The Census Bureau recognized the importance of providing a tailored and ready-to-use message to potential communication partners. Therefore, the agency tailored letters and e-mails to recipients. The letters incorporated the names of the relevant geographic area's chamber of commerce and newspapers and listed the industry scope of trade associations. Where appropriate, the letters stated the estimated number of questionnaires being sent to businesses and included text that the Census Bureau encouraged organizations to use.

News and Web site clips. Throughout the census operations, the Census Bureau monitored news stories and Web site links related to the census to assess the effectiveness of the public awareness campaign.

Media coverage consistently included these themes, which were identified by the Census Bureau as important in encouraging response:

- Census data are important and useful.
- Forms are due February 12, 2008.
- Response is required by law.

Additional media coverage noted that establishments could respond electronically and that the data supplied are confidential. Coverage of the census reached its peak during December 2007 to March 2008, which encompassed most of the data collection period.¹⁵

Public service advertisements (PSAs). Past experiences taught the Census Bureau that convincing publications to run economic census PSAs was difficult. Publishers, particularly in print media, were reluctant to sacrifice paid advertising space for free PSAs on any topic. At the same time, focus group research suggested that businesses were more likely to visit Inter-

¹⁵ Marske, Hartz, and Torene, "Promoting Business Response," pp. 12-14.

Figure 4-2.

2007 Economic Census Public Service Advertisements

The top row features three vertical panels and one horizontal panel. The first vertical panel (yellow background) contains two speech bubbles: "I need figures to estimate that market!" and "Check out business.census.gov". Below it is the Economic Census logo and the text "OFFICIAL 5 YEAR MEASURE OF AMERICAN BUSINESS" and "USCENSUSBUREAU". The second vertical panel (green background) contains two speech bubbles: "Watch for your 2007 Economic Census form." and "It's coming in December." Below it is an illustration of a hand holding a form, the text "If your business receives a form, fill it out.", "business.census.gov", and "USCENSUSBUREAU". The third vertical panel (orange background) contains one speech bubble: "Filling out your Economic Census form is required by law." Below it is an illustration of a hand holding a form, the text "If your business received a form, it's due by Feb. 22.", "business.census.gov", and "USCENSUSBUREAU". The horizontal panel (yellow background) contains one speech bubble: "Info your business needs is a click away!" and "business.census.gov". Below it is a banner that says "Economic Census forms are due!".

The bottom row features three comic-style panels. The first panel (yellow background) is titled "MEANWHILE, AT THE WATER COOLER..." and contains a speech bubble: "I need figures to estimate that market!" and another: "Check out business.census.gov". The second panel (green background) is titled "THAT MORNING, IN THE MAILROOM..." and contains two speech bubbles: "Isn't that our 2007 Economic Census form?" and "Yes, and it's important to our industry!". The third panel (orange background) is titled "SUDDENLY, THAT MORNING..." and contains two speech bubbles: "Isn't that our 2007 Economic Census form?" and "Yes, and it's required by law." Each panel includes an illustration of a hand holding a form and the Economic Census logo with the text "USCENSUSBUREAU".

net sites than in past censuses. Consequently, while the agency still developed PSAs for the 2007 census, the design incorporated a graphic look and feel and highlighted the business Web site (see Figure 4-2). Brochures and other communications did the same.

WB&A Market Research focus groups indicated that a cartoon/balloon theme grabbed attention better than other tested alternatives. The Census Bureau provided images in electronic formats for use in electronic and print publications (see Figure 4-2).

During the “awareness” phase of the campaign (April 2007 to October 2007), advertising highlighted the value of economic census data. During the data collection phase, beginning December 2007, advertisements encouraged businesses to respond. All of the advertisements urged readers to visit the Census Bureau’s business Web site (<http://business.census.gov>).¹⁶

COMPANY CONTACT PROGRAM

Large Company Program

The 15,000 largest companies in the United States account for about one-half of the nation’s total private employment, and the 1,300 largest companies account for about one-third. Therefore, receipt of census data from these companies is essential to creating a complete and accurate portrait of the national economy. The Census Bureau developed and implemented a program of alerts and contacts with these large companies to encourage their response and assist them through the reporting process. The agency sent packages of “advance” information about the economic census to companies with 500 or more employees. The 1,300 largest companies were assigned account managers. The goals of the advance information and account manager programs were to promote early and complete response to the census and to encourage use of Surveyor, the software provided by the Census Bureau that businesses could use to respond electronically.

These large businesses already had been subject to intensive mail and/or telephone follow-up in the past because delays in response result in greater expenses involved to collect the information. The account manager program was particularly effective in establishing working relationships with very large companies. It encouraged prompt and complete responses and provided timely assistance to those companies that

¹⁶ The Census Bureau did not conduct a third phase of the campaign following the due date because intermediaries expressed reservations about carrying the negative message that forms were overdue and their members might be in violation of federal law. Marske, Hartz, and Torene, “Promoting Business Response,” p. 12.

needed to complete and return the census questionnaires as early as possible.¹⁷

Account Manager (AM) Program

General information. For the 2007 Economic Census, approximately 170 account managers (AMs) from the Census Bureau’s Economic Programs Directorate¹⁸ worked with the nation’s 1,300 largest companies. Quick and thorough response by these companies was critical to the accuracy of the census.

The AMs received information about, and hands-on training in, census operations, contact strategies, and the use of software tools (including Surveyor electronic reporting software and Remedy/CRM contact management software). Electronic reporting access was important because it simplified respondents’ ability to import data from internal spreadsheets (reducing respondent burden) and enabled them to send the data to the Census Bureau in a format ready for processing, thereby eliminating time-consuming data entry and processing operations. After completing their initial training, AMs received detailed information about the specific companies they were assigned to work with and the reporting burdens of those companies.¹⁹

During the first half of 2007, the Census Bureau mailed advance information packages, including contact exchange cards, to 15,000 companies with 500 or more employees. The cards requested the name of the person who would coordinate the company’s census reporting. Recipients responded to the contact exchange card using an online form on the Census Bureau’s Business Help Site; these responses were then imported into the Remedy/CRM contact management software. For the 1,300 largest companies, the Remedy/CRM software automatically generated an e-mail message directing AMs to make initial contact with their assigned company. AMs contacted the companies to introduce themselves, identify potential reporting obstacles, encourage timely reporting, and advocate the use of electronic reporting.

Approximately 50 percent of large companies returned the contact exchange card by mid-May 2007. Since the Census Bureau had determined that up-to-date address and contact information is necessary for efficient data

¹⁷ U.S. Census Bureau, “Project Charter: 2007 Economic Census Account Managers (AM 2007),” November 8, 2004.

¹⁸ Personnel from the Economic Programs Directorate’s Company Statistics Division, Economic Planning and Coordination Division, Manufacturing and Construction Division, and Service Sector Statistics Division worked as AMs at both the Census Bureau headquarters and the National Processing Center in Jeffersonville, IN.

¹⁹ Marske, Hartz, and Torene, “Promoting Business Response,” pp. 5–8; U.S. Census Bureau, “AM Bulletin,” No. 1, April 23, 2007; U.S. Census Bureau “AM Bulletin,” No. 2, May 24, 2007.

collection, the agency sent one mail follow-up and then conducted telephone follow-up operations to obtain additional responses. AMs contacted the companies assigned to them that had not responded, and interviewers at the National Processing Center (NPC) contacted the remaining nonrespondents. In addition to obtaining contact exchange card information, callers also reminded businesses to complete the 2006 Report of Organization (form NC-99001), which is the basis for the mailing list for multiestablishment companies. After completion of telephone follow-up operations, the response rate for contact exchange cards rose to 92 percent. Once contact exchange card collection operations were finished, the updated address information was loaded into the Business Register (which provides the mailing list) and used for the economic census mailout.

Record-keeping system.²⁰ The Census Bureau used Remedy/CRM software to keep track of company contacts and provide assistance and information to both the AMs and Census Bureau senior staff. The software collected and stored all the information needed to keep track of the AMs' activities and companies' responses—or lack thereof—to the economic census. Furthermore, Remedy/CRM provided the data AMs needed to give effective and efficient service to contacted companies.²¹

The three key “modules” of the system included managing information supplied by companies on the contact exchange cards, facilitating contact management, and generating management information reports.

The AMs used Remedy/CRM to:

- Obtain company name, address, and contact information from contact exchange cards. The system generated automatic e-mail messages to the AMs, alerting them to call their assigned companies.
- Store company Web site addresses.
- Facilitate company requests for extensions.
- Receive alerts about changes in response.
- Document communication with company contacts.

Company selection. Companies were assigned to the AM program according to the following factors:

1. The company's importance to the economy or to a specific industrial sector, based on number of employees, payroll, total number of establishments (in 2006), or total sales or receipts reported in the 2002 Economic Census.

2. The expectation that, based on previous experience, the company would have difficulty with responding or might not respond at all. Companies were selected by subject branches within the Economic Programs Directorate divisions.
3. Once the list was compiled, staff members selected to act as AMs were assigned specific companies' “accounts” and were responsible for contacting the firms to which each was assigned.²²

Advance information mailing. On April 10, 2007, the Census Bureau began mailing advance information packages to approximately 15,000 companies with 500 or more employees and their subsidiaries, including the 1,300 companies identified for the AM program.

The information packages contained a cover letter, signed by the Census Bureau's associate director for Economic Programs, that introduced the upcoming census and a folder that provided general information about the census. Folder inserts included an overview of the census, examples of the kinds of data collected, key dates, information on how businesses use the data, and Census Bureau contact information. The inserts directed recipients to the Census Bureau's Business Help Site to obtain additional information about the census and see sample forms. A particularly important part of the mailing—the contact exchange card—provided the name and contact information of the Census Bureau AM assigned to assist the company respond to the economic census. The Census Bureau asked each company to return the contact exchange card, with updates to the company's mailing address and the name of the person responsible for completing the census questionnaires. Companies also could submit the contact exchange card information electronically at the Census Bureau's Business Help Site.

Companies that had not returned the contact exchange card received a reminder letter in May 2007 requesting their response as soon as possible. Because evidence from the 2002 Economic Census suggested that companies returning their contact information had a higher response rate in the census, AMs and NPC staff made telephone follow-up calls to nonrespondent companies, resulting in a 92 percent response rate for the 2007 operation.²³

Contact operations. The AMs made their initial contacts (by telephone or e-mail) to assigned companies

²² Marske, Hartz, and Torene, “Promoting Business Response,” pp. 5–6.

²³ Marske, Hartz, and Torene, “Promoting Business Response,” pp. 5–8; U.S. Census Bureau, “AM Bulletin,” No. 1; U.S. Census Bureau “AM Bulletin,” No. 2.

²⁰ U.S. Census Bureau, “Project Charter,” November 8, 2004.
²¹ Robert A. Marske, “Findings from the 2002 Economic Census Account Manager Surveys,” March 18, 2004, p. 1.

between April and July 2007, following receipt of the returned contact exchange cards or when following up with companies that had not responded. The first contact was essentially introductory, including an offer to help and requesting that companies use electronic reporting if possible. Following the October 2007 mailout of census forms to large companies, the AMs contacted their assigned companies to confirm receipt of the census questionnaire packages and establish a schedule for reporting. A third call (if necessary) was placed between March and June 2008 to provide extensions and monitor company activity until the completed forms were received.²⁴

Companies that failed to return questionnaires by June 2008 were considered for “stronger” follow-up operations. For example, several companies were sent a letter from the deputy chief counsel for Economic Programs, Department of Commerce. These letters were tailored to each company, detailed prior efforts to solicit a response from the company, and informed them of the fines for nonresponse and the possibility of being referred to the Department of Justice for prosecution. The letters were sent to the chief executive officer, chief financial officer, and general counsel of each company.²⁵

ROLE OF THE INTERNET

General Information

The Census Bureau’s use of the Internet for both improving response and marketing economic products continued to expand in the 2007 Economic Census. The agency introduced a new business Web site (<http://business.census.gov>) that provided a public face for the economic census. Initially, the page offered information to alert businesses to the coming census and validated the importance of the data and census response. After mailout, the page provided messages and resources to encourage response and provide assistance. The page complemented the Business Help Site (BHS) and provided a repository for reports from the census that also were available to intermediaries and news media. The page provided access to digital

²⁴ Marske, Hartz, and Torene, “Promoting Business Response,” p. 8; U.S. Census Bureau, “AM Bulletin,” No. 1; U.S. Census Bureau “AM Bulletin,” No. 2.

²⁵ During the 2002 Economic Census, a small number of nonrespondents received letters from the Department of Commerce’s chief counsel for Economic Programs threatening prosecution. The Census Bureau received replies from all these companies and completed census forms from most recipients of this letter. For 2007, all nonrespondent companies were contacted by the Commerce Department’s general counsel and warned of the likelihood of prosecution should they remain nonrespondent. Thomas Mesenbourg, “Economic Directorate Update,” Census Advisory Committee of Professional Associations Meetings, April 19, 2007.

versions of advance information before the BHS was available. At respondents’ request, the Census Bureau created a section that included an explanation of each item on the census questionnaires and the reasons each item was included.

Business Web site. The Census Bureau’s new Web site for promoting response to the 2007 Economic Census—<http://business.census.gov>—became available in spring 2007. The Web site provided quick, easy access to information that business people find most interesting and useful. The site also served as the gateway to the BHS, which offered sample forms, electronic reporting, and an array of online services, and to published census data via the Census Bureau’s American FactFinder (the Census Bureau’s primary electronic data dissemination system). Banner advertisements at professional association Web sites and other heavily trafficked Web sites linked visitors to the economic census page.²⁶

The business Web site offered responses to “frequently asked questions” about the census, as well as a link enabling users to pose questions directly to Census Bureau staff. In addition, the page contained:

- Sample articles, public service announcements (PSAs), and other resources for news media and trade associations.
- Industry snapshots available for 2,000 industries and industry groups that highlighted data from the 2002 Economic Census and allowed businesses to compare their own performance to industry averages.
- Information about new features of the 2007 Economic Census.
- Information on how people use the economic census data.

The Web page also provided links to other Census Bureau sites of possible interest to respondents or data users, such as “drill down” tables containing data from past censuses and links to the home pages for the North American Industry Classification System (NAICS) and the American FactFinder.²⁷

Business Help Site (BHS). The Census Bureau introduced the Internet-based BHS during the 2002 Economic

²⁶ Marske, Hartz, and Torene, “Promoting Business Response,” pp. 4–5.

²⁷ For more information, see Paul Zeisset, “Promoting Business Response in the Economic Census: SDC Steering Committee,” Version 1.0 (Final), February 22, 2007, and Powerpoint presentation by Robert Marske, Michael J. Hartz, and Laurie Torene, “Promoting Business Response to the 2007 Economic Census,” April 19, 2007.

Census. The BHS provided links to census forms and instructions, answers to frequently asked questions, and links to census data. The site also provided a secure interface that respondents could use to request extensions and replacement forms, verify receipt of completed questionnaires, and e-mail Census Bureau staff.

The Census Bureau printed the BHS Web site address on every census form and cover letter and via links at the Census Bureau's Web site. Since its 2002 introduction, the BHS has become the initial point of contact for many businesses seeking answers to questions about the census or in need of help completing their questionnaires. During the 2002 Economic Census, the Web site received 3.5 million "hits." During the 2007 Economic Census operations, the site received approximately 75,000 hits per month.²⁸

Electronic Reporting

Businesses keep their operating records in electronic databases and spreadsheets and often are proficient in using Excel and other software programs. The Census Bureau responded by redesigning its electronic reporting software—called Surveyor—to work easily with business spreadsheet files. Businesses wishing to respond electronically visited the agency's secure Internet site to download Surveyor and the necessary questionnaire(s) and instructions and create a file for census response. Account managers received training in using the software and assisting companies in its use. They also created spreadsheets for respondents unwilling or unable to use the software.

Surveyor software. The Census Bureau introduced its Surveyor software for the 2002 Economic Census. For 2007, the agency improved the software in response to feedback from businesses and associations. The 2007 edition of Surveyor permitted respondents to enter data directly into the electronic form or to copy and paste data into a "workbook view" and upload completed forms using the Internet. Edits incorporated into the software ensured the accuracy of data, which reduced the number of follow-up calls required by Census Bureau staff to correct erroneous information.²⁹

Internet Advertising

Focus group participants indicated that they wanted advertisements and messages to answer the question, "What's in it for me?" They preferred advertisements that grabbed their attention more than conservative or

traditional PSAs. As a result, the Census Bureau provided a variety of cartoon-themed images in digital formats for use in electronic and print publications (see Figures 4-1 and 4-2).

During the awareness phase of the advertising campaign (beginning April 2007), the advertisements related to the value of the economic census data. During the data collection phase (beginning October 2007), advertisements provided visual recognition of the mailing envelope and encouraged business people to watch for the forms. All of the advertisements sought to lead people to <http://business.census.gov>.³⁰

MARKETING ECONOMIC CENSUS PRODUCTS

The Census Bureau used press releases, its Web pages, and its new NotifyMe system (see below) as the principal means of informing the public about the release of the 2007 Economic Census data products. It also conducted a series of data user conferences around the country to familiarize probable users of census data and intermediaries with the products as they became available. The first data products from the 2007 Economic Census were released in December 2008, consisting of advance data from the 2007 Commodity Flow Survey. The Census Bureau announced the publication of these data in a press release on December 9, 2008.³¹ Thereafter, the Public Information Office issued press announcements as significant data were released, beginning with the *Core Business Statistics—Advance Report* and *Economic Census of the Island Areas—Northern Mariana Islands* in March 2009.³²

NotifyMe. In response to feedback from users of the 2002 Economic Census, the Census Bureau developed a system to notify users as particular units in its publication program were released. Users were given the opportunity to select the industries and/or states they were interested in, and an e-mail was generated each time data were released that met their criteria.³³

³⁰ The Census Bureau did not conduct a third phase of the campaign following the due date because intermediaries expressed reservations about carrying the negative message that forms were overdue and their members might be in violation of federal law. Marske, Hartz, and Torene, "Promoting Business Response," p. 12; Powerpoint presentation by Marske, Hartz, and Torene, pp. 5–7; and Zeisset, "Promoting Business Response," pp. 1–10.

³¹ U.S. Census Bureau, "Commodity Flow Survey Shows U.S. Businesses Ship Nearly \$12 Trillion in Goods in 2007," CB08-179, December 9, 2008.

³² For more information on the 2007 Economic Census data release schedule, see U.S. Census Bureau, "2007 Economic Census—Data Release Schedule By Date," <http://www.census.gov/econ/census07/pdf/EconCensusScheduleByDate.pdf> (February 19, 2009).

³³ For more information, see U.S. Census Bureau, "NotifyMe: Introduction to the NotifyMe Service from the U.S. Census Bureau for the 2007 Economic Census," <http://www.census.gov/econ/census07/www/notifyme.html> (May 5, 2010).

²⁸ Correspondence from Mary D. Harley, Economic Planning and Coordination Division, U.S. Census Bureau, "Business Help Site Visitation," May 5, 2010.

²⁹ Marske, Hartz, and Torene, "Promoting Business Response," p. 4.

Chapter 5: Preparations for Data Collection

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INTRODUCTION

The U.S. Census Bureau used paper and electronic questionnaires, as well as administrative records, to collect 2007 Economic Census data from more than 29 million businesses.¹ These businesses encompassed approximately 85 percent of the nation's economy.² Although the majority of businesses became aware of the census from the mid-December 2007 questionnaire mailout, the enumerations' efficiency resulted from

¹ Businesses are legal or administrative entities assigned an employer identification number (EIN) by the Internal Revenue Service. Units include divisions, subsidiaries, companies, and other affiliated organizations.

² The Economic Census excludes agriculture and most government, most education, and some specialized activities (such as railroad, labor organization, and religious activities). The Economic Census also excludes private household activities. For more information, see U.S. Census Bureau, "2007 Economic Census Business Help Site," <<http://bhs.econ.census.gov/ec07/>> (March 11, 2008).

years of preparation by Census Bureau staff.³ These preparations included:

- Compiling the economic census address list.
- Acquiring administrative records for small establishments not subject to direct data collection.
- Assigning identification numbers to individual establishments so the agency could identify each during data collection and processing.
- Printing and assembling mailout packages containing questionnaires, instructions, and cover letters for the initial mailout and follow-up mailings.

³ The Census Bureau contacted large businesses (those with 500 or more employees) prior to the mailout of questionnaires.

- Establishing contacts between Census Bureau staff and large companies and maintaining these contacts during the census to encourage participation.

COMPILING THE ECONOMIC CENSUS MAIL LIST

Conducting the economic census required the Census Bureau to maintain a record of all businesses eligible to participate. The agency also needed to assign each establishment to the industry in the North American Industry Classification System (NAICS) from which it derives income. Using this information, the Census Bureau sent one or more of the 560 questionnaires and supplemental forms used during the 2007 Economic Census to enumerate establishments in the 50 states, District of Columbia, and Island Areas.

The Census Bureau continually collects and updates its database of business addresses—the Business Register—from a number of federal statistical sources and administrative records and uses the information to identify establishments to be included in the mailout. Sources for the Business Register include data supplied by the Internal Revenue Service (IRS), Social Security Administration (SSA), and Bureau of Labor Statistics (BLS), and from responses to the Census Bureau's Company Organization Survey and its Annual Survey of Manufactures.⁴

The Business Register (BR)

Authorized by Titles 13 and 26 of the U.S. Code and a 1968 Office of Management and Budget (OMB) directive, the BR provides information about establishments for the Census Bureau's periodic surveys and the economic censuses. The BR includes the establishments of all domestic employer and nonemployer businesses (except private households and governments) and the organizational units of multiestablishment businesses. It contains information on more than 160,000 multiestablishment companies (representing 1.6 million affiliated establishments) and 6 million single-establishment companies (both of which are employer companies), and approximately 22 million

nonemployer businesses (i.e., businesses without paid employees).⁵

Background information. Prior to 1968, each federal statistical agency maintained its own form of "business register" and designed its own statistical programs patterned to its particular needs. To reduce redundancy, the Bureau of the Budget (predecessor of the OMB) directed the Census Bureau to lead a project to develop a general, multipurpose business directory for use throughout the federal statistical system. In response to this directive, the Census Bureau developed the Standard Statistical Establishment List (SSEL) following the 1972 Economic Census, and at the same time, developed the annual Company Organization Survey (COS) to update the SSEL's data. The agency used the SSEL until it redesigned and renamed the database the "Business Register" for the 2002 Economic Census.⁶

Using the Business Register. For the economic census, the BR functions as a universe file to control questionnaire mailing and data processing. Through late summer 2007 (prior to the 2007 mailout), the Census Bureau updated the BR using administrative records data from the SSA, IRS, and BLS as well as results of its own surveys (such as the 2006 COS) on a flow basis. For multiestablishment companies, the Census Bureau used the BR to:

- Identify all active companies (excluding farms) and all active establishments.
- Identify consolidated companies/establishments.⁷
- Assign numbers for the report forms (that is, the different questionnaire types) created for:
 - Finance, insurance, real estate, and communications establishments (consolidated questionnaires)

⁵ The BR data is establishment-based and includes business location, organization type (e.g., subsidiary or parent), industry classification, and operating data (e.g., receipts and employment). The scope, detail, and reference period for BR information vary by establishment type and size and by the source of list information. BR information is maintained separately for each establishment, company, and major intracompany organizational unit. U.S. Census Bureau, "Business Register," <<http://www.census.gov/econ/overview/mu0600.html>> (February 28, 2008).

⁶ For more details on the origins and development of the SSEL, see U.S. Census Bureau, Technical Paper 44: *The Standard Statistical Establishment List*. Washington, DC: Government Printing Office, 1978. For more information on the development of the Business Register, see U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, "Chapter 4: Technological Innovations and the Census" and "Chapter 7: Preparations for Data Collection," EC02-00R-HIST, September 2006, pp. 72–73.

⁷ A consolidated company/establishment is a multiestablishment company that (because of the kind of economic operations of its various individual establishments) is sent a consolidated questionnaire requesting summary data on all its establishments, rather than individual questionnaires for each establishment.

⁴ The Census Bureau mailed questionnaires for the last Company Organization Survey and Annual Survey of Manufactures (COS/ASM) prior to the 2007 Economic Census to approximately 42,000 multi-establishment companies and 37,000 single-establishment companies in mid-December 2006. The agency used the COS/ASM data as one of the sources to update the BR's establishment contact and industry data. Carrie Hill, "Business Register Users Group November Meeting: Managers Memorandum for the Record," November 9, 2006, p. 2.

- Out-of-scope or suspected out-of-scope establishments⁸
- All other in-scope establishments

For single-establishment companies, the Census Bureau used the BR to:

- Identify and select establishments with 2007 payroll.
- Assign questionnaire types.
- Sample businesses by trade area.⁹

The Census Bureau uses these continually updated data as the primary sources for the statistical operations of the economic census and surveys. These operations include preparation, mailout and follow-up, data processing, and quality assurance. The Census Bureau also uses the BR to select establishments (the sampling frame) for special reimbursable surveys, summary statistics published in the annual *County Business Patterns* and *Statistics of U.S. Businesses* reports, and requests for special reports and reimbursable tabulations (particularly for small-area data).¹⁰

ADMINISTRATIVE RECORDS

The Census Bureau used administrative records extensively during the 2007 Economic Census to reduce the administrative burden on small employers and non-employers. For 2007, the agency used administrative records to collect data on approximately 3.1 million small employers and 22 million nonemployers.¹¹

⁸ “Out-of-scope” establishments are those identified as not having business activities in an industry for which data are collected during the economic census.

⁹ For more information on the background and use of the Census Bureau’s Business Register, see Thomas L. Mesenbourg, Edward Walker, and Paul Hanczaryk, “The Census Bureau’s Business Register: Basic Features and Future Direction,” United Nation’s Economic Commission for Europe (ECE) and the Statistical Office of the European Communities (Eurostat) Joint Seminar on Business Registers, Luxembourg, June 23–24, 2003, pp. 2–3.

¹⁰ Recipients of summary statistics have included the Bureau of Economic Analysis; Departments of Defense, Energy, and Housing and Urban Development; Small Business Administration; state and local economic development agencies; and private businesses. See U.S. Census Bureau, “Business Register,” <<http://www.census.gov/econ/overview/mu0600.html>> (February 28, 2008).

¹¹ The Census Bureau enumerated all nonemployers using administrative records in 2007. Under authority of Title 26, U.S. Code, the Internal Revenue Service supplies information on business taxpayers that includes name, address, and other identifying facts; industrial and other classifications; measures of sales/receipts/revenue, payroll, employment, expenses, inventories, and assets; and other content needed to conduct Census Bureau statistical programs authorized by Title 13, U.S. Code, Chapter 5. The Social Security Administration and the Bureau of Labor Statistics also provide data—chiefly industrial classifications. These administrative data are the foundation of the Business Register; further, the economic census considerably reduces reporting burden on businesses by using administrative data in lieu of direct collection to represent smaller single units with paid employees and all businesses without paid employees—accounting for about 50 percent of covered employer establishments and more than 80 percent of all covered establishments, including nonemployers. Thomas L. Mesenbourg, “Economic Census Overview,” 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007, p. 6.

The Census Bureau first used administrative records during the 1890 census to collect data on individual debt and corporate debt from real estate recorders’ offices; however large-scale use of administrative records did not begin until the 1954 Economic Census. In 1954, the agency used Internal Revenue Service records to gather selected data items (employment, payroll, and sales) for small retailers (\$2,500 or more in sales) and service providers (\$1,000 or more in sales) that were nonemployer establishments (i.e., businesses without paid employees). Thereafter, administrative records became a significant source for the Census Bureau’s economic statistical programs.

The use of administrative records has a number of advantages for both the Census Bureau and businesses, including:

- Reducing data collection costs.
- Reducing respondent burden, particularly for nonemployers.
- Serving as a source of company and establishment names and addresses for the Census Bureau’s other data collection programs.
- Supplying information the Census Bureau uses to edit reported data (that is, help fill in incomplete data).

Obtaining Administrative Records

The Census Bureau’s principal sources of administrative records are the Internal Revenue Service, Social Security Administration, and Bureau of Labor Statistics. The Census Bureau reimbursed the cooperating agencies for staff and other costs associated with the transfer of records. The data from these records, compiled in the Business Register (BR), are protected under the confidentiality laws governing the Census Bureau (Titles 13 and 26) and the confidentiality regulations of the supplying agencies. (See Appendix A for the provisions of Title 13.)

Internal Revenue Service (IRS) records. Title 26, U.S. Code, governs the operations of the IRS and specifically authorizes it to provide tax data to the Census Bureau for statistical programs. To receive these data for the 2007 census, the Census Bureau identified the type of information needed and assured the IRS that all files would remain confidential. In response, the IRS

sent data to the Census Bureau on a weekly, monthly, and annual basis to update the BR's data on:¹²

- Business names and addresses
- Employment and payroll
- Sales or receipts, interest income, gross rents, and various expense items
- Broad industry codes

Social Security Administration (SSA) records. The IRS provided business birth information from Form SS-4 (application for an Employer Identification Number [EIN]). The Census Bureau attempted to assign industry classifications to these IRS records using an automated coding process. When an industry classification could not be automatically assigned, the Census Bureau received clerically coded industry information from the SSA on a monthly basis.

Bureau of Labor Statistics (BLS) records. The Census Bureau also attempted to assign industry codes to single-establishments by using BLS industrial classification codes. Each quarter, the Census Bureau provided the BLS a list of EINs from the Business Register for BLS to match to their own Business Establishment List (BEL). The BLS returned all matched records with the appropriate industry classification codes and other selected data elements. If there was no match to the BEL, then only the EIN was returned to the Census Bureau.

Using Administrative Records in the Economic Census

The Census Bureau used a hierarchy to determine which industry classification source (IRS, BLS, SSA, or Census Bureau) should be considered the best. If industry classification information was not available from any of these sources, the Census Bureau attempted to assign NAICS codes based on trade name. If still unable to assign a classification, the Census Bureau sent the establishment a classification form (NC-99023 or NC-99026) in October 2007 on which the business self-identified its NAICS code.

The Census Bureau updated the BR using administrative records on a flow basis. During these updates, Census Bureau staff added new administrative records, removed duplicate records, matched new records to establishments already recorded in the BR, and updated payroll, employment, industrial classification code, and

address information. Establishments not matched to the list were added as births.

The agency used information from the administrative records and other Census Bureau programs to divide the census address file into four major groups:

- Multiestablishment firms, out-of-scope establishments, and a sample of firms that responded to the Annual Survey of Manufactures
- Large single-establishment and classification-form cases to be canvassed by mail
- Small single-establishments
- Nonemployers

Separating establishments by the above types enabled the Census Bureau to identify whether the establishment would be enumerated using administrative records or receive a questionnaire. If the firm was to receive a questionnaire, this grouping helped to identify the type of questionnaire mailing package to send (single- or multi-establishment), as well as whether the company should be assigned a Census Bureau account manager (based on the number of employees).¹³

IDENTIFICATION NUMBERS

Beginning with the 2002 Economic Census, the Census Bureau replaced the census file number (CFNs) assigned to each establishment with a permanent, unique, 10-digit identification number. The new identification number (assigned to each birth on a flow basis) is permanent and used for the life of the establishment. For example, if an entity changes ownership, the permanent identification remains unchanged as long as the main business activity remains the same.

The Census Bureau printed the relevant identification numbers on questionnaires and mailing labels and translated them to bar codes to identify establishments during enumeration, check-in, and processing.¹⁴

¹³ For more information on the criteria for selecting establishments assigned account managers, see Chapter 4, "Promoting the Census and Product Awareness."

¹⁴ Prior to 2002, the CFN for single establishments consisted of a "0" plus each establishment's nine-digit employer identification number. For multiestablishment units, the CFN was made up of the enterprise's six-digit identification number (alpha), plus four digits identifying the location of the unit. This required that CFNs be changed when the organization of a business changed, such as the expansion of a single-unit business moving to a new location or opening a branch location and becoming a multiestablishment unit. U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, Chapter 7, "Preparations for Data Collection," EC02-00R-HIST, September 2006, p. 83.

¹² U.S. Census Bureau, Administrative Records Quality Assurance Team, "Economic Directorate Administrative Records: Their Production Path and Quality Assurance," August 30, 2005, p. 7.

Table 5-1.

Number of Questionnaire Types Used in the 2007 Economic Census by NAICS Sector

NAICS sector	NAICS code	Number of types
Arts, Entertainment, and Recreation	71	9
Accommodation and Food Services	72	5
Administrative and Support and Waste Management and Remediation Services	56	13
Construction	23	7
Educational Services	61	2
Finance and Insurance	52	17
Health Care and Social Assistance	62	15
Puerto Rico	97	19
U.S. Virgin Islands	98	1
The Northern Mariana Islands	98	1
Guam	98	1
American Samoa	98	1
Information	51	22
Manufacturing	31–33	294
Mining, Quarrying, and Oil and Gas Extraction	21	19
Management of Company and Enterprises	55	2
Supplemental Forms	99	29
Other Services (Except Public Administration)	81	13
Professional, Scientific, and Technical Services	54	21
Real Estate and Rental and Leasing	53	9
Retail Trade	44–45	35
Transportation and Warehousing	48–49	8
Utilities	22	2
Wholesale Trade	42	42

Source: U.S. Census Bureau, "2007 Census Forms," <http://bhs.econ.census.gov/BHS/CEN_2007FORMS.html> (July 5, 2007).

TOOLS FOR DESIGNING THE QUESTIONNAIRES

The Census Bureau developed the Economic Metadata Repository (EMR) prior to the 2002 Economic Census to ensure the consistency of paper and electronic questionnaires. The EMR acts as a "clearinghouse" for economic metadata, and it interfaces with the Questionnaire User Interface (QUI) and the Generalized Instrument Design System (GIDS) to facilitate the design of questions and economic census questionnaires.¹⁵

The Census Bureau created approximately 560 questionnaires and supplemental forms for the 2007 Economic Census using the GIDS's questionnaire layout and the EMR's content files. With the EMR-supplied files, the Census Bureau used the GIDS's "Forms Design Tool" to create a draft of each question (e.g., employer identification number, physical location), which analysts reviewed to ensure correct and consistent content. Once created, analysts could assign this "master" question (with embedded layout information) to any questionnaire. Revisions to the "master" questions stored in

¹⁵ For more information on the development and use of the EMR, see Sheila M. Proudfoot and Donna Lee Hambric, "Experiences with Developing and Using Metadata-Driven Processing Systems for the Economic Census," presented at the Third International Conference on Establishment Surveys, Montreal, Quebec, Canada, June 18–21, 2007.

the EMR automatically applied to all the questionnaires on which it appeared.

Analysts created and maintained the questionnaire content and assigned questions in the QUI; they designed and assembled questions and questionnaires using the GIDS. Analysts reviewed drafts and, following review, finalized questionnaires in preparation for publication by a printing contractor or at the Census Bureau's National Processing Center on DocuPrint® printers.¹⁶ (For more information on the design and printing of questionnaires, see Chapter 3, "Questionnaire Development and Design.")

PRINTING AND ASSEMBLING THE MAILOUT PACKAGES

General Information

Questionnaires and other package materials for multi-establishment companies, as well as those for single-establishment manufacturing and mining firms, were printed using the DocuPrint® (programmable graphics printers) at the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. The agency awarded

¹⁶ For more information, see Steven A. Schafer, Ph.D., "Digitizing the U.S. Census Bureau," <http://www.idealliance.org/papers/xml02/dx_xml02/papers/04-04-03/04-04-03.html> (March 26, 2008).

contracts to print single-establishment mailout packages for the services and construction sectors and for Puerto Rico and the Island Areas.¹⁷

A single-establishment mailing package contained a cover letter, questionnaire(s), instructions, and a return envelope. A multiestablishment package contained the same, plus an inventory list of questionnaires and establishments, electronic reporting information, and a return envelope or postage-paid label. If applicable, the agency also included electronic media (i.e., a CD-ROM) to assist establishments with reporting.¹⁸

Cover letters. The Census Bureau prepared cover letters for single-, unclassified-, and multi-establishments informing recipients that federal law required them to complete and return the accompanying census questionnaire(s). The letter assured recipients that census data are confidential and also provided a Web site address for electronic response.

Questionnaires. The Census Bureau prepared questionnaires using the EMR, QUI, and GIDS. Census Bureau headquarters and NPC staff prepared the associated letters, instruction sheets, and other materials for the mailing packages to multiestablishment and single-establishment manufacturing and mining firms (see Table 5-1). As noted previously, commercial printers printed and assembled single-establishment mailout packages for the services and construction sectors and for Puerto Rico and the Island Areas. The NPC's DocuPrint® printers printed and assembled the single-establishment manufacturing and mining mailing packages.¹⁹

Instructions. The Census Bureau included most instructions on the questionnaires and also supplemented these with separate instruction sheets added to each mailout package. These additional "Info Sheets" included instructions for completing sector-, industry-, and questionnaire-specific inquiries and included definitions of terms used on the questionnaires.²⁰

¹⁷ The Census Bureau operated under a continuing resolution during fiscal year 2007. Budget uncertainties required that the Census Bureau split the printing contract for service sector establishments between two contractors to meet the September 2007 deadline for delivery of mailout packages to the NPC. Edward D. Walker, "General Lessons Learned from the 2002 Economic Census," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007.

¹⁸ B.J. Fitzpatrick, "Collection Highlights and Strategies to Increase Response," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007. See also, B.J. Fitzpatrick, "Assembly and Mailout of the 2007 Economic Census Multiunit Mailing Packages," September 4, 2007.

¹⁹ Ibid. See also, B.J. Fitzpatrick, "Assembly and Mailout of the 2007 Economic Census Multiunit Mailing Packages."

²⁰ For more information on the "Info Sheets," see the U.S. Census Bureau's 2007 Economic Census Help Site, "2007 Economic Census Forms," <http://bhs.econ.census.gov/ec07/CEN_2007FORMS.html> (March 11, 2008).

Inventory sheets. A census package for a multi-establishment company included an inventory list of all its establishments, including those not in scope of the census. This gave the respondent the opportunity to confirm that all the firm's establishments either were covered by the census—or were known by the Census Bureau to be out-of-scope—and enabled the respondent to coordinate and control responses from subsidiaries. In addition, the Census Bureau's cover letter to a multiestablishment requested that the firm call the NPC's toll-free telephone number to ask for additional questionnaires or visit the Census Bureau's Business Help Site (<http://www.census.gov/econhelp>) if one or more of its business establishments was in scope but had been left off the Census Bureau's inventory.²¹

Envelopes. The Census Bureau's Administrative and Customer Services Division designed mailout and return envelopes, and the U.S. Postal Service approved draft envelope designs. Upon approval, the NPC and commercial printers printed the envelopes and incorporated them into mailing packages.²²

Address labels. Census Bureau analysts using the address list maintained by the Business Register reviewed and transmitted electronic address files to the NPC. The NPC used the DocuPrint® equipment to print the addresses onto the face of the questionnaires prior to the assembly of the mailing packages.²³ The NPC also printed labels for the mailout packages printed by contractors.²⁴

Quality Assurance

Quality assurance inspectors checked materials at all stages of the printing process and the mailing-package assembly process. The NPC's staff performed quality assurance inspections of all materials printed by contractors and by the NPC's own equipment. Inspectors reviewed random samples of questionnaires, cover letters, and other printed materials from different print runs; samples of assembled mailing packages; and samples of address labels. Quality assurance inspectors looked over commercially printed materials at the contractors' facilities and upon receipt at the NPC.

²¹ Ibid.

²² Douglas Miller, "Activity Report for SSPB—September 2006," October 2, 2006, p. 3.

²³ Due to concerns regarding the inclusion of the complete employer identification number (EIN) on the mailing label of the single-establishment mail packages, the Census Bureau made changes during the labeling operation to alter the label contents to display only the last four digits of the EIN.

²⁴ For more detailed information on the address labels, see Memorandum from B.J. Fitzpatrick to David E. Hackbarth, "Assembly and Mailout of the 2007 Economic Census Multiunit Mailing Packages," September 4, 2007, and "2007 Economic Census Single-Unit Mailout DocuPrint® Applications: Attachment F," June 8, 2007.

During printing, inspectors monitored the quality of printing for such errors as ink “bleeding,” failure to completely color appropriate areas, loss of information, white spots, extraneous marks, and misalignment. During assembly of questionnaires and mailing packages, they verified barcode accuracy; checked questionnaire pagination; inspected envelope construction and printing quality; and ensured that mailing packages contained all appropriate and correctly paginated inserts.

If inspections revealed defects in a selected sample, inspectors expanded their review by inspecting the materials immediately before and after the initial sample. If they found additional defects, they notified their quality assurance supervisor.²⁵ Depending upon the extent and severity of the defects, quality assurance supervisors rejected the materials and either: (1) reprinted the materials (or returned them to the contractor for reprinting); (2) set acceptable items aside for later use if supplies ran low; or (3) used them for follow-up correspondence operations.

CONTACT WITH COMPANIES BEFORE THE CENSUS

Advance Information and Contacts

On April 10, 2007, the Census Bureau began mailing advance information packages to approximately 13,000 companies with 500 or more employees as well as to the approximately 1,300 companies and their subsidiaries identified for the account managers program.²⁶ Each information package contained a cover letter introducing the census and a brochure providing

general information about the census and the kinds of data collected, key dates, data uses, and Census Bureau contact information.

The most important part of the advance mailing—the contact exchange card—provided the 1,300 largest companies with the name and contact information of the Census Bureau account manager assigned to assist each company with the reporting process. The contact exchange card also asked the business to confirm or update the company’s mailing address. Key to the account manager program, the postcard requested that the participant provide the name of the person responsible for completing the census questionnaires.²⁷

Contact operations. The account managers made initial contact (by telephone or e-mail) to assigned companies between April and July 2007, following receipt of the returned contact exchange cards. Account managers also followed up with nonrespondents during this time.

Following the October 2007 census mailout, account managers contacted their assigned companies to confirm receipt of the census questionnaire packages and establish a schedule for reporting. Account managers placed additional calls (if necessary) between March and October 2008 to grant deadline extensions and to monitor the reporting progress of an establishment until the NPC received all of the establishment’s assigned census forms.²⁸

(For more information about the advance information mailing and account manager program, see Chapter 4, “Promoting the Census and Product Awareness.”)

²⁵ For more detailed information, see U.S. Census Bureau, “2007 Economic Census Quality Assurance Monitoring of Printing/Finishing and Package Assembly at the Contractors,” December 19, 2007.

²⁶ The criteria for company selection for the account manager program were (1) the company’s importance to a specific industry or industries, and (2) the likelihood the establishment would have difficulty with census reporting or would not respond (based on previous experience). Subject matter branches within the Census Bureau’s Economic Programs Directorate nominated establishments for the account manager program.

²⁷ The Census Bureau used information supplied on the contact exchange cards to update its own records used to prepare the mailing packages. For more information, see U.S. Census Bureau, “AM Bulletin,” No. 1, April 23, 2007, and U.S. Census Bureau “AM Bulletin,” No. 2, May 24, 2007.

²⁸ U.S. Census Bureau, “AM Bulletin,” No. 1, April 23, 2007, and U.S. Census Bureau, “AM Bulletin,” No. 2, May 24, 2007.

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INTRODUCTION

Every 5 years, in years ending in “2” and “7,” the U.S. Census Bureau conducts the economic census by using mailed questionnaires and administrative records. Establishments receiving a questionnaire are required either to return the completed paper questionnaire to the Census Bureau’s National Processing Center (NPC) in Jeffersonville, IN, or submit data electronically via the agency’s secure Web site.

Once the Census Bureau receives data from establishments, staff at the NPC check in the records and analyze the returns for errors or partial responses. The data are then subject to a number of edits and reviews to assure accuracy and completeness and to protect the confidentiality of each establishment’s data prior to tabulation and publication.

CLASSIFICATION MAILOUT

Background Information

Prior to conducting the 2007 Economic Census, the Census Bureau identified businesses eligible to participate in the census and assigned each a North American

Industry Classification System (NAICS) code.¹ The Census Bureau assigned these codes according to information already in its database of business addresses (called the Business Register [BR]) and to responses to a “refile survey” conducted in 2006 and a classification questionnaire mailed to businesses with insufficient or missing classification data in 2007.²

Classification Mailout

The Census Bureau mailed a classification form to every establishment for which it lacked the information needed to assign a NAICS code. One of several versions of Form NC-99023 was sent, depending on the type of establishment. The form consisted of an eight-page questionnaire that asked the respondent to identify the establishment’s physical location, principal business or activity during the previous 12 months, class of customer (e.g., households, wholesale, business-to-business), and basic information about the percentage

¹ For more information on the development and implementation of the NAICS, see Chapter 2, “Industrial and Product Classification.”

² The majority of the companies that received classification forms were small single-establishment firms that would not receive a census form if their classification information had been complete.

of revenue and/or shipments among categories for the type of goods and services sold.

In some cases, the BR included enough information to classify the business by sector or subsector, but not by specific industry. The Census Bureau then included in the mailout a separate classification form tailored to a specific industry to verify classification information. There were 31 preprinted classification forms used for establishments in retail and wholesale trade and the various service sectors. For establishments in mining, manufacturing, and construction, Form NC-99026 asked the respondent to supply the establishment's principal business or activity during the previous year ("Construction, Manufacturing, or Other—*Specify Activity*") and to check one or several relevant checkbox entries on the preprinted form. All classification forms asked for physical location and operation status as well.³

In October 2007, the Census Bureau mailed these classification questionnaires to the selected establishments. The Census Bureau continued to add new businesses ("births") to the mail list it had compiled for the initial mailout. These new businesses were identified from Internal Revenue Service and Social Security Administration administrative records throughout 2007. By the time of the general census mailout in December, the Census Bureau had compiled thousands of additional single-establishment addresses that could not be accurately classified and to which it sent classification questionnaires. Generally, these were small establishments that would have been enumerated through administrative records if their classification information had been complete.⁴

Processing

Establishments returned their classification questionnaires to the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. For 2007, classification forms were processed by the same standardized operation used for the census questionnaires. (See the "Processing and Tabulation" section in this chapter.) During processing, an automated screening edit assigned each responding business an industrial classification on the BR and referred incomplete or inconsistent questionnaires for further analysis. This automation meant the number of forms physically handled was greatly reduced. Furthermore, integrating the classification

³ These forms were used primarily for establishments in the various services sector, retail trades, and in the trucking industry within the Warehousing and Transportation sector.

⁴ For more information, see U.S. Census Bureau, "Classification Report Form NC-99026 Mailout/Followup Procedures and Docuprint Specifications," Reference No. 7-CENSUS-COLL-9966.

form processing and questionnaire processing substantially reduced costs when compared to the manual screening used previously.⁵

PROCESSING DATA FROM ADMINISTRATIVE RECORDS

Many businesses do not directly participate in the economic census. These businesses indirectly participate, however, through the Census Bureau's collection of data from administrative records supplied by other government agencies. The use of administrative records both reduces the burden on businesses and eases the Census Bureau's data processing workload.

The Census Bureau obtained millions of electronic records for nonemployers (i.e., establishments with no employees for whom payroll taxes are filed) and very small employer companies⁶ from the Internal Revenue Service, Social Security Administration new business ("birth") records, and Bureau of Labor Statistics records during 2007 Economic Census operations.⁷ (See Chapter 5, "Preparations for Data Collection" for more information on the Census Bureau's acquisition of administrative records.) Data from these records were used in place of data that would otherwise have been collected by mailed questionnaires.

2007 ECONOMIC CENSUS DATA COLLECTION

The Census Bureau mailed 2007 Economic Census questionnaires to approximately 4.6 million establishments in October and December of 2007 (see Table 6-1). Large businesses received their questionnaires in October, which provided additional time for them to organize data. Establishments without adequate classification information also were mailed questionnaires in October. The Census Bureau requested that establishments complete and return questionnaires by February 12, 2008. In March 2008, the agency's National Processing Center (NPC) mailed an additional 198,909 questionnaires to single-establishment companies that began operations during the third quarter of 2007 (third-quarter births), which was too late for the initial mailing.

⁵ U.S. Census Bureau, "Coding of Classification Report Forms (NC-99023, NC-99026, and Trade Area Class Forms)," December 13, 2007.

⁶ A "very small" employer firm was defined slightly differently depending on the NAICS industry involved. Generally, very small firms were single-establishment companies that had less than the specified minimum annual payroll levels. The payroll cutoff varied by industry, typically corresponding to 1 to 3 paid employees in retail firms to as many as 20 in manufacturing firms.

⁷ Paul Hanczaryk, "Sources and Uses of Administrative Records Data in the Economic Area," slide 20. (n.d.).

Table 6-1.

Initial Mailout: 2007 Economic Census

Trade or geographic areas	Multiestablishment questionnaires			Single-establishment questionnaires ¹			
	Total	Long	Consolidated ²	Total	Classification	Long	Short
Total	1,666,497	1,658,920	7,577	2,959,027	951,019	1,966,416	41,592
Company Report (Form NC-99001)	83,215	83,215	0	0	0	0	0
General Classification (Form NC-99023)	0	0	0	56,674	56,674	0	0
Construction	15,638	15,638	0	272,065	159,296	112,769	0
Mining	6,030	5,627	403	9,635	242	8,188	1,205
Manufacturing and Annual Survey of Manufactures (ASM)	62,269	62,269	0	138,741	6,542	91,812	40,387
Wholesale Trade	120,965	120,965	0	277,997	0	277,997	0
Retail/Accommodation/Food Services	584,518	584,518	0	618,492	187,571	430,921	0
Utilities/Transportation/Warehousing	52,606	51,793	813	119,096	27,024	92,072	0
Finance/Insurance/Real Estate	210,548	204,873	5,675	372,664	155,667	216,997	0
Service Industries	520,827	520,141	686	1,055,292	358,003	697,289	0
Puerto Rico	8,544	8,544	0	32,968	0	32,968	0
Guam	579	579	0	2,258	0	2,258	0
Northern Mariana Islands	247	247	0	741	0	741	0
U.S. Virgin Islands	437	437	0	2,097	0	2,097	0
American Samoa	74	74	0	307	0	307	0

¹ Includes 198,909 questionnaires mailed in March 2008 to businesses "born" in the third-quarter.

² This type of questionnaire surveys all the domestic establishments for a company that operates in a specified industry. Consolidated reports apply to networked industries where the production of goods or services cannot be attributed to a single individual physical location.

As noted previously, establishments had the option of responding via the paper questionnaire or electronically via the Census Bureau's secure Web site. The Census Bureau preferred electronic responses, and to encourage this, it included a username and password in the questionnaire packages that respondents could use on the Census Bureau's Web site to download the electronic reporting software.

Respondents who needed further assistance were directed to visit the Census Bureau's Internet help page, call a toll-free number, send questions to a secure messaging center, and/or write to a postal address.

Follow-Up Operations

Mail follow-up. The Census Bureau conducted four mail follow-up operations in an attempt to solicit a response from each establishment that received a questionnaire. To manage the follow-up mailings, the agency established "close-out" dates—that is, the latest date by which a company could respond and its address be checked in to avoid further follow-up attempts (see Tables 6-2 and 6-3). Following each close-out date, the Census Bureau generated a new list of nonrespondent companies for additional follow-up mailings.

The agency sent a final follow-up mailing to nonrespondent companies in July and August 2008 that urged response to avoid prosecution.⁸

Telephone follow-up operations. The Census Bureau supplemented the mail follow-up operation with a telephone follow-up operation targeting nonrespondent companies. Telephone follow-up began when Census Bureau staff contacted companies to confirm receipt of the census packages (so, prior to the February 12, 2008, response deadline). It continued through September 2008.

To identify companies requiring telephone follow-up calls after the response deadline, the NPC periodically generated and updated a list of delinquent companies (sorted by size of payroll). The Census Bureau contacted nonrespondent companies in descending payroll order (the largest companies first) and attempted to speak with the person the company had designated as its census contact. Interviewers updated follow-up worksheets with information on each contact (or failed attempt to contact) and noted any requests, including time extensions or information on reporting response. If a contact name was not supplied, the interviewer

⁸ For more information, see U.S. Census Bureau, "Specifications for Single Unit Mail Followup Operations," Reference No. 7-CENSUS-COLL-10913, February 25, 2008, and U.S. Census Bureau, "Multiunit Followup Procedure," Reference No. 7-CENSUS-COLL-10979, February 25, 2008.

Table 6-2.

Follow-Up Mailings to Single-Establishment Companies: 2007 Economic Census

Type of mailing	Package type	Closeout date	Number of packages mailed
First follow-up			
Annual Survey of Manufactures (ASM)	Letter	3/4/08	10,506
Non-ASM, excluding classification	Questionnaire	5/6/08	1,021,653
Classification	Questionnaire	5/6/08	331,142
Second follow-up			
Single-unit, excluding classification	Questionnaire	6/25/08	739,999
Classification	Questionnaire	6/24/08	187,151
Third follow-up			
Classification (unexpired extension)	Letter	5/22/08	339
Classification (expired extension)	Letter	7/29/08	13,576
Classification (no contact) ¹	Letter	6/12/08	94,975
Classification (NC-99026)	Questionnaire	7/29/08	15,288
Single-unit, excluding classification ²	Questionnaire	7/29/08	554,754
Single-unit, excluding classification (unexpired extension)	Letter	5/29/08	6,391
Fourth follow-up			
Single-unit, excluding classification (no contact) ¹	Letter	8/11/08	342,871
Single-unit, excluding classification (expired extension)	Letter	7/18/08	10,053
Single-unit, excluding classification (unexpired extension)	Letter	7/18/08	9,844

¹ These letters were from the chief counsel for Economic Affairs at the U.S. Department of Commerce's Office of the General Counsel. The letters targeted delinquent companies that had not previously contacted the Census Bureau and urged response to avoid prosecution.

² This mailing included 149,161 packages delivered via certified mail to companies in low-response industries.

asked to speak with the person responsible for completing government reports.⁹

At the conclusion of telephone follow-up operations, the Census Bureau had attempted to contact 242,298 nonrespondent companies.¹⁰

PROCESSING AND TABULATION

Receipt and Check-In

The National Processing Center (NPC) began checking classification forms, using laser sorters, in November 2007. Imaging of 2007 questionnaires began in late December 2007. In late December, the clerical staff began checking in the multiestablishment flat envelopes and boxes during the "batch-for-imaging" process. Because NPC staff scanned the barcodes, the questionnaire check-in file was continually updated. This file was used to identify nonrespondent establishments eligible for mail and telephone follow-up.¹¹ Following initial check-in of forms, clerks:

- Checked for correspondence in the return envelope (and forwarded it to the appropriate staff for response).

⁹ U.S. Census Bureau, "Specifications for Multiunit Mail and Telephone Followup Operations," Reference No. 7-CENSUS-COLL-10954, February 25, 2008.

¹⁰ Data supplied by Kathryn L. Scott, U.S. Census Bureau, Economic Planning and Coordination Division, April 2009.

¹¹ For more information, see Bernard J. Fitzpatrick, "2007 Economic Census: Laser Sorter, Bar Code Check-in, and Sorting Requirement Specifications," November 15, 2007.

- Reviewed the contents for completeness.
- Separated returns from single- and multiestablishment firms.
- Inspected pages for damage that could hamper digital scanning.
- Entered the package into the Transmittal Tracking System (TTS).¹²
- "Batched"¹³ the paper returns for digital scanning.¹⁴

¹² The Census Bureau used its Transmittal Tracking System (TTS) to track the movement of questionnaires and associated documents through check-in and processing. A paper progress sheet accompanied the documents as they advanced through the processing stages, while the TTS maintained digital records of the progress of the work. U.S. Census Bureau, "Processing Mail Receipts, Open and Remove Content, Sort Receipts, and Disposition of Documents After Check-In," Reference No. 7-CENSUS-COLL-9896, March 7, 2008.

¹³ "Batches" consisted of 400 to 450 sheets. For more information, see U.S. Census Bureau, "Batching Single Unit Questionnaires Procedure," Reference No. 7-CENSUS-COLL-10139, October 26, 2007; U.S. Census Bureau, "Procedures for Check-In and Batching of Multi-Unit Questionnaires," Reference No. 7-CENSUS-COLL-10821, December 28, 2007; U.S. Census Bureau, "Printing the Batch Breaker Sheet and Post-Batching Processing Procedure," Reference No. 7-CENSUS-COLL-10653; U.S. Census Bureau, "Processing Mail Receipts, Open and Remove Content, Sort Receipts, and Disposition of Documents After Check-In," Reference No. 7-CENSUS-COLL-9896, March 7, 2008.

¹⁴ For more information, see Bernard J. Fitzpatrick, "2007 Economic Census: Processing Mail Receipts, Open and Remove Content, Sort Receipts, and Disposition of Documents After Check-in," August 7, 2007.

Table 6-3.

Follow-up Mailings to Multiestablishment Companies: 2007 Economic Census

Status of company's response	Package type	Closeout date	Number of packages mailed
First follow-up			
Totally delinquent, no or expired extension	Letter	2/28/08	74,149
Second follow-up			
Totally delinquent, no or expired extension	Letter	4/8/08	51,247
Totally or partially delinquent, unexpired extension	Letter	4/8/08	7,030
Partially delinquent, no or expired extension	Letter/Listing	4/9/08	4,759
Third follow-up			
Totally delinquent, unexpired extension	Letter	5/21/08	7,907
Totally delinquent, L and M, no or expired extension ¹	Letter	5/21/08	3,004
Totally delinquent, N and S, no or expired extension ¹	Questionnaire	6/13/08	27,313
Partially delinquent, expired extension	Letter/Listing	5/21/08	3,698
Partially delinquent, unexpired extension	Letter/Listing	5/21/08	669
Fourth follow-up			
Totally delinquent, unexpired extension	Letter	8/5/08	2
Totally delinquent, expired extension	Letter	8/5/08	9,362
Totally delinquent, no contact ²	Letter	9/10/08	20,651
Partially delinquent, no or expired extension	Letter/Listing	7/17/08	4,054
Partially delinquent, unexpired extension	Letter/Listing	7/17/08	33

¹ The designations "L," "M," "N," and "S," represent certain size characteristics of the company at the time of mailout.

² These letters were from the chief counsel for Economic Affairs at the U.S. Department of Commerce's Office of the General Counsel. The letters targeted delinquent companies that had not previously contacted the Census Bureau and urged response to avoid prosecution.

Data Capture and Entry

The NPC staff digitally scanned each paper questionnaire on Kodak 9500 scanners in preparation for "key-from-image" (KFI) and optical mark recognition (OMR) data capture.¹⁵ To capture check-box data, the Census Bureau used OMR software instead of manually entering the individual entries. However, many questions on the census required handwritten or printed responses. For these, clerks at the NPC manually entered ("keyed") the data from the scanned questionnaire images.¹⁶ A staff of 76 keyers captured the data from the 2007 Economic Census (compared to 126 keyers for the 2002 Economic Census).

¹⁵ For more information, see U.S. Census Bureau, "Procedures for Using the Kodak 9500 Capture Software with the ECON2007 Processing Extension," Reference No. 7-CENSUS-COLL-10598, October 25, 2007.

¹⁶ The Census Bureau conducted quality-assurance checks of manually entered data by comparing randomly selected samples to fields that had been electronically data captured. When verification disagreed with the original keyed value, the answer was independently keyed again. When adjudication agreed with either of the two previous values, the accuracy of the agreed values was assumed. In cases where all three values differed, the observation from the keyer with the lowest error rate was accepted and excluded from the error calculations. If the number of keyer errors exceeded the limit specified for the sample, the unverified answers in the batch underwent remainder verification and, if necessary, remainder adjudication. U.S. Census Bureau, "Key From Image (KFI) Procedures," Reference No. 7-CENSUS-COLL-10127, March 31, 2008. For more information on editing, imputation, and data analysis, see U.S. Census Bureau, "Data Processing and Treatment of Nonresponse," <http://www.census.gov/econ/census07/www/methodology/data_processing_and_treatment_of_nonresponse.html> (December 23, 2008).

Data Processing and Treatment of Nonresponse

Following data capture, and in preparation for release to the public, 2007 Economic Census data were processed in three primary ways:

- Data edits—to detect reporting errors and other problems.
- Nonresponse imputation—to estimate missing data.
- Tabulation and analytical processing—to tabulate and analyze summary data and prevent disclosure of respondents' identities.

Data edits. Economic census data must be edited to identify and correct reporting errors and other problems. The data also must be adjusted to account for missing items and for nonrespondent businesses. Data edits detected and validated data by considering factors such as proper classification for a given record, historical reporting for the record, and industry/geographic ratios and averages.

The first step of the data editing process is classification. To assign a valid "kind-of-business or industry" classification code to the establishment, the Census Bureau subjects responses to specified items in a series of data edit programs.

The specific items used for classification depend on the census report forms and include:

- Self-designated “kind-of-business” check-box classifications
- Responses to product lines sold by a retail establishment
- Products manufactured by a plant
- Entries written in by the respondent explaining the establishment’s activities

If critical information is missing, the record is flagged and fixed manually before further processing occurs. If all critical information is available, the classification code is assigned automatically. After classification codes are assigned, a “verification” operation is performed to validate the industry, geography, and ZIP Codes.

After a valid “kind-of-business or industry” code has been assigned to an establishment, the data edits further evaluate the response data for consistency and validity—for example, assuring that employment data are consistent with payroll or sales/receipts data. Response data are always evaluated by industry and in some cases, type of operation or tax-exempt status is also taken into account. Additional checks compare current year data to data reported in previous censuses or from administrative sources.

Nonresponse imputation. The Census Bureau handles nonresponse by estimating, or imputing, missing data. Imputation is defined as the replacement of a missing or incorrectly reported item with another value derived from logical edits or statistical procedures.

There are two types of nonresponse:

- *Unit nonresponse* occurs when an eligible unit fails to provide sufficient data to be classified as a response.
- *Item nonresponse* occurs when some but not all data have been collected for the respondent.

Title 13 of the U.S. Code states that respondents are required to answer all questions to the best of their ability. Incomplete forms, unclear or erroneous data, or nonresponse can affect data analyses and the quality of the published data.

Problems that arise from missing data include:

- Analyses of data sets with missing data being more problematic than analyses of complete data sets.

- Lack of consistency among similar analyses due to differing treatments of missing data.
- Inappropriate imputation models, if the reason for nonresponse is dependent on the data item collected and not random.

Although economic census nonresponse accounts for less than 5 percent of published figures, it is a significant source of nonsampling error.

Tabulation and analytical processing. Individual establishment records are tabulated in different ways based on data product and analytical needs. Tabulations include data summed by industry, specified geographic areas, establishment size, products produced, materials used, fuels used, and product lines sold.

The tabulations undergo disclosure analysis prior to macro-analysis. A disclosure would occur if someone could infer data values (e.g., dollar value of sales) for a particular business from data supplied during the 2007 Economic Census. To safeguard respondents’ data, the Census Bureau utilizes cell suppression and noise infusion to prevent disclosure.

- *Cell suppression.* Some of the data in economic census data sets are withheld to protect the confidentiality of information reported by individual businesses. A “D” in a data cell indicates that data have been withheld.

Cell suppression protects the confidentiality of individual businesses where the value of the cell, if it were known, would allow a data user to estimate a single contributor’s value too closely. This occurs when contributors are very few or when one or two large contributors dominate the aggregate statistic.

The cells that must be protected are called “primary suppressions.” To make sure the primary suppressions cannot be closely estimated by subtracting the other cells in the data set from the higher-level totals, additional cells may also be suppressed. These additional suppressed cells are called “complementary suppressions.”

The process of suppression does not usually change the higher-level totals. Values for cells that are not suppressed remain unchanged. Before the Census Bureau releases data, computer programs check published data sets for both primary and complementary disclosures.

Establishment counts are not considered to be disclosures, so this information is published in all tables.

Ranges are sometimes used in place of the “D” symbol to suppress sensitive data while still providing meaningful information.

- *Noise infusion.* Noise infusion, an alternative to cell suppression, allows the Census Bureau to publish more data. By marginally adjusting (perturbing) each respondent’s data, data for individual businesses can be camouflaged. Most of the resulting aggregated statistics are distorted by a relatively small amount. Some cells may be suppressed for additional protection from disclosure or because the quality of the data does not meet publication standards. Though some of these suppressed cells may be derived by subtraction, the results are not official and may differ substantially from the true estimate.¹⁷

¹⁷ For more technical information on noise infusion, see Timothy Evans, Laura Zayatz, and John Slanta, “Using Noise for Disclosure Limitation of Establishment Tabular Data” *Journal of Official Statistics*, Vol. 14, No. 4, 1998, pp. 537–551.

Macro-analysis. Prior to publishing tabulations from the 2007 Economic Census, the Census Bureau subjected data to macro-analysis. At that time, units of measure were converted from collected units to disseminated units, data flags and symbols were set, and data fields were renamed for dissemination.¹⁸

Data Tabulation

For more information on the publication of 2007 Economic Census data, see Chapter 10, “Data Dissemination.”

¹⁸ For more information on editing, imputation, and data analysis, see U.S. Census Bureau, “Data Processing and Treatment of Nonresponse,” <http://www.census.gov/econ/census07/www/methodology/data_processing_and_treatment_of_nonresponse.html> (May 19, 2010).

Chapter 7: 2007 Economic Census of the Island Areas

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INTRODUCTION

The 2007 Economic Census of the Island Areas covered Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and American Samoa. The U.S. Census Bureau's Company Statistics Division (CSD) managed the economic census for the Island Areas under the provisions of Title 13, U.S. Code. (For more information about Title 13, see Appendix A, "Provisions of Title 13, U.S. Code, Relating to the 2007 Economic Census"). Coverage and collection activities were equivalent to those used for state-side operations, as were establishment classification and the geographic levels used for data publication. The Census Bureau classified establishments in the Island Areas also using the North American Industry Classification System (NAICS). The agency mailed establishments in the Island Areas standardized questionnaires similar to those mailed to stateside establishments. Respondents could return completed questionnaires by mail or report their data electronically.¹

¹ Single-unit establishments in Puerto Rico received a Spanish-language version of the standardized, sector-specific paper questionnaire. Multiestablishment companies received the English-language version. The electronic questionnaire was in English for all establishments. For more information, see prepared statement of Thomas L. Mesenbourg, Acting Deputy Director, U.S. Census Bureau, before the Information Policy, Census, and National Archives Subcommittee, Committee on Oversight and Government Reform, and the Committee on Natural Resources Subcommittee on Insular Affairs, "Treatment of the U.S. Territories by the U.S. Census Bureau," May 21, 2008, pp. 1–2.

The Census Bureau included Island Areas establishments if (1) they were located in Puerto Rico, Guam, the Northern Mariana Islands, the U.S. Virgin Islands, or American Samoa; (2) they engaged in any of the NAICS activities covered by the census; and (3) they had an active operating establishment with payroll. (However, the economic census in 2007 for American Samoa included establishments without employees because of the unique structure of American Samoa's economy and the lack of economic statistics for that area.)²

CONDUCTING THE 2007 ECONOMIC CENSUS OF THE ISLAND AREAS

General Information

The Census Bureau contacted the governments of Puerto Rico, the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa in 2006 to advise them of its plans to conduct the 2007 Economic Census. The agency also solicited the governments' support for census operations and sought input on questionnaire design. The Census Bureau and each of the respective governments (or the government designee) signed memoranda of agreement (MOA) that defined the roles of the Census Bureau and each government in conducting the census.

² For more information, see Chapter 10, "Data Dissemination."

These MOA assigned the Census Bureau the tasks of designing the questionnaires and, in the case of Puerto Rico, translating them into Spanish; planning and conducting mailout and follow-up operations; processing and tabulating data; and preparing data for publication. The MOA assigned the governments of the Island Areas with making recommendations on questionnaire content and overseeing census publicity via print, radio, and television advertisements.³

Preparatory Work

Printing questionnaires. As with stateside questionnaires, the forms used to collect data in Puerto Rico were industry-specific according to the North American Industry Classification System. In Puerto Rico, paper questionnaires were available in English as well as Spanish. For each remaining Island Area, the Census Bureau used a single form (with form numbers specific to each Island Area) that covered all economic activity within the scope of the census (see Table 7-1).⁴

Questionnaires and other package materials for multi-establishment companies, as well as those for single-establishment manufacturing and mining firms, were printed using DocuPrint® (programmable graphics printers) at the Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. The agency awarded contracts to print single-establishment mailout packages for the services and construction sectors and for Puerto Rico and other Island Areas.⁵

DATA COLLECTION

Mail Enumeration

For Puerto Rico, the Northern Mariana Islands, Guam, and the U.S. Virgin Islands, the 2007 Economic Census was a mailout operation conducted in concert with the mailout for the 50 states and District of Columbia.⁶

³ The Census Bureau worked with the Puerto Rico Planning Board to conduct the economic census in that area. Memoranda from Ewen Wilson to Thomas L. Mesenbourg, "Monthly Activity Report for September," October 5, 2005, p. 2 and "Monthly Activity Report for March," April 5, 2006, p. 2.

⁴ Mesenbourg, "Treatment of the U.S. Territories," p. 1.

⁵ The Census Bureau operated under a continuing resolution during fiscal year 2007. Budget uncertainties required that the Census Bureau split the printing contract for service-sector establishments between two contractors to meet the September 2007 deadline for delivery of mailout packages to the NPC. Edward D. Walker, "General Lessons Learned from the 2002 Economic Census," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007.

⁶ Personal enumeration was also conducted on a limited basis in Guam and the Northern Mariana Islands, but only for establishments that requested a personal visit or those nonrespondent establishments that could not be reached by telephone during telephone follow-up operations. When personal enumerations were necessary, the Census Bureau trained the staff from the Department of Commerce in the Northern Mariana Islands and the Department of Labor in Guam to conduct the enumeration. The Census Bureau provided a list of the establishments for which a

Table 7-1.

Forms Used: 2007 Economic Census of the Island Areas¹

Form number	Form description
IA-97120	Puerto Rico—Utilities, Transportation, and Warehousing
IA-97123	Puerto Rico—Construction
IA-97130	Puerto Rico—Manufacturing
IA-97142	Puerto Rico—Wholesale Trade
IA-97144	Puerto Rico—Retail Trade
IA-97152	Puerto Rico—Finance, Insurance, Real Estate, Rental and Leasing
IA-97172	Puerto Rico—Accommodation Services
IA-97180	Puerto Rico—Services
IA-97220	Puerto Rico—Utilidades, Transportación y Almacenaje
IA-97223	Puerto Rico—Industrias de Construcción
IA-97230	Puerto Rico—Manufactura
IA-97242	Puerto Rico—Comercio al Por Mayor
IA-97244	Puerto Rico—Comercio al Detal
IA-97252	Puerto Rico—Finanzas, Seguros, Bienes Raíces, Alquiler y Arrendamiento
IA-97272	Puerto Rico—Servicios de Alojamiento
IA-97280	Puerto Rico—Servicios
IA-97290	Puerto Rico—Cuestionario General
IA-98163	Guam
IA-98173	U.S. Virgin Islands
IA-98183	Northern Mariana Islands
IA-98193	American Samoa

¹ U.S. Census Bureau, "2007 Economic Census Forms," <http://bhs.econ.census.gov/ec07/CEN_2007FORMS.html> (February 10, 2009).

As was the case with stateside establishments, the Census Bureau used its database of businesses—called the Business Register (BR)—to identify establishments eligible to participate in the census. (For more information on the BR, see Chapter 5, "Preparations for Data Collection.") Prior to the 2007 mailout, the Census Bureau updated the BR using administrative records data from the Social Security Administration, Internal Revenue Service, and Bureau of Labor Statistics, as well as data collected from other Census Bureau surveys (such as the 2006 Company Organization Survey) on a flow basis through late summer 2007.⁷

Each mailout package consisted of the appropriate questionnaire(s), a cover letter explaining the need for the census and the respondent's legal requirement to participate, an instruction sheet for completing the questionnaire(s), and a return envelope.

The Census Bureau mailed the census packages for both single- and multiestablishment companies in the Island Areas between December 17 and December

report form had not been received. Interviewers were instructed to contact establishments by telephone to obtain the required information.

⁷ For more information on the background and use of the Census Bureau's BR, see Thomas L. Mesenbourg, Edward Walker, and Paul Hanczaryk, "The Census Bureau's Business Register: Basic Features and Future Direction," United Nation's Economic Commission for Europe (ECE) and the Statistical Office of the European Communities (Eurostat) Joint Seminar on Business Registers, Luxembourg, June 23–24, 2003, pp. 2–3.

Table 7-2.

Number of Initial Mailout Forms Sent: 2007 Economic Census of the Island Areas¹

Geographic area	Multiestablishment companies	Single-establishment companies	Total
Total	9,881	38,371	48,252
Puerto Rico	8,544	32,968	41,512
Guam	579	2,258	2,837
U.S. Virgin Islands	437	2,097	2,534
Northern Mariana Islands	247	741	988
American Samoa	74	307	381

¹ Data supplied by Kathryn L. Scott, U.S. Census Bureau, Economic Planning and Coordination Division, April 2009.

Table 7-3.

Number of Follow-Up Mailings Sent to Single-Establishments: 2007 Economic Census of the Island Areas¹

Area	First follow-up	Second follow-up	Third follow-up	Fourth follow-up
Puerto Rico	20,338	18,490	12,947	6,352
Guam	1,223	995	618	14
U.S. Virgin Islands	1,248	914	687	12
Northern Mariana Islands	344	257	180	1
American Samoa	224	185	149	2

¹ Data supplied by Kathryn L. Scott, U.S. Census Bureau, Economic Planning and Coordination Division, April 2009.

21, 2007. For single establishments, the National Processing Center (NPC) boxed and shipped questionnaire packages (by express mail) to each Island Area for direct distribution to respondents using the local mail infrastructure. Instructions enclosed in the packages directed establishments to return completed questionnaires to the NPC by February 12, 2008.⁸

Follow-Up Operations

The Census Bureau attempted to obtain responses from all establishments. To that end, it contacted all nonrespondent establishments following the February 2008 deadline. Nonrespondents continued to receive follow-up mailings and telephone inquiries until the NPC recorded receipt of a completed questionnaire.⁹ (See Chapter 6, "Data Collection and Processing.")

Mail follow-up. The NPC conducted four follow-up mailings to all nonrespondent establishments in the Island Areas between March and August 2008 (see Table 7-3). Mail follow-up packages to single- and multiestablishments included a cover letter requesting response, a duplicate questionnaire, instructions, and

a return envelope.¹⁰ The fourth follow-up mailing to single-establishments contained a letter only. Establishments received one of three letters depending upon their response status:

1. Establishments in Puerto Rico from which the Census Bureau had no response or contact.¹¹
2. Establishments in the Island Areas that had requested deadline extensions, and the extensions had expired.
3. Establishments in the Island Areas with unexpired extensions.

Telephone follow-up. In addition to mail follow-up, the Census Bureau conducted telephone follow-up operations between April and October 2008 for nonrespondent multiestablishment companies in the Island Areas.

For Puerto Rico and the U.S. Virgin Islands, the NPC call center staff in Indiana conducted telephone follow-up operations for nonrespondent establishments. The governments of Guam, American Samoa, and the Northern Mariana Islands conducted telephone follow-up of their territories' nonrespondents.

⁸ Lee Wentela, "Economic Census of Island Areas," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007.

⁹ Although the Census Bureau attempted to achieve a 100 percent response rate, a number of establishments remained nonrespondent. In such cases, the Census Bureau focused its resources on those establishments for which a lack of response would have the greatest impact on an area's data. Thomas L. Mesenbourg, "Economic Census Overview," 2007 Economic Census Offsite Conference, University of Maryland, October 2–3, 2007.

¹⁰ Wentela, "Economic Census of Island Areas," pp. 1–5.

¹¹ The chief counsel for Economic Affairs at the Office of the General Counsel sent these letters (5,911) only to Puerto Rico establishments. They urged delinquent establishments with no previous contact with the Census Bureau to respond so as to avoid prosecution.

Personal enumeration. In Guam and the Northern Mariana Islands, enumeration through an onsite visit was conducted on a very limited basis. These personal visits were conducted only for establishments requesting such a visit or for nonrespondent establishments unavailable through telephone follow-up. In such cases, local staff conducted visits using lists of establishments supplied by the Census Bureau. Enumerators visited the few nonrespondent establishments that remained after mail and telephone follow-up in an effort to obtain required information. All Island Areas staff working with census data were sworn to uphold its confidentiality.

In American Samoa, a combination of mail and personal enumeration was used to conduct the economic census. Data were collected for establishments with and without employees that were in operation during 2007. A single report form was used. American Samoa was divided into four zones for enumeration—Manu'a Islands and the Eastern, Central, and Western districts of Tutuila. Nonemployer establishments were identified from the American Samoa Government Business License List. Each interviewer was provided with an assignment list that included the establishments assigned for interview and a labeled report form for each establishment listed. Every report underwent a consistency review to ensure the accuracy of the reported data.¹²

Treatment of nonresponse. In cases of total nonresponse (report forms not returned) and missing items—despite mail, telephone, and in some cases, personal follow-up operations—the Census Bureau still needed to assign a North American Industry Classification

System (NAICS) classification and estimate general and industry-specific characteristics to an establishment. To do this, the agency used administrative records from other federal agencies, in conjunction with industry averages, prior period data, and outside reference sources.

Incomplete or inadequate product-line data for Puerto Rico were imputed on the premise that a nonrespondent's data were similar to product-line data for other establishments in the same kind of business. At the conclusion of follow-up operations in Puerto Rico, 31,750 single- and multiestablishment companies responded to the 2007 Economic Census (approximately 76 percent). Approximately 82 percent of these establishments returned their responses via paper questionnaires and 18 percent submitted responses electronically.¹³

The Census Bureau received 5,544 responses from the other Island Areas (approximately 82 percent). Of these, approximately 91 percent were paper returns and 9 percent were electronic.¹⁴

DATA PROCESSING, TABULATION, AND PUBLICATION

Data processing and tabulation operations for the Island Areas were the same as those for the United States. See Chapter 6, "Data Collection and Processing."

For more information on the publication of 2007 Economic Census data, see Chapter 10, "Data Dissemination."

¹² U.S. Census Bureau, "Economic Census of the Island Areas: 2007 Methodology," <<http://www.census.gov/econ/islandareas/methodology.html>> (May 19, 2010).

¹³ Data supplied by Kathryn L. Scott, U.S. Census Bureau, Economic Planning and Coordination Division, April 2009.

¹⁴ *Ibid.*

Chapter 8: The 2007 Survey of Business Owners

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2007 SURVEY OF BUSINESS OWNERS

Introduction

The Survey of Business Owners (SBO) provides the only comprehensive, regularly collected source of information on selected economic and demographic characteristics of businesses and business owners by gender, ethnicity, and race. For 2007, the survey collected data from approximately 2.4 million businesses. These businesses were sampled from all nonfarm businesses filing 2007 Internal Revenue Service tax forms as individual proprietorships, partnerships, or any type of corporation with receipts of \$1,000 or more.

Scope and Content

The SBO, which is part of the economic census, has been conducted every 5 years since 1972, for years ending in “2” and “7.” The program began as a special project for minority-owned businesses in 1969 and was incorporated into the economic census in 1972, along with the survey of women-owned business. Data collection for the 2007 SBO began in June 2008 and continued through September 2009. Reported data are for calendar year 2007.

Title 13 of the U.S. Code authorizes this survey and provides for mandatory response. The survey collects data on the gender, ethnicity, and race for up to four persons owning the majority of rights, equity, or interest in the business. Additional demographic

and economic characteristics of the business owners include age, education level, veteran status, and primary function in the business. Characteristics of businesses include family- and home-based businesses; types of customers and workers; and sources of financing for expansion, capital improvements, or start-up.

As noted, the SBO universe included data on all non-farm businesses filing 2007 Internal Revenue Service tax forms as individual proprietorships, partnerships, or any type of corporation with receipts of \$1,000 or more, except those classified in the following North American Industrial Classification System (NAICS) industries:¹

- Crop Production and Animal Production (NAICS 111 and 112)
- Scheduled Air Transportation (Part of NAICS 4811)
- Rail Transportation (NAICS 482)
- Funds, Trusts, and Other Financial Vehicles (NAICS 525)
- Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)
- Private Households (NAICS 814)

¹ U.S. Census Bureau, “Survey of Business Owners,” <<http://www.census.gov/econ/overview/mu0200.html>> (July 30, 2009).

Changes From the 2002 Survey of Business Owners

Several changes implemented in the 2007 SBO relative to the 2002 SBO allowed for the availability of more data about business ownership. Among these changes were:²

- Reinstatement of totals for minority business owners (omitted in 2002).
- Collection of additional owner characteristics, such as whether the owner was born in the United States; the year the owner acquired the business; and how the business was acquired.
- Collection of additional business characteristics, such as language(s) used for business transactions with customers; percent of sales outside the United States; outsourcing to businesses outside the United States; use of the Internet and e-commerce; and provision of employee benefits (e.g., health care, retirement, defined contribution plans, and vacation/holiday pay).
- Expansion of data included in the *Characteristics of Veteran-Owned Businesses* and *Characteristics of Veteran Business Owners* reports.

How the Data Are Used

Government officials, industry organization leaders, economic and social analysts, and business entrepreneurs routinely use SBO data.³

- The Small Business Administration and the Department of Commerce's Minority Business Development Agency use the data to assess business assistance needs and allocate available program resources.
- Local government commissions on small and disadvantaged businesses use SBO data to establish and evaluate practices for contract procurement.
- Federal, state, and local government agencies use the data as a framework for planning, directing, and assessing programs that promote the business activities of disadvantaged groups.
- A national trade association of women-owned businesses uses the data to assess women-owned businesses by industry and area and to educate other industry associations, corporations, and government entities.

- Consultants and researchers use the data to analyze long-term economic and demographic shifts and to analyze differences in ownership and performance among geographic areas.
- Individual business owners use the data to analyze their operations in comparison to similar firms, compute their market share, and assess their growth and future prospects.

DATA COLLECTION

The Census Bureau compiled a list of all firms (referred to as the "universe") eligible to participate in the SBO from a combination of business tax returns and data collected from the economic census. It also obtained electronic files from the Social Security Administration.

The Census Bureau collected employment, payroll, receipts, and kind of business for each plant, store, or physical location during the 2007 Economic Census from most firms with paid employees.⁴

Sampling

To design the 2007 SBO sample, the Census Bureau used the following sources of information to estimate the probability that a business was minority- or women-owned:

- Administrative data from the Social Security Administration.
- Lists of minority- and women-owned businesses published in syndicated magazines, located on the Internet, or disseminated by trade or special interest groups.
- Word strings in the company name indicating possible minority ownership.
- Racial distributions for various state-industry classes and racial distributions for various ZIP Codes.
- Gender, race, and ethnicity responses of a single-owner business to a previous SBO or other Census Bureau data collections.

These probabilities were then used to place each firm in the SBO universe in one of nine frames for sampling:

- American Indian
- Asian
- Black or African American
- Hispanic

² For more information on the changes to the 2007 SBO, see *Federal Register*, Vol. 72, No. 99, May 23, 2007, pp. 28950–51.

³ U.S. Census Bureau, "Survey of Business Owners," <<http://www.census.gov/econ/sbo/about.html>> (June 25, 2009).

⁴ U.S. Census Bureau, "Survey of Business Owners," <<http://www.census.gov/econ/overview/mu0200.html>> (July 22, 2009).

- Non-Hispanic White men
- Native Hawaiian and Other Pacific Islander
- Other
- Women
- Publicly owned companies

The SBO universe was stratified by state, industry, frame, and whether the company had paid employees in 2007. All large companies (based on volume of sales, payroll, or number of employees), including those operating in more than one state, were deemed certain to be included in the survey. All certainty cases were sure to be selected and represented only themselves (i.e., had a selection probability of one and a sampling weight of one). The certainty cutoffs for large companies varied by sampling stratum, and each stratum was sampled at varying rates, depending on the number of firms in a particular industry in a particular state. The remaining universe was subjected to stratified systematic random sampling.⁵

Questionnaire mailout and follow-up. Following the design of the 2007 SBO questionnaires and cover letters by Census Bureau staff, a contractor printed, packaged, and delivered the questionnaire packages to the Census Bureau’s National Processing Center (NPC) in Jeffersonville, IN, for mailout. Unlike the 2002 SBO, the 2007 survey used a single questionnaire (Form SBO-1) for all firms.⁶ The NPC mailed questionnaire packages in two phases. (Packages included the questionnaire, cover letter [SBO-1-L1], return envelope, instructions for responding electronically, and answers to frequently asked questions.) Each recipient was instructed to complete and return the questionnaire using the enclosed postage-paid envelope or via electronic response within 30 days of receipt. The Web address to the Census Bureau’s Business Help Site was provided; this site allowed respondents to perform many functions that were previously available only through the call center (e.g., ask for forms to be mailed again, request extensions, and make address corrections).

The first-phase mailout consisted of 969,936 packages mailed to employer firms in May 2008. A first follow-up

⁵ U.S. Census Bureau, “Survey of Business Owners,” <<http://www.census.gov/econ/overview/mu0200.html>> (July 30, 2009).

⁶ In 2002, the Census Bureau used two questionnaires—SBO-1, for employer businesses, and SBO-2, for corporations/partnerships and nonemployer businesses. U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, Chapter 10, “2002 Survey of Business Owners,” EC02-00R-HIST, September 2006, p. 121.

mailing was sent to nonrespondent firms between July 14 and July 17. (This mailing also included packages that had been returned to the NPC as “undeliverable as addressed” after the initial mailout; they were readdressed and resent in the follow-up mailing). A second follow-up mailing was sent between August 18 and August 22; and a third follow-up mailing was sent on September 26, 2008, to businesses that still had not responded.

The second-phase mailout consisted of 1,313,492 packages mailed to nonemployer businesses in May 2009.⁷ A first follow-up mailing, including packages from the initial mailing that were returned to the NPC as “undeliverable as addressed,” was sent to nonrespondent firms between June 26 and July 9. A second follow-up was sent between August 5 and August 10 to those who had still not responded.

DATA PROCESSING AND TABULATION

Receipt and Check-In

The National Processing Center (NPC) checked in Survey of Business Owners (SBO) questionnaires by using laser sorters and laser wands to scan and capture envelope barcodes. These barcodes created a check-in receipt file that was used to update the survey mailing list and generate address files for follow-up operations.

Following check-in, the forms were scanned on Kodak 9500® scanners, and digital images were created. Forms that were imaged only, and did not go through data capture, were created via the Workflow and Image Processing System, while forms to be processed through data capture were created with the scanner software. The digital images were then loaded to an image storage and retrieval system for survey area review and analysis.

The SBO receipt and check-in operations closed out on November 7, 2008, for packages included in the Phase 1 mailout; however, the NPC continued to receive SBO forms well after closeout. The NPC reopened receipt and check-in operations in early January 2009 to clear out the backlog of cases. The NPC still continued to receive Phase 1 receipts and sent these to headquarters for future processing. Headquarters

⁷ In addition to the mailout of questionnaire packages to nonemployer businesses, the second phase of the mailout also included 36,716 packages remailed to employer businesses whose Phase 1 questionnaires were returned as undeliverable. Data supplied by Gail D. White, U.S. Census Bureau, Company Statistics Division, July 2009.

processed approximately 1,500 forms in March 2009, but continued to receive late receipts from the NPC. These receipts were kept for processing after the Phase 2 mailout.

Phase 2 operations were closed out on September 30, 2009. All receipts received after this date were saved for a final processing on October 20, 2009. At this time, all Phase 2 receipts received after closeout were processed as well as all remaining Phase 1 receipts.

Data Entry, Editing, and Tabulation

Following receipt and check-in of questionnaires, the integrated Computer Assisted Data Entry System (iCADE) captured questionnaire data; iCADE transmitted data in batches to Census Bureau headquarters, where data were loaded into the Census Survey Processing System (CSPRO). Census Bureau analysts edited the data that had been automatically flagged (individually or in relationship to other data) because the data failed to conform to expected reporting behavior.

Use of Administrative and Economic Census Records

Once analysts completed the review of SBO response data, the Census Bureau retrieved each business's data from the 2007 Economic Census and administrative records.⁸ The following data were matched to each

⁸ The Census Bureau's principal sources of noncensus administrative records were the Internal Revenue Service, the Social Security Administration, and the Bureau of Labor Statistics. For more information on the kinds of records and data used, see Chapter 5, "Preparations for Data Collection."

business's 2007 SBO data, to improve understanding of business activity and ownership characteristics:

- Geographic code
- Organizational status (sole proprietorship, partnership, or corporation)
- Number of employees reported during the week of March 12, 2007
- Annual payroll (for firms with paid employees)
- Receipts
- Kind of business

PUBLICATION PROGRAM

Data from the 2007 Survey of Business Owners were published via the Census Bureau's American Fact-Finder Web site. The agency initiated the publication program for SBO data with the release of "Preliminary Estimates of Business Ownership by Gender, Ethnicity, and Race (PRELIM)" data in July 2010. Additional data were released periodically, with the final data product—*Characteristics of Business Owners (CBO)*—in June 2011.⁹ For more information on the publication of 2007 Economic Census data, see Chapter 10, "Data Dissemination."

⁹ U.S. Census Bureau, "Survey of Business Owners: 2007 Data Release Schedule," <<http://www.census.gov/econ/sbo/releaseschedule07.html>> (July 22, 2009).

Chapter 9: The 2007 Commodity Flow Survey

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INTRODUCTION

The U.S. Census Bureau partnered with the Bureau of Transportation Statistics (BTS) to carry out the 2007 Commodity Flow Survey (CFS) as a component of the 2007 Economic Census.¹ Title 13, U.S. Code, Sections 193 and 195, authorize the Secretary of Commerce to direct the Census Bureau to collect economic data, including those gathered by the 2007 CFS. The CFS produces data on the movement of goods in the United States. Its data are used by public policy analysts for transportation planning and decision-making and to assess the demand for transportation facilities and services, energy use, safety risks, and the potential for environmental degradation.

¹ The BTS is a bureau of the Research and Innovative Technology Administration of the U.S. Department of Transportation. The CFS has been conducted through a partnership between the Census Bureau and the BTS since its inception in 1993. The BTS provides 80 percent of the funding and the Census Bureau the remaining 20 percent. Ronald J. Duych, "Scope and Industry Coverage of the 2007 Commodity Flow Survey," Commodity Flow Survey Conference, Boston, MA, July 8–9, 2006, p. 2.

BACKGROUND INFORMATION²

From 1963 through 1977, the Census Bureau used the Commodity Transportation Survey (CTS) to produce measures on the flow of goods and materials according to mode of transportation.³ An evaluation of the 1977 CTS showed that both the methodology for collecting the shipment samples and the small sample size were problematic. In 1983, the Census Bureau conducted an abbreviated CTS that collected summary data from participants. However, an evaluation of the 1983 survey found that the summary data were of poor quality. As a result, the Census Bureau did not publish the data and ended the survey.⁴

² Information for the following section was drawn from Ronald J. Duych, "Scope and Industry Coverage of the 2007 Commodity Flow Survey," and U.S. Census Bureau, *2002 Commodity Flow Survey: United States*, EC02TCF-US, December 2004, pp. v–viii.

³ The CTS provided statistics on the volume and characteristics of commodity shipments by manufacturing establishments in the United States. The Census Bureau collected shipping data from manufacturing establishments (approximately 19,500 in 1977) selected from the 1977 Census of Manufactures. U.S. Census Bureau, *History of the 1977 Economic Censuses*, Chapter 10, "1977 Census of Transportation," December 1980, pp. 127–132.

⁴ For more information on the abbreviated 1983 CTS and its subsequent cancellation, see U.S. Census Bureau, *History of the 1982 Economic Censuses*, Chapter 8, "1982 Census of Transportation," February 1987, pp. 91–101.

Table 9-1.
NAICS Industries Covered in the 2007 CFS

NAICS code	Description
212	Mining (Except Oil and Gas)
311	Food Manufacturing
312	Beverage and Tobacco Product Manufacturing
313	Textile Mills
314	Textile Product Mills
315	Apparel Manufacturing
316	Leather and Allied Product Manufacturing
321	Wood Product Manufacturing
322	Paper Manufacturing
323	Printing and Related Support Activities
324	Petroleum and Coal Products Manufacturing
325	Chemical Manufacturing
326	Plastics and Rubber Products Manufacturing
327	Nonmetallic Mineral Product Manufacturing
331	Primary Metal Manufacturing
332	Fabricated Metal Product Manufacturing
333	Machinery Manufacturing
334	Computer and Electronic Product Manufacturing
335	Electrical Equipment, Appliance, and Component Manufacturing
336	Transportation Equipment Manufacturing
337	Furniture and Related Product Manufacturing
339	Miscellaneous Manufacturing
423	Merchant Wholesalers, Durable Goods
424	Merchant Wholesalers, Nondurable Goods
4541	Electronic Shopping and Mail-Order Houses
45431	Fuel Oil Dealers
4931	Warehousing and Storage (auxiliaries)
5111	Newspaper, Periodical, Book, and Directory Publishers
5122	Sound Recording Industries
551114	Corporate, Subsidiary, and Regional Managing Offices (auxiliaries)

In its 1990 “Statement of National Transportation Policy,” the Department of Transportation recognized the need for restoring a commodity-based survey. Congress reinforced the need for these data when it enacted the 1991 Intermodal Surface Transportation Efficiency Act. In response, the U.S. Bureau of Transportation Statistics and the Census Bureau formed a partnership to design an improved survey to collect and publish statistics corresponding to those that had previously been produced by the CTS. In 1993, with funding from the U.S. Bureau of Transportation Statistics and the Census Bureau, the Census Bureau conducted the first Commodity Flow Survey.⁵

⁵ For more information, see U.S. Bureau of Transportation Statistics, “Intermodal Surface Transportation Efficiency Act of 1991—Summary,” <<http://ntl.bts.gov/DOCS/ste.html>> (November 30, 2006). See also, U.S. Census Bureau, *History of the 1992 Economic Census*, Chapter 8, “Transportation Surveys,” EC92-R-5, March 1996, pp. 150–152.

THE 2007 COMMODITY FLOW SURVEY

Scope of the 2007 Commodity Flow Survey (CFS)⁶

The 2007 CFS covered establishments in the United States that had paid employees and were classified (using the 2007 North American Industry Classification System [NAICS]) in the mining, manufacturing, and wholesale trade sectors and in selected retail and service industries. The survey also covered auxiliary establishments, i.e., establishments providing services to other establishments within the same company, in NAICS 4931 (Warehousing and Storage—auxiliaries) and 551114 (Corporate, Subsidiary, and Regional Managing Offices—auxiliaries). (See Table 9-1).

Uses of the Data

The CFS is the only comprehensive source of multi-modal, systemwide data on the volume and pattern of goods movement in the United States. These data are used by government transportation analysts at the federal, state, and local levels to estimate the future demand for transportation services and facilities; assess the adequacy of current transportation infrastructure to accommodate future demand; and evaluate the economic, social, and environmental impacts of transportation flows. The data also are used extensively by academics, researchers, economic planning organizations, and the business community.⁷

Sample Design

The sample design used in the 2007 CFS began with a review and selection of establishments found in the Census Bureau’s database of business addresses (called the Business Register). The Business Register contained approximately 7.5 million employer establishments, of which approximately 750,000 were in industries considered to be “in-scope” for the 2007 CFS.⁸ From this universe of establishments, the Census Bureau collected data from a sample of approximately 100,000 establishments. As noted in Table 9-1, sample establishments included those engaged in the mining,

⁶ Information for the following section was drawn from Transportation Research Board of the National Academies, “Commodity Flow Survey Conference: July 8–9, 2005,” *Transportation Research Circular*, No. E-C088, January 2006.

⁷ Office of Management and Budget, *Federal Register*, “2007 Commodity Flow Survey,” Vol. 71, No. 80, April 26, 2006, p. 24639.

⁸ “In-scope” establishments are those that meet CFS sample criteria for participation in the survey. See Table 9-1.

manufacturing, and wholesale trade sectors, in selected retail and service industries (including electronic shopping and mail order businesses), and auxiliary establishments in NAICS 4931 and 551114.

The Census Bureau selected the sample for the 2007 CFS using a stratified three-stage design in which first-stage sampling units were establishments, second-stage units were four reporting weeks within the survey year (distributed one week per quarter) for those establishments, and third-stage units were a sample of shipments selected by those establishments according to Census Bureau instructions.⁹

Standard Classification of Transported Goods¹⁰

From 1963 to 1993, the Census Bureau used the product classifications found in the Standard Transportation Commodity Code (STCC) system to classify Commodity Transportation Survey (CTS) and CFS shipments. Created by the Association of American Railroads (AAR) in the early 1960s to analyze commodity movements by rail, the STCC codes were useful for analyzing the most important aspects of the U.S. transportation system for the 1963 CFS through the 1993 CFS.

Deficiencies in the STCC system arose because the CFS is a shipper survey and collects information about shipments moving by all modes of transportation, not just shipments by rail. The STCC system frequently provided inadequate detail for identifying products that were significant for other modes, such as truck and air. The codes became increasingly inappropriate for tracking domestic product movements across all modes as a result of changes that included the deregulation of trucking;¹¹ the enactment of the 1994 North American Free Trade Agreement (NAFTA); changes in logistics practices; the emergence of plastics and composite materials to replace metals and glass; the obsolescence of many categories of wood products; and the rapid development of high-tech electronic goods.¹²

⁹ Transportation Research Board of the National Academies, "Commodity Flow Survey Conference: July 8–9, 2005," *Transportation Research Circular*, No. E-C088, January 2006. For more information about sample selection for the 2007 and past commodity flow surveys, see U.S. Census Bureau, *2002 Economic Census: Transportation—Commodity Flow Survey*, Appendix C, "Sample Design, Data Collection, and Estimation," EC02TCF-US, December 2004, pp. C-1–C-5.

¹⁰ Information for the following section was drawn from U.S. Bureau of Transportation Statistics, "Commodity Flow Survey," <http://www.bts.gov/programs/commodity_flow_survey/> (December 19, 2006).

¹¹ Although calls to lessen federal oversight of the trucking industry began in 1962, during the Kennedy Administration, it was not until strong antiregulatory pressure was applied by the Carter Administration that the Interstate Commerce Commission began noticeably lessening its regulatory hold on the industry, culminating in the 1980 Motor Carrier Act.

¹² The AAR continues to use the STCC system as a tariff mechanism, and the codes remain functional for tracking rail-only movement of goods.

For these reasons, the Bureau of Transportation Statistics (BTS) sponsored the development of a new commodity code system—the Standard Classification of Transported Goods (SCTG)—to collect and report CFS data, replacing the STCC in 1997. Created jointly by agencies of the United States and Canadian governments and based on the Harmonized System of commodity classification, the SCTG coding system specifically addresses the statistical needs concerning transported products.¹³

The Census Bureau began classifying commodities shipped using the SCTG coding system in 1997. In 2007, as in past surveys, the CFS survey materials included a listing of SCTG codes and descriptions at the five-digit level to assist respondents with assigning a commodity code to each shipment. For shipments of more than one commodity, respondents used the five-digit code for the major commodity—the commodity of greatest total weight in the shipment.

Shipment Coverage

The 2007 CFS captured data on shipments originating from select types of business establishments (see Table 9-1) located in the 50 states and the District of Columbia. It did not cover shipments originating from business establishments located in Puerto Rico or the Island Areas.¹⁴ The CFS did not include shipments traversing the United States from a foreign location to another foreign location (e.g., from Canada to Mexico) or shipments from a foreign location to a U.S. location. It did include imported products at the point that they left the importer's domestic location for shipment to another location and shipments transported through a

¹³ The Harmonized System nomenclature is used as a basis for the collection of customs duties and international trade statistics by almost all countries (approximately 98 percent of world trade). Use of the system ensures that a customs administration produces statistics in exact accord with international classification standards.

Every item in the Harmonized System that is exported is assigned a unique ten-digit identification code. Every ten-digit item is part of a series of progressively broader product categories. For example, the Harmonized System number for concentrated frozen apple juice is 2009.70.0010. The concentrated frozen apple juice is aggregated into a broader category assigned a six-digit identifier described as apple juice (2009.70.). The six-digit identifier described as apple juice is aggregated into a broader category assigned a four-digit identifier (2009) described as fruit juices and vegetable juices, etc. The four-digit identifier is further aggregated into a broader category assigned a two-digit identifier (20) described as Preparations of Vegetables, Fruit, Nuts etc. The first six-digits of the classification number are universal, the last four may vary from country to country. World Customs Organization, "The Harmonized System: The language of international trade," <<http://www.gfppt.org/uploadededitorimages/00000313.pdf>> (May 19, 2010). See also, U.S. Department of Transportation, "Report 4 (R4)," <http://ops.fhwa.dot.gov/freight/freight_analysis/faf/faf2_report/report4/rpt4_commodity_class.pdf> (December 17, 2007).

¹⁴ Although the 2007 CFS did not include Puerto Rico or the U.S. territories and possessions, the 2007 Economic Census did include Puerto Rico, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands.

foreign territory with both the origin and destination being in the United States. The mileages calculated for these shipments excluded the international segments (e.g., shipments from New York to Michigan through Canada did not include mileages for Canada). The survey included export shipments, with the domestic destination defined as the U.S. port, airport, or border crossing of exit from the United States.

The 2007 CFS also did not cover certain industry areas with significant shipping activity, such as agriculture and government. As a result, the CFS did not cover shipments of agricultural products from the farm site to processing centers or terminal elevators (most likely short-distance local movements); however, it did cover the shipments of these products from the initial processing centers or terminal elevators onward.¹⁵

Mileage Calculations

A BTS mileage calculation team working at a secure data site within the Census Bureau estimated the distance traveled by each freight shipment sampled for the 2007 CFS using algorithms and an integrated, intermodal transportation network developed and updated expressly for this purpose by the Bureau of Transportation Statistics.¹⁶

Mileage Data for Pipeline Shipments

The CFS did not publish ton-miles and average miles per shipment for commodities transported through pipelines. For most of these shipments, respondents reported the shipment destination as a pipeline facility on the main pipeline network. Therefore, for the majority of these shipments, the resulting mileage represented only the access distance through feeder pipelines to the main pipeline network, and not the actual distance through the main pipeline network. Pipeline shipments are included in the U.S. totals for ton-miles and average miles per shipment. For security purposes, there are no pipeline networks available in the public domain with which to route petroleum-based products. Hence, any distance involving a pipeline was considered as solely pipeline mileage from origin ZIP Code to destination ZIP Code and calculated to equal great circle distance (i.e., the shortest distance between two points on the earth's surface, taking into account the earth's curvature).¹⁷

¹⁵ U.S. Census Bureau, *2002 Economic Census: Transportation-Commodity Flow Survey*, pp. C-1–C-5.

¹⁶ For more information, see U.S. Department of Transportation, Bureau of Transportation Statistics, "How Freight Moves: Estimating Mileage and Routes Using an Innovative GIS Tool," TR-001, June 2007.

¹⁷ *Ibid.*, p. x.

DATA COLLECTION AND PROCESSING

Data Collection¹⁸

The Census Bureau's National Processing Center (NPC) in Jeffersonville, IN, conducted the 2007 Commodity Flow Survey mailout and data collection. Data collection took place on a flow basis as establishments returned their one-week data for each of their four assigned reporting weeks of 2007. The NPC began mailing first quarter questionnaires December 22, 2006, and completed mailing fourth quarter questionnaires December 7, 2007.¹⁹

Each establishment in the CFS sample received questionnaire CFS(07)-1000 by mail for each of its three reporting weeks in 2007. These three weeks were spread over the first three quarters of the year (one reporting week per quarter). The Census Bureau sent a second questionnaire—CFS(07)-2000—to establishments during the fourth quarter. By assigning different reporting periods to different establishments, the mailout covered shipment activity during all 52 weeks of the year.

The Census Bureau requested that an establishment provide the following information about each of its reported shipments:

- Shipment identification number
- Date of shipment
- Value
- Weight
- Commodity code from the Standard Classification of Transported Goods list and description
- Mode(s) of transportation (all that apply in order of use)
- Domestic destination or port of exit
- An indication of whether the shipment was an export
- The United Nations or North America (UN/NA) number for hazardous material shipments, if applicable
- Export mode of shipment and city and country of foreign destination, if applicable

¹⁸ Information for the following section was drawn from U.S. Census Bureau, "Commodity Flow Survey," <<http://www.census.gov/svsd/www/cfsmain.html>> (December 19, 2006).

¹⁹ U.S. Census Bureau, "Mailout and Follow-Up Procedures and Docuprint® Specifications for 2007 (CFS) Commodity Flow Survey," Project 7103011, 7-162-COLL-8869, April 3, 2007, p. 3.

For shipments including more than one commodity, the establishment reported the commodity that made up the greatest percentage of the shipment's weight.²⁰

Mail and telephone follow-up. As with the mailout, the NPC conducted mail and telephone follow-up operations. Mail follow-up consisted of a complete reporting package (questionnaire, instructions, etc.) mailed to nonrespondents on a flow basis beginning one week after the establishment's due date.

The NPC conducted telephone follow-up only for the largest nonrespondent establishments. At the conclusion of the follow-up operations, an estimated 70 percent of establishments had supplied data that contributed to tabulation.²¹

Receipt, Check-In, and Data Processing²²

Establishments returned completed questionnaires in the supplied envelopes to the NPC. The U.S. Postal Service delivered CFS returns in three groupings:

1. Good receipts (in return envelopes)
2. Undeliverable as addressed (UAA) receipts (in outgoing envelopes)
3. Other receipts (correspondence, envelopes with nonvisible barcode, miscellaneous, etc.)

NPC staff processed receipts on a first-in, first-out basis, with every effort made to check in receipts on the day they arrived. Staff sorted all "good" and UAA receipts by preprinted barcodes on the envelopes using laser sorters. The preprogrammed laser sorters separated each report form by quarter and organized the returns into "batches" of 20.²³

²⁰ U.S. Census Bureau, "2007 Commodity Flow Survey," Form CFS(07)-1000, October 2, 2006, and "2007 Commodity Flow Survey Instruction Guide," Form CFS(07)-1100, October 24, 2007.

²¹ The response rate is based on the number of establishments providing at least one-quarter of the information requested by the questionnaire.

²² Information for the following section was drawn from U.S. Census Bureau, "Procedures for Check In and Batching of Multiunit Questionnaires Including Procedures for Screening for Analysts Review," December 20, 2002; and U.S. Census Bureau, *2002 Economic Census: Transportation—Commodity Flow Survey*, Appendix C.

²³ Correspondence and materials that could be associated with an establishment were logged into the check-in system, and staff transcribed the establishment's Survey Unit Identification Number onto each form. These returns were reviewed to determine what action (including imaging) should be taken. Questionable returns (those that could not be determined to be correspondence) were referred to NPC supervisors for action. U.S. Census Bureau, "2007 Commodity Flow Survey: Receipt, Check-In, and Batching Procedure—Working Draft #3," Project 7103011, 7-CFS-COLL-9026, April 19, 2007.

Editing. To identify inconsistencies, errors, and critical omissions once data entry files were transmitted from the NPC, Census Bureau headquarters staff used a flow-basis edit process. The edit program assigned a series of flags for missing or incorrect data that required analyst intervention.²⁴

Imputation of missing or incorrect data. Item non-response occurred when a data variable (either value or weight) was not reported or was determined to be invalid during the edit process. Establishment non-response, in turn, took place when an establishment failed to report shipment data for at least one reporting week. Analysts used imputation procedures to resolve item non-response and an adjustment of statistical weights to resolve establishment non-response.

Disclosure review. For the 2007 CFS, the Census Bureau used a disclosure avoidance methodology featuring the systematic application of "noise." This protected the identity of individual companies while minimizing the impact on most published data items.²⁵

PUBLICATION PROGRAM

The Census Bureau published the 2007 Commodity Flow Survey (CFS) data in electronic format via the agency's American FactFinder Web site beginning with a *Preliminary Report* in December 2008 that contained selected national-level estimates and a final series of reports in December 2009. The Census Bureau issued printed reports for the United States, hazardous materials, and exports. The Census Bureau released the 2007 CFS data for the United States, census divisions and regions, individual states, and selected substate areas.²⁶

²⁴ For more information, see Chapter 6, "Data Collection and Processing."

²⁵ For more information on the use of protective noise in the Census Bureau's economic censuses and surveys, see Richard A. Moore Jr., Paul B. Massell, and Jeremy M. Funk, "The Application of Protective Noise to Economic Programs," Census Advisory Committee of Professional Associations Meetings, October 18–19, 2007.

²⁶ For more information on 2007 Commodity Flow Survey publications, see U.S. Bureau of Transportation Statistics, "Commodity Flow Survey," <http://www.bts.gov/publications/commodity_flow_survey/index.html> (December 19, 2006). See also the U.S. Census Bureau's American FactFinder at <http://factfinder.census.gov/servlet/EconSectorServlet?caller=dataset&sv_name=2007+Commodity+Flow+Survey&SectorId=*&ds_name=EC0700A1> (May 19, 2010).

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INTRODUCTION

The U.S. Census Bureau published data for all sectors covered by the 2007 Economic Census and associated surveys via its American FactFinder Internet Web site (<http://factfinder.census.gov/>). In contrast to past censuses, the agency did not publish 2007 data in printed publications, portable document format (PDF) files, or on CD-ROM/DVD-ROMs.

ELECTRONIC PUBLICATION

Economic data have been published in printed volumes since marshals first collected it during the 1810 decennial census. Despite the introduction of public-use computer tape files in 1972, the agency continued disseminating most data in printed formats through the 1992 Economic Census.

The 1997 Economic Census introduced a marked shift from dual publication of economic census data to a dissemination program based primarily upon electronic publication. The increasing use of computers by private

and public data users during the 1990s encouraged the agency to expand publication of electronically disseminated data. Technological advances in the 1990s permitted dissemination on more-compact and user-friendly CD-ROMs and the Internet.¹ Following the 1997 Economic Census, only a few printed reports were produced for public consumption; instead data users accessed and printed reports at the agency Internet Web site (<http://www.census.gov>) using portable document format (PDF) files, hypertext tables, as well as the agency's American FactFinder.

The 2007 Economic Census completed the Census Bureau's move away from printed publications and distribution of diskettes by disseminating all 2007 data via the Internet using American FactFinder. In addition to acknowledging data users' preference for dissemination of data in a form they could manipulate, this shift eliminated printing costs and sped the agency's ability to provide data to the public.

¹ U.S. Census Bureau, *History of the 1997 Economic Census*, POL-00-HEC, Government Printing Office, Washington, DC, 2000, p. 118.

American FactFinder (AFF)

The Census Bureau's AFF is an Internet-enabled information system that makes a wide range of census information available to agency personnel and external users. The system is interactive, and data can be easily accessed, efficiently disseminated, and readily inquired into. Although the Census Bureau initially developed AFF to disseminate Census 2000 data, the system now disseminates data generated by programs throughout the agency (e.g., economic censuses and surveys, the census of population and housing, population estimates, and the American Community Survey).

Development of American FactFinder

Spurred by the need to provide Census 2000 data more efficiently and in customizable formats, AFF has revolutionized the way the Census Bureau disseminates all its data. The agency introduced the first publicly accessible version of AFF (initially called the Data Access and Dissemination System [DADS]) in March 1999 to disseminate the 1997 Economic Census, the American Community Survey (ACS), and 1990 census data. The agency "upgraded" AFF in December 2000 to incorporate performance and interface improvements and to accommodate Census 2000 data. The Census Bureau continues to enhance the information system as technology and data user requirements evolve.²

For more information about accessing data using the Census Bureau's AFF, visit the system home page at <<http://factfinder.census.gov>> or the AFF tutorial at <http://www.census.gov/econ/census07/www/using_american_factfinder/>.

NEW FOR THE 2007 ECONOMIC CENSUS

The Census Bureau introduced several new features and reports for the 2007 Economic Census. Notable additions include:

- Data for places with a large number of workers but few inhabitants. Places are shown if they have 5,000 or more inhabitants or workers. The 2007 Economic Census marks the first time that the Census Bureau introduced the number of workers as a criterion, permitting the publication of data for economically important places with few inhabitants. (For example,

² For more information on the development and introduction of AFF, see U.S. Census Bureau and Titan Systems Corporation, "American FactFinder System Requirements Study," Census 2000 Evaluation R.3.b, June 6, 2002, pp. iii-3.

Lake Buena Vista, FL, had thousands of workers, but only 16 residents in 2000.)³

- Data for census designated places (CDPs). These unincorporated places, defined for statistical purposes by local agencies, were published for 2007 on the same basis as incorporated places.
- Nonemployer establishments and receipts to the economy-wide key statistics (EWKS)⁴ file in AFF, complementing the establishments, receipts, payroll, and employment data for businesses with paid employees. Although nonemployers account for less than 4 percent of all receipts, they represent approximately three-quarters of all businesses.⁵
- Expanded classification of all remaining service sector product lines (Sectors 51 to 81) based on the North American Product Classification System (NAPCS). These data are published in the *Product Lines Reports* subject series. In 2002, the Census Bureau classified product lines in four service sectors during the first phase of the NAPCS implementation.
- Data on employer-provided benefits (health insurance, defined-benefit pensions, defined-contribution plans, and "other") published at the national level for manufacturing in the *Industry Reports* and *Summary Series Reports*, and for retail trade, wholesale trade, and service industries in related surveys. The Survey of Business Owners also identifies the number of businesses providing various fringe benefits across all sectors.
- A question about franchising on 81 of the 560 census questionnaires. This provided the first hard data available on the economic impact of franchising across many industries and served as the foundation for the new *Franchising Report*.⁶

³ The 5,000 population threshold increases the number of towns and townships shown in the 12 northern states with strong minor civil divisions; the previous threshold was 10,000. At the same time, the 5,000 threshold eliminates data for many small incorporated places, for which the previous threshold was 2,500 inhabitants.

⁴ EWKS are data for the United States, states, counties, places, and metropolitan areas for all industries. Items include the number of establishments, sales and receipts, annual payroll, and number of employees.

⁵ Nonemployer data are available for all sectors and subsectors, but only for those detailed industries with many nonemployers. While employer and nonemployer data items are separate, it is possible to add them together in AFF.

⁶ The Census Bureau inquired about franchising during past censuses, but limited these inquiries to the Accommodation and Food Services sector.

Table 10-1.

2007 Economic Census Publication Schedule by Quarter as of August 19, 2008

Publication or data product	2008	2009				2010				2011		
	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
<i>Advance Report</i>		X										
<i>Industry Series Reports</i>			X	X	X							
<i>Geographic Area Series Reports</i>					X	X	X					
<i>Comparative Statistics Report</i>											X	
<i>Bridge Between 2007 NAICS and 2002 NAICS Report</i>											X	
<i>Subject Series Reports</i>						X	X	X	X	X	X	X
<i>Summary Series Reports</i>						X	X	X	X	X	X	X
<i>ZIP Code Statistics Reports</i>											X	
<i>Franchise Report</i>											X	
<i>Nonemployer Statistics Report</i>			X				X					X
<i>Island Areas Report</i>		X	X	X		X		X	X			
Commodity Flow Survey	X				X							
Business expenses data					X					X		
Survey of Business Owners								X	X	X	X	

2007 ECONOMIC CENSUS PUBLICATIONS

The Census Bureau released the first economy-wide 2007 Economic Census data to the public beginning with the *Advance Report* in early 2009 and ending with *Subject Series* and *Summary Series Reports* in late 2011 (see Table 10-1). For the most current schedule of 2007 Economic Census data releases, visit the Census Bureau's Web site at <http://www.census.gov/econ/census07/www/data_release_schedule/>.

Types of Data Products

The Census Bureau published 2007 Economic Census data in the following national and economy-wide reports between 2009 and 2011 through American FactFinder (AFF):

Advance Report. The *Advance Report*, released in early 2009, initiated the publication program with a preliminary look at 2007 data at the national level, by sector and subsector.

Industry Series Reports. Separate *Industry Series Reports* (covering each industry or group of related industries) present general statistics for establishments of firms with payroll (by kind of business⁷ for the United States). Statistics include the number of establishments; sales, receipts, revenue, or shipments; payroll; and employment.

Geographic Area Series Reports. The Census Bureau prepared data for individual industries at the U.S., state, county, place and metropolitan-area levels. Coverage by geographic levels varies by economic census sector.⁸

Comparative Statistics Report. This report presented general statistics for establishments of firms with payroll for both 2007 and 2002. The report is classified according to the 2002 North American Industry Classification System (NAICS) to facilitate comparisons. Data are available for the United States and states.

Bridge Between 2007 NAICS and 2002 NAICS Report. This report presents general statistics for establishments of firms with payroll for 2007. It is classified according to the lowest common denominator categories between NAICS 2007 and NAICS 2002. Statistics shown include the number of establishments; employment; payroll; and value of sales, receipts, revenue, or shipments.

Subject Series Reports. *Subject Series Reports* provide general statistics for establishments classified by enterprise and establishment-size category, by detailed product data, and by a variety of industry-specific special inquiries data that are summarized by NAICS industry for the United States and, in some cases, for states.

Summary Series Reports. *General Summary Reports*, which are published for mining, manufacturing, and construction, republish totals for the United States, states, and in some cases metropolitan areas, with numbers that

⁷ The Census Bureau used an eight-digit "kind of business" classification code that identified the principal business activity of an establishment. The code provided finer details on the activities within certain industries.

⁸ For more information on the *Geographic Area Series* from the 2007 Economic Census, see the Census Bureau's "Geographic Coverage Tables," at <http://www.census.gov/econ/census07/www/geography/geographic_coverage_tables.html>.

generally supersede those published earlier and with some higher-level totals not previously published. The *Geographic Area Series* includes a *U.S. Summary* for other sectors where the U.S. data are consistent with previously published state totals.

Economy-wide key statistics (EWKS) file. This data set was continually built as other data sets were released from March 2009 to October 2010. EWKS presents four key statistics for every available industry and geographic area published. The four key statistics are (1) number of establishments, (2) value of sales, shipments, receipts, revenue, or business done, (3) annual payroll, and (4) number of employees.

ZIP Code Statistics Reports. These reports present data for establishments of firms with payroll by ZIP Code for eight sectors (Retail Trade; Professional, Scientific, and Technical Services; Administrative and Support and Waste Management and Remediation Services; Educational Services; Health Care and Social Assistance; Arts, Entertainment, and Recreation; Accommodation and Food Services; and Other Services [Except Public Administration]).

Franchise Report. The Census Bureau asked a question about franchising on 81 variants of the 2007 Economic Census questionnaires covering 271 industries. Establishment responses provided the first hard data available on the economic impact of franchising across many industries.

Nonemployer Statistics Report. This report presents counts of establishments and receipts for nonemployers (i.e., firms not subject to payroll tax and composed of self-employed individuals). The report contains data for the United States, states, counties, and core-based statistical areas (CBSAs).

Island Areas Report. For the 2007 Economic Census, the Census Bureau published a single report containing all data for Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, and the U.S. Virgin Islands. Data for each Island Area are available on AFF as follows:

- *Puerto Rico.* Published data are for all businesses and are presented for each NAICS sector.
- *Guam.* Published data are for all businesses and are presented for Guam and its election districts.⁹
- *Commonwealth of the Northern Mariana Islands.* Published data are for all businesses and are

⁹ U.S. Census Bureau, *Guam: 2002 Economic Census of Island Areas*, IA02-00A-GUAM (RV), March 2005.

presented for the Northern Mariana Islands and three municipalities: Saipan, Tinian, and Rota. The Census Bureau did not report business activity for the Northern Islands.

- *American Samoa.* Published data are for all businesses and are presented for American Samoa and its districts and counties.¹⁰
- *U.S. Virgin Islands.* Published data are for all businesses and are presented for the U.S. Virgin Islands as a whole. As in previous censuses, the Census Bureau published additional data for St. Thomas and St. John (combined to prevent disclosure problems), St. Croix, and the towns of Charlotte Amalie, Christiansted, and Frederiksted.¹¹

Commodity Flow Survey. The Census Bureau released data from the 2007 Commodity Flow Survey (CFS) for the following geographic levels: United States, census regions and divisions, states and selected CBSAs, and remainder of states. Data provided information on commodities shipped, their value, weight, origination, destination, and mode of transportation.

The Census Bureau also published selected data on hazardous material shipments and exports. Commodity data for national tables are at the four-digit Standard Classification of Transported Goods (SCTG) level. The data are available at the two-digit, and where possible, three-digit SCTG level for state reports.¹²

Business expenses data. Data corresponding to business expenses data in previous censuses are published for 2007 as part of the Industry Series for manufacturing and in the 2007 Annual Retail Trade Survey, the 2007 Annual Wholesale Trade Survey, and the 2007 Service Annual Survey. Employer costs for fringe benefits are broken down into health care, pensions (defined-contribution plans versus defined-benefit plans), and other.

Survey of Business Owners (SBO). Data from the 2007 SBO were published via AFF. The agency initiated the SBO data publication program with the release of "Preliminary Estimates of Business Ownership by Gender, Ethnicity, and Race (PRELIM)" data in July 2010. Additional data were released periodically, with the final data product—*Characteristics of Business Owners (CBO)*—in June 2011.¹³

¹⁰ U.S. Census Bureau, *American Samoa: 2002 Economic Census of Island Areas*, IA02-00A-SAMOA, April 2005.

¹¹ U.S. Census Bureau, *U.S. Virgin Islands: 2002 Economic Census of Island Areas*, IA02-00A-VI (RV), April 2005.

¹² For more information on the SCTG, see Chapter 9, "The 2007 Commodity Flow Survey."

¹³ For more information, see U.S. Census Bureau, "Survey of Business Owners: 2007 Data Release Schedule," <<http://www.census.gov/econ/sbo/releaseschedule07.html>> (July 22, 2009).

Appendix A: Provisions of Title 13, United States Code, Relating to the 2007 Economic Census

TITLE 13, UNITED STATES CODE—CENSUS

CHAPTER 1. ADMINISTRATION

Subchapter I—General Provisions

Section 1. Definitions

As used in this title, unless the context requires another meaning or unless it is otherwise provided—

- (1) “Bureau” means the Bureau of the Census;
- (2) “Secretary” means the Secretary of Commerce; and
- (3) “respondent” includes a corporation, company, association, firm, partnership, proprietorship, society, joint stock company, individual, or other organization or entity which reported information, or on behalf of which information was reported, in response to a questionnaire, inquiry, or other request of the Bureau.

Section 2. Bureau of the Census

The Bureau is continued as an agency within, and under the jurisdiction of, the Department of Commerce.

Section 5. Questionnaires; number, form, and scope of inquiries

The Secretary shall prepare questionnaires, and shall determine the inquiries, and the number, form, and subdivisions thereof, for the statistics, surveys, and censuses provided for in this title.

Section 6. Information from other Federal departments and agencies; acquisition of reports from other governmental and private sources

- (a) The Secretary, whenever he considers it advisable, may call upon any other department, agency, or establishment of the Federal Government, or of the government of the District of Columbia, for information pertinent to the work provided for in this title.
- (b) The Secretary may acquire, by purchase or otherwise, from States, counties, cities, or other units of government, or their instrumentalities,

or from private persons and agencies, such copies of records, reports, and other material as may be required for the efficient and economical conduct of the censuses and surveys provided for in this title.

- (c) To the maximum extent possible and consistent with the kind, timeliness, quality and scope of the statistics required, the Secretary shall acquire and use information available from any source referred to in subsection (a) or (b) of this section instead of conducting direct inquiries.

Section 7. Printing; requisitions upon Public Printer; publication of bulletins and reports

The Secretary may make requisition upon the Public Printer for miscellaneous printing necessary to carry out the provisions of this title. He may further have printed by the Public Printer, in such editions as he deems necessary, preliminary and other census bulletins, and final reports of the results of the several investigations authorized by this title, and may publish and distribute such bulletins and reports.

Section 8. Authenticated transcripts or copies of certain returns; other data; restrictions on use; disposition of fees received

- (a) The Secretary may, upon written request, furnish to any respondent, or to the heir, successor, or authorized agent of such respondent, authenticated transcripts or copies of reports (or portions thereof) containing information furnished by, or on behalf of, such respondent in connection with the surveys and census provided for in this title, upon payment of the actual or estimated cost of searching the records and furnishing such transcripts or copies.
- (b) Subject to the limitations contained in sections 6(c) and 9 of this title, the Secretary may furnish copies of tabulations and other statistical materials which do not disclose the information reported by, or on behalf of, any particular respondent, and may make special statistical

compilations and surveys, for departments, agencies, and establishments of the Federal Government, the government of the District of Columbia, the government of any possession or area (including political subdivisions thereof) referred to in section 191 (a) of this title, State or local agencies, or other public and private persons and agencies, upon payment of the actual or estimated cost of such work. In the case of nonprofit agencies or organizations, the Secretary may engage in joint statistical projects, the purpose of which are otherwise authorized by law, but only if the cost of such projects are shared equitably, as determined by the Secretary.

- (c) In no case shall information furnished under this section be used to the detriment of any respondent or other person to whom such information relates, except in the prosecution of alleged violations of this title.

(d) All moneys received in payment for work or services enumerated under this section shall be deposited in a separate account which may be used to pay directly the costs of such work or services, to repay appropriations which initially bore all or part of such costs, or to refund excess sums when necessary.

Section 9. Information as confidential; exception

- (a) Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may, except as provided in section 8 of this title—
- (1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or
 - (2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or
 - (3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

No department, bureau, agency, officer, or employee of the Government, except the Secretary in carrying out the purposes of this title, shall require, for any reason, copies of census reports which have been retained

by any such establishment or individual. Copies of census reports which have been so retained shall be immune from legal process, and shall not, without the consent of the individual or establishment concerned, be admitted as evidence or used for any purpose in any action, suit, or other judicial or administrative proceeding.

- (b) The provisions of subsection (a) of this section relating to the confidential treatment of data for particular individuals and establishments, shall not apply to the censuses of governments provided for by subchapter III of chapter 5 of this title, nor to interim current data provided for by subchapter IV of chapter 5 of this title as to the subjects covered by censuses of governments, with respect to any information obtained therefor that is compiled from, or customarily provided in, public records.

Section 12. Mechanical and electronic development

The Secretary is authorized to have conducted mechanical and electronic development work as he determines is needed to further the functions and duties of carrying out the purposes of this title and may enter into such developmental contracts as he may determine to be in the best interest of the Government.

Subchapter II—Officers and Employees

Section 21. Director of the Census; duties

The Bureau shall be headed by a Director of the Census, appointed by the President, by and with the advice and consent of the Senate. The Director shall perform such duties as may be imposed upon him by law, regulations, or orders of the Secretary.

Section 22. Qualifications of permanent personnel

All permanent officers and employees of the Bureau shall be citizens of the United States.

Section 23. Additional officers and employees

- (a) The Secretary may establish, at rates of compensation to be fixed by him without regard to the Classification Act of 1949, as many temporary positions as may be necessary to meet the requirements of the work provided for by law. Bureau employees who are transferred to any such temporary positions shall not lose their permanent civil service status by reason of the transfer. The Secretary may make appointments to such temporary positions

in conformity with the civil service laws and rules.

- (b) In addition to employees of the Department of Commerce, employees of other departments and independent offices of the Government may, with the consent of the head of the respective department or office, be employed and compensated for field work in connection with the work provided for by law without regard to section 301 of the Dual Compensation Act.
- (c) The Secretary may utilize temporary staff, including employees of Federal, State, or local agencies or instrumentalities, and employees of private organizations to assist the Bureau in performing the work authorized by this title, but only if such temporary staff is sworn to observe the limitations imposed by section 9 of this title.

Section 24. Special employment provisions

- (a) The Secretary may utilize the services of non-temporary employees of the Bureau (by assignment, promotion, appointment, detail, or otherwise) in temporary positions established for any census, for not to exceed the period during which appropriations are available for that census. Whenever the Secretary determines that the services of an employee which have been utilized under this section are no longer required in such a temporary position, he may, without regard to the provisions of any other law, return the employee to a continuing position, with rank and compensation not less than that which he held in his last permanent position in the Bureau: provided, That no employee shall, by reason of his service in a temporary position under this subsection, lose the protection of any law or regulation with respect to his separation, suspension, furlough, or reduction in rank or compensation below the level held in his last permanent position in the Bureau. Service by a nontemporary employee in a temporary position under this subsection shall be creditable for step-increases (both periodic and longevity) under title VII of the Classification Act of 1949, as amended, as though it were a continuation of service in his last permanent position.

- (b) As used in this title with respect to appointments or positions, "temporary" shall be construed to mean not in excess of one year, or not in excess of the specific period during which appropriations are available for the conduct of a particular census, whichever is longer. No employee of the Bureau who holds only a temporary appointment within the meaning of this section shall be considered as other than strictly temporary for purposes of any other provision of law relating to separations, suspensions, or reductions in rank or compensation.
- (c) The enlisted men and officers of the uniformed services may be appointed and compensated for service in temporary enumerator positions for the enumeration of personnel of the uniformed services.
- (d) The Secretary may fix compensation on a piece-price basis without limitation as to the amount earned per diem, and payments may be made to enumerators for the use of private-automobiles on official business without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837), but at rates not in excess of the rates provided by that Act.
- (e) The Secretary may authorize the expenditure of necessary sums for travel expenses of persons selected for appointment for attendance at training courses held by the Department of Commerce with respect to any of the work provided for by law.
- (f) Notwithstanding any other provision of law prohibiting the expenditure of public money for telephone service, the Secretary, under such regulations as he shall prescribe, may authorize reimbursement for tolls or charges for telephone service from private residences or private apartments to the extent such charges are determined by the Secretary to have been incurred to facilitate the collection of information in connection with the censuses and surveys authorized by this title.

Section 25. Duties of supervisors, enumerators, and other employees

- (a) Each supervisor shall perform the duties imposed upon him by the Secretary in the enforcement of chapter 5 of this title in

accordance with the Secretary's orders and instructions.

- (b) Each enumerator or other employee detailed to serve as enumerator shall be charged with the collection in his subdivision of the facts and statistics called for on such schedules as the Secretary determines shall be used by him in connection with any census or survey provided for by chapter 5 of this title.

Section 26. Transportation by contract

The Secretary may contract with field employees for the rental and use within the continental limits of the United States of means of transportation, other than motorcycle, automobile, or airplane, and for the rental and use outside of the continental United States of any means of transportation, which means may be owned by the field employee. Such rental contracts shall be made without regard to section 4 of the Travel Expense Act of 1949, as amended (5 U.S.C. 837). The rentals shall be at rates equivalent to the prevailing rental rates of the locality. The rental contracts within the continental United States may be entered into only when the use by the field employee of such other means of transportation is safer, more economical, or more advantageous to the Government than use of his motorcycle, automobile, or airplane in conducting the census.

CHAPTER 5. CENSUSES

Subchapter I—Manufactures, Mineral Industries, and Other

Section 131. Collection and publication; five-year periods

The Secretary shall take, compile, and publish censuses of manufactures, of mineral industries, and of other businesses, including the distributive trades, service establishments, and transportation (exclusive of means of transportation for which statistics are required by law to be filed with, and are compiled and published by, a designated regulatory body), in the year 1964, then in the year 1968, and every fifth year thereafter, and each such census shall relate to the year immediately preceding the taking thereof.

Section 132. Controlling law; effect on other agencies

To the extent that the provisions of this subchapter or subchapter IV of this chapter conflict with any other

provision of this title or other law, pertaining to the Secretary or the Department of Commerce, the provisions of this title shall control; but nothing in this title shall be deemed to revoke or impair the authority of any other Federal agency with respect to the collection or release of information.

Subchapter IV—Interim Current Data

Section 182. Surveys

The Secretary may make surveys deemed necessary to furnish annual and other interim current data on the subjects covered by the censuses provided for in this title.

Subchapter V—Geographic Scope, Preliminary and Supplemental Statistics, and Use of Sampling

Section 191. Geographic scope of censuses

- (a) Each of the censuses authorized by this chapter shall include each State, the District of Columbia, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, and as may be determined by the Secretary, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of other areas over which the United States exercises jurisdiction or control shall be subject to the concurrence of the Secretary of State.
- (b) For censuses taken in the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, or any possession or area not specifically designated in subsection (a) of this section, the Secretary may use census information collected by the Governor or highest ranking Federal official, if such information was obtained in accordance with plans prescribed or approved by the Secretary.
- (c) If, pursuant to a determination by the Secretary under subsection (a) of this section, any census is not taken in a possession or area over which the United States exercises jurisdiction, control, or sovereignty, the Secretary may include data obtained from other Federal agencies or government sources in the census report. Any data obtained from foreign governments shall be obtained through the Secretary of State.

Section 193. Preliminary and supplemental statistics

In advance of, in conjunction with, or after the taking of each census provided for by this chapter, the Secretary may make surveys and collect such preliminary and supplemental statistics related to the main topic of the census as are necessary to the initiation, taking, or completion thereof.

Section 195. Use of sampling

Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as “sampling” in carrying out the provisions of this title.

Section 196. Special censuses

The Secretary may conduct special censuses for the government of any State, or of any county, city, or other political subdivision within a State, for the government of the District of Columbia, and for the government of any possession or area (including political subdivisions thereof) referred to in section 191 (a) of this title, on subjects covered by the censuses provided for in this title, upon payment to the Secretary of the actual or estimated cost of each such special census. The results of each special census shall be designated “Official Census Statistics.” These statistics may be used in the manner provided by applicable law.

CHAPTER 7. OFFENSES AND PENALTIES

Subchapter I—Officers and Employees

Section 211. Receiving or securing compensation for appointment of employees

Whoever—

- (1) receives or secures to himself any fee, reward, or compensation as a consideration for the appointment of any person as supervisor, enumerator, clerk, or other officer or employee of the Department of Commerce or bureau or agency thereof, referred to in subchapter II of chapter 1 of this title: or
- (2) in any way receives or secures to himself any part of the compensation paid to any person so appointed—

shall be fined not more than \$3,000 or imprisoned not more than five years, or both.

Section 212. Refusal or neglect of employees to perform duties

Whoever, being an employee referred to in subchapter II of chapter 1 of this title, and having taken and subscribed the oath of office, neglects or refuses, without justifiable cause, to perform the duties enjoined on such employee by this title, shall be fined not more than \$500.

Section 213. False statements, certificates, and information

- (a) Whoever, being an officer or employee referred to in subchapter II of chapter 1 of this title, willfully and knowingly swears or affirms falsely as to the truth of any statement required to be made or subscribed by him under oath by or under authority of this title, shall be guilty of perjury, and shall be fined not more than \$2,000 or imprisoned not more than five years, or both.
- (b) Whoever, being an officer or employee referred to in subchapter II of chapter 1 of this title—
 - (1) willfully and knowingly makes a false certificate or fictitious return; or
 - (2) knowingly or willfully furnishes or causes to be furnished, or, having been such an officer or employee, knowingly or willfully furnished or caused to be furnished, directly or indirectly, to the Secretary or to any other officer or employee of the Department of Commerce or bureau or agency thereof, any false statement or false information with reference to any inquiry for which he was authorized and required to collect information provided for in this title

—shall be fined not more than \$2,000 or imprisoned not more than five years, or both.

Section 214. Wrongful disclosure of information

Whoever, being or having been an employee or staff member referred to in subchapter II of chapter 1 of this title, having taken and subscribed the oath of office, or having sworn to observe the limitations imposed by section 9 of this title, publishes or communicates any information, the disclosure of which is prohibited under the provisions of section 9 of this title, and which comes into his possession by reason of his being

employed (or otherwise providing services) under the provisions of this title, shall be fined not more than \$5,000 or imprisoned not more than five years, or both.

Subchapter II—Other Persons

Section 221. Refusal or neglect to answer questions; false answers

- (a) Whoever, being over eighteen years of age, refuses or willfully neglects, when requested by the Secretary, or by any other authorized officer or employee of the Department of Commerce or bureau or agency thereof acting under the instructions of the Secretary or authorized officer, to answer, to the best of his knowledge, any of the questions on any schedule submitted to him in connection with any census or survey provided for by subchapters I, II, IV, and V of chapter 5 of this title, applying to himself or to the family to which he belongs or is related, or to the farm or farms of which he or his family is the occupant, shall be fined not more than \$100.
- (b) Whoever, when answering questions described in subsection (a) of this section, and under the conditions or circumstances described in such subsection, willfully gives any answer that is false, shall be fined not more than \$500.
- (c) Notwithstanding any other provision of this title, no person shall be compelled to disclose information relative to his religious beliefs or to membership in a religious body.

Section 222. Giving suggestions or information with intent to cause inaccurate enumeration of population

Whoever, either directly or indirectly, offers or renders to an officer or employee of the Department of Commerce or bureau or agency thereof engaged in making an enumeration of population under subchapter II, IV, or V of chapter 5 of this title, any suggestion, advice, information, or assistance of any kind, with the intent or purpose of causing an inaccurate enumeration of population to be made, shall be fined not more than \$1,000 or imprisoned not more than one year, or both.

Section 223. Refusal, by owners, proprietors, etc., to assist census employees

Whoever, being the owner, proprietor, manager, superintendent, or agent of any hotel, apartment house, boarding or lodging house, tenement, or other building, refuses or willfully neglects, when requested by

the Secretary or by any other officer or employee of the Department of Commerce or bureau or agency thereof, acting under the instructions of the Secretary, to furnish the names of the occupants of such premises, or to give free ingress thereto and egress therefrom to any duly accredited representative of such Department or bureau or agency thereof, so as to permit the collection of statistics with respect to any census provided for in subchapters I and II of chapter 5 of this title, or any survey authorized by subchapter IV or V of such chapter insofar as such survey relates to any of the subjects for which censuses are provided by such subchapters I and II, including, when relevant to the census or survey being taken or made, the proper and correct enumeration of all persons having their usual place of abode in such premises, shall be fined not more than \$500.

Section 224. Failure to answer questions affecting companies, businesses, religious bodies, and other organizations; false answers

Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule or questionnaire prepared and submitted to him under the authority of this title, shall be fined not more than \$500; and if he willfully gives a false answer to any such question, he shall be fined not more than \$10,000.¹

Section 225. Applicability of penal provisions in certain cases

- (a) In connection with any survey conducted by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof pursuant to subchapter IV of chapter 5 of this title, the provisions of sections 221, 222, 223, and 224 of this title shall apply—

¹ The Sentencing Reform Act of 1984 (Title 18, Sections 3551, 3559, and 3571) changes these penalties to up to \$5,000 for failure to report and \$10,000 for intentionally providing false information.

-
- (1) with respect to the answering of questions and furnishing of information, only to such inquiries as are within the scope of the schedules and questionnaires and of the type and character heretofore used in connection with the taking of complete censuses, under subchapters I and II of chapter 5 of this title, or in connection with any censuses hereafter taken pursuant to such subchapters;
 - (2) only after publication of a determination with reasons there for certified by the Secretary, or by some other authorized officer or employee of the Department of Commerce or bureau or agency thereof with the approval of the Secretary, that the information called for is needed to aid or permit the efficient performance of essential governmental functions or services, or has significant application to the needs of the public, business, or industry and is not publicly available from nongovernmental or other governmental sources;
 - (3) in the case of any new survey, only after public notice, given by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof at least thirty days in advance of requesting a return, that such survey is under consideration.
- (b) The provisions for imprisonment provided by section 222 of this title shall not apply in connection with any survey conducted pursuant to subchapter II of chapter 3 of this title, or to subchapter IV of chapter 5 of this title.
 - (c) The provisions of sections 221, 222, 223, and 224 of this title shall not apply to any censuses or surveys of governments provided for by subchapters III and IV of chapter 5 of this title, nor to other surveys provided for by subchapter IV of such chapter which are taken more frequently than annually.
 - (d) Where the doctrine, teaching, or discipline of any religious denomination or church prohibits the disclosure of information relative to membership, a refusal, in such circumstances, to furnish such information shall not be an offense under this chapter.

Subchapter III—Procedure

Section 241. Evidence

When any request for information, made by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, is made by registered or certified mail or telegram, the return receipt therefor or other written receipt thereof shall be prima facie evidence of an official request in any prosecution under such section.

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ECONOMIC CENSUSES IN THE NINETEENTH CENTURY

BEGINNINGS OF THE ECONOMIC CENSUSES

1810

The United States first inquired into the state of the nation's economy during the 1810 census of population. In an act of May 1, 1810, Congress directed that, "it shall be the duty of the several marshals, secretaries, and their assistants aforesaid, to take, under the direction of the Secretary of the Treasury, and according to such instructions as he shall give, an account of the several manufacturing establishments and manufactures within their several districts, territories, and divisions." The act did not outline specific questions or prescribe a schedule, leaving those matters to the Secretary of the Treasury's discretion.¹

To facilitate data collection, the Treasury Department divided manufactured products into 25 broad categories, encompassing more than 220 kinds of goods. As the U.S. marshals and their assistants conducted the decennial census, they also visited the manufacturing establishments in their assigned areas to obtain economic data—generally on the quantity and value of products manufactured.

The enumeration was conducted from August 1810 to July 1811, at a total cost of \$40,000. In March 1812, Congress authorized \$2,000 for the Treasury Department to prepare a statistical report on the kind, quantity, and value of goods manufactured and the number of manufacturing establishments in each state, territory, district, and county. The May 1813 report noted that the economic data were of poor quality because of serious undercounting and omissions during the enumeration. These shortcomings likely figured into the 1810 valuation of the nation's total manufactures at about \$173 million; however, the actual figure probably exceeded \$200 million.²

1820

The 1820 census collected data on manufactures similar to the kind collected in 1810. It also collected additional information on the location of establishments, types of raw materials used (kind, quantity, and cost), numbers of employees (men, women, and children), machinery (kind of machinery and quantity of machinery in operation), expenditures (capital, wages,

and contingent expenses), and production (nature and names of articles manufactured, value, demand, and sales). Federal marshals and their assistants collected the data, and the U.S. Department of State published the results for each state, territory, and district.

As a result of insufficient funds to pay marshals and the neglect (or refusal) of many establishments to provide the required information, the Department of State did not attempt to compute U.S. totals because the data were incomplete. Data from 1810 and 1820 are not comparable because marshals counted household manufactures (goods produced at home) in 1810 but not in 1820.³

1830

The poor quality of data collected during the previous two censuses resulted in the marshals making no attempt to obtain manufactures data during the 1830 census.⁴

1840

Congress resumed collecting manufactures' statistics as well as data on mining and fisheries in 1840 following the rapid growth in commercial fishing, commerce, and mining since the 1820 census. Marshals and their assistants used a single questionnaire, "Schedule of Mines, Agriculture, Commerce, Manufactures, Etc.," to collect data on these subjects. The census divided manufacturing into 30 categories according to the basis of the manufactured product (machinery, paper, furniture, etc.), and included an "all other manufactures" classification. Census takers collected statistics on the quantity and value of goods produced, amount of capital invested, number of employees, and number of establishments. After classification of mine operations (i.e., iron, lead, salt, stone, etc.), marshals questioned mine operators about the quantity and value of materials produced, employment, and capital invested in mining operations. Commercial fishermen responded to questions regarding quantity (and sometimes value) of fish products, employment, and capital invested.

Marshals tabulated the returns for manufacturing, fishing, commerce, and mining and published statistical tables on the "commerce and industry of the country." However, the 1840 census results reflected a considerable undercoverage of the national economy.⁵

¹ Act of May 1, 1810.

² Tench Coxe, *A Statement of the Arts and Manufactures of the United States for the Year 1810* (Philadelphia, PA: A. Cornman, 1814), pp. ii and iii.

³ Carroll D. Wright and William C. Hunt, *The History and Growth of the U.S. Census* (Washington, DC: Government Printing Office, 1900), pp. 26–27.

⁴ *Ibid.*, p. 29.

⁵ *Ibid.*, pp. 309–12. See list of inquiries to manufactures in the 1840 census.

EXPANSION OF THE CENSUSES

1850

In a report of the Senate Committee on the Library, Senator Rufus Choate of Massachusetts acknowledged the deficiencies in the economic data collected during previous censuses, stating that, “. . . in view of the manifest and palpable, not to say gross, errors of the late census, the [members of the Senate Committee on the Library] feel bound to suggest to the Senate the necessity of some legislation with a view to prevent similar errors and inaccuracies in the census to be taken in 1850.” Subsequently, in a March 3, 1849, act, Congress established the Census Board, specifically tasked with correcting these inaccuracies in data collection, and selected board members “not for their political opinions, but for their scientific attainments and knowledge of the matters they are to investigate.”⁶

The newly established Census Board consisted of the Secretary of State, the Attorney General, and the Postmaster General. The Census Board nominated Joseph C. G. Kennedy, a statistician and newspaper editor-owner from Pennsylvania, to serve as secretary, and the Secretary of the Interior formally appointed Kennedy “superintendent” of the Census Office in 1850. As superintendent, Kennedy’s responsibilities included designing and printing the schedules of inquiries and collecting and publishing data on the nation’s population, manufacturing, mining, fishing, and commerce.⁷

The Census Board consulted with prominent statisticians to develop six schedules of inquiries. Schedule 5 collected economic data from every corporation, company, or individual having annual production valued at \$500 or more for the year ending July 1, 1850.⁸ The schedules also asked respondents to supply the following data:

- Name of business, manufacture, or product
- Amount of capital invested in real and personal estate in the business
- Quantities, kinds, and values of raw materials used
- Kind of motive power (water or steam), machinery, structure, or resource used in the manufacturing process

⁶ Wright and Hunt, “*History and Growth of the U.S. Census*,” pp. 40–41.

⁷ *Ibid.*, p. 40.

⁸ For a time, the government used the words “schedule” and “questionnaire” interchangeably to refer to the report form completed either by a respondent or a census enumerator. In more recent years, the Census Bureau has generally used the term “questionnaire.”

- Average number of male and female workers employed
- Average monthly cost of male and female labor
- Quantities, kinds, and values of annual production

Although federal marshals and their assistants continued to collect census data, clerks working under the supervision of Superintendent Kennedy prepared statistics for publication. The Census Board published the first general census results in June 1853. Partial data for manufactures were available in September 1854, and complete economic statistics for the 1850 census were released in December 1859.⁹

Following the enumeration, the Census Board reported that the total value of manufactures (including fisheries and the products of mines), as reflected in the 1850 census, exceeded \$1 billion—a 500 percent increase since 1810, compared to a 75 percent growth in population. Although the undercount continued, the economic and decennial censuses were considerably more accurate than the previous censuses.¹⁰

1860

A significant change to the published results followed the 1860 census when Superintendent Kennedy offered analysis of census statistics. In the 1862 *Preliminary Report on the Eighth Census*, Kennedy described the increasing impact of manufacturing and commerce in the United States, estimating that one-third of the entire population in 1860 was supported, directly or indirectly, by manufacturing. He compared various industries, interpreted the data to show how and why sections of the economy expanded, stabilized, or decreased, and illustrated interrelationships among the production and socioeconomic factors.

1870

For the 1870 census, the Census Board modified several of the economic schedules in an attempt to collect more detailed data. For example, the “products of industry” inquiry collected additional information on machinery and machine power sources, cost of labor, and number of months the establishment was in operation. The motive power and machinery inquiry was subdivided to identify the kind of motive power, horsepower (if steam or water), and the number of machines used. Also, the inquiry concerning the average number

⁹ Wright and Hunt, “*History and Growth of the U.S. Census*,” p. 47.

¹⁰ George F. Warren and Frank A. Pearson. *Prices* (New York: John Wiley and Sons, 1933), pp. 11–13, 25–27, cited by Frederick G. Bohme, “U.S. Economic Censuses, 1810 to the Present,” *Government Information Quarterly*, Volume 4, Number 3 (1987), p. 224.

of hands employed was revised to cover males (older than 16 years), females (older than 15 years), and children. Despite these changes, statistics on industry and wealth contained basic tabulations closely resembling those of 1850 and 1860.

1880

In March 1879, a new census law implemented major changes in economic data collection for the census of 1880.¹¹ These changes included:

- Tailoring schedules to specialized businesses.
- Expanding the scope of the censuses.
- Replacing the federal marshals and their assistants with census supervisors and “experts,” appointed by the President and confirmed by the Senate.¹²
- Implementing a schedule of fines and/or imprisonment for census workers who breached respondent confidentiality, falsified census records, or participated in other forms of misconduct.

The Census Office expanded the number of general economic questions used for the 1880 census and designed 49 special schedules, containing more than 2,000 inquiries tailored for manufacturing industries. Although the same item appeared on several (or on the general schedules and also on one or more special schedules), more than 700 inquiries were unique to an individual economic sector.¹³

During the 1850, 1860, and 1870 censuses, mining and mineral industries inquiries were included on the “products of industry” schedules. For 1880, the Census Office created 42 schedules specific to mining and mineral industries. (The 1850, 1860, and 1870 censuses collected these data from the “products of industry” schedules). The mining and mineral industries schedules contained almost 3,000 inquiries, of which 1,600 were unique to specific schedules.¹⁴

The 1880 census included five schedules for commercial fisheries to inquire about the amount and kind of fish taken, type of equipment used, employment, and finances. Of these schedules, commercial fishermen

received a basic schedule, and more-detailed schedules were prepared for dealers of fresh and salt fish and for fishing activities.

Although the 1850 census collected some data on telegraph facilities, the 1880 census marked the first major effort to compile detailed statistics on transportation and communications, including the collection and publication of data on steam railroads, steamboat companies, incorporated express companies, and telegraph companies. The Census Office asked 375 questions designed to collect information on the railroads’ financial and physical characteristics.¹⁵

The 1880 census also contained a special survey on wages and prices. Three schedules, with a total of 167 questions, collected statistics on wages in the manufacturing industries and building trades and on average retail prices of the “necessaries of life.”

The insurance industry (specifically life insurance) merited several questions in the 1860 census. By 1880, 15 schedules collected data on the organization, finances, and insurance in force for life, fire, and marine insurance companies.¹⁶

The rise of organized labor and trade associations prompted the government, for the first and only time in the censuses, to include a series of inquiries on labor unions and trade societies (number, objectives and methods, membership, receipts, and expenditures) and on the number, location, causes, and results of strikes and lockouts. The census used four schedules containing a total of 101 questions to collect this information.

The economic statistics compiled in the 1880 census were more comprehensive than in any previous census. The use of experts and special agents generally resulted in returns being more complete and consistent, which led to more-accurate data on the nation’s economy. The Census Office published the compendium summarizing census data in early

¹¹ Act approved March 3, 1879, for the conduct of the tenth census, 20 Stat. 473.

¹² For the economic census, “experts” and “special agents” (college professors, engineers, economic statisticians, and others with training and experience in the appropriate subject-matter areas) were authorized to collect, classify, and analyze statistics on manufacturing, mineral industries, or commercial fisheries in 279 large cities and towns.

¹³ For a general description of the schedules, see Wright and Hunt, p. 63. Individual inquiries on the schedules are listed on pp. 316–63.

¹⁴ Although schedules for copper mines asked more than 120 questions, the median number of items on the mining and mineral industries special schedules was 53.

¹⁵ Financial characteristics included income, expenses, and analysis of earnings, while physical characteristics encompassed track mileage, amount and kind of rolling stock (locomotives and cars), and fuel used to power locomotives. The census requested a detailed report from each railroad on virtually every facet of its operations, including timber conservation practices and data on employees and others killed or injured in accidents.

In addition to questions about the railroads’ current characteristics, there was a special inquiry on the history of their construction. From this, the Census Office tabulated statistics on mileage built and existent, by groups of states, for individual companies, and annually from 1830 to 1880. The special schedules asked fewer and less-detailed questions of steamboat companies (21 questions), express companies (30), telegraph companies (24), and telephone/telegraph companies (16).

¹⁶ As a result of difficulties experienced in collecting and tabulating the data, no report was issued on this subject, except for a preliminary statement in the statistical compendium.

1883; manufacturing statistics and transportation-communications data in October 1883; and the mineral industries data in July 1886. Additionally, the Census Office published several monographs in the mid-1880s (on water power used in manufacturing; precious metals; and petroleum, coke, and building stone). The office published the last 1880 publication—the 1880 statistical atlas—following the 1890 census.

1890¹⁷

The 1890 Censuses of Manufactures and Mineral Industries followed the basic procedures established for the 1880 census. Specialists and agents visited establishments in 1,042 manufacturing and commercial centers, bulletins announced preliminary census results, and in many instances, the same schedule formats were used.

The 1890 census was the first to use administrative records (those kept by governmental or private organizations on their day-to-day operations) to compile economic census data, including indebtedness—such as real estate mortgages—of private corporations and individuals. Census agents compiled data on mortgages made during the period 1880 to 1890 from real estate recorders' offices. Collected data included a description of the property, provisions of the mortgage, and the addresses of the mortgagor and mortgagee. The Census Office mailed schedules (and postage-paid return envelopes) to the mortgagors (or the mortgagees if the mortgagors did not respond), requesting additional information about their mortgages (whether or not they had been fully paid and, if not, how much was owed). Respondents mailed their completed schedules to the Census Office.¹⁸

Additionally, the 1890 census covered Alaskan manufactures for the first time.¹⁹ The census also expanded its inquiries into national transportation (first asked in

1880) to include coverage extended to sailing vessels and rapid-transit facilities in cities (including cable railways, railways operated by animal power, and electric street railroads).²⁰

1900

The census of 1900,²¹ modeled on the 1890 census, included coverage of manufactures, mines and quarries, street and electric railroads, and, for the first time, central electric light and power stations. It compiled manufacturing information on the number of establishments, capital invested, number of wage earners and total wages paid, cost of materials, and value of products in 1,042 cities and towns. Most manufacturing establishments reported information on a general questionnaire (about 513,000 of 640,000 establishments responding to the census). Thirty-two industry-specific questionnaires were used to enumerate the remaining establishments.²²

The Census Office published manufacturing data in four volumes, with summary data published in the 1900 statistical abstract and atlas. The Census Office also disseminated economic data in 59 unique bulletins on various special subjects in manufacturing that included shipbuilding, slaughtering and packing, and lumbering, as well as in bulletins on manufacturing for each of the states and territories except Alaska and Hawaii.²³

The Census Office staff compiled statistics about street and electric railroads, on such topics as number of companies, length of rail lines, cost of construction and equipment, employees, and passengers. Data compiled for central electric light and power companies included number of stations, cost of construction and equipment, earnings, expenses, and power generated.²⁴

¹⁷ The Census Bureau, for much of its history, used the term “economic censuses” to cover all of its economic data-collection activities. For 1992, on the advice of the Advertising Council, the agency used the term “economic census” primarily to assist its promotional activities and because data users frequently did not understand what “economic censuses” meant.

¹⁸ U.S. Census Bureau, *Report of the Superintendent of the Census to the Secretary of the Interior 1890* (Washington, DC: Government Printing Office, 1890), pp. 25–27.

¹⁹ *Ibid.*, pp. 38–39. In the early 1880s, Ivan Petroff, a special Census Office agent, traveled to Alaska (in accordance with instructions from the Superintendent of the Census) to report on the number of inhabitants. As a result of his work, he (1) produced a brief statistical review of Alaska in geographic divisions, with tables of population, (2) provided a review of the fur trade, fisheries, mineral, and agricultural resources, (3) described the geography and topography of Alaska, (4) furnished a historical sketch of Alaska from its discovery to the year 1880, and (5) wrote notes on Alaskan ethnology. However, this effort did not constitute an economic census of that territory.

²⁰ Wright and Hunt, “*History and Growth of the U.S. Census*,” pp. 812–21.

²¹ Statistics for manufacturing were for the year 1900. Data for mining, street and electric railroads, and electric light and power stations were for 1902, but the Census Office released these results as part of the 12th Decennial Census publication series. See U.S. Census Bureau, *Bureau of the Census Catalog of Publications 1790–1972* (Washington, DC: Government Printing Office, 1974).

²² U.S. Census Office, *Census Reports, Volume VII, Twelfth Census of the United States Taken in the Year 1900, Manufactures*, “Part 1: United States by Industries” (Washington, DC: Government Printing Office, 1902), p. xlvi.

²³ Data for Alaska and Hawaii appeared in the regular census reports.

²⁴ For details of the publications for the 1900 census, see the *Census Catalog*, pp. 28–33.

ECONOMIC CENSUSES IN THE TWENTIETH CENTURY

THE CENSUS BUREAU AND THE GROWTH OF THE ECONOMIC CENSUS

Permanent Census Act

Moves to establish a permanent agency responsible for conducting the census began soon after the 1840 census. In a June 17, 1844, report, the American Statistical Society urged Congress to establish a permanent bureau of statistics to avoid the errors of the 1840 census. In the decades that followed, committees and professional associations continued to lobby for a permanent agency. In 1888, Superintendent of the Census Francis Amasa Walker recommended that the task of taking the census, at the very least, be assigned to an already existing, organized, and permanently operating agency (specifically the Bureau of Statistics and Labor in the Department of the Interior).²⁵

Lobbyists for a permanent census bureau persisted, strengthened by continued efforts of the American Statistical Society and the National Board of Trade²⁶ and by continued dissatisfaction with census results. Congress eventually rewarded proponents' efforts with passage of the Permanent Census Act in March 1902.²⁷ The act established the Census Bureau (referred to as the Census Office in the act) as a permanent agency in the U.S. Department of the Interior.²⁸ It also directed that a census of manufactures would be conducted every 5 years (quinquennially) beginning in 1905.²⁹

The 1902 act mandated several specialized inter-decennial censuses (taken between 1902 and 1937) that included street railways and telephone and

²⁵ John Cummings, "The Permanent Census Bureau: A Decade of Work," *Publications of the American Statistical Association*, Vol. 13, No. 104, December 1913, pp. 605–7.

²⁶ In 1890, the National Board of Trade formed a committee to study the feasibility of a permanent census-taking agency. The committee was also tasked with developing recommendations to help avoid concentrating demographic and economic inquiries in a single year. In response to the committee's recommendations, Congress asked the Commissioner of Labor to prepare a plan for a permanent census agency. The U.S. House of Representatives and Senate held hearings on the agency's creation in 1897, only to conclude their sessions without action other than to address the situation in the future. A. Ross Eckler, *The Bureau of the Census* (New York: Praeger Publishers Inc., 1972), p. 9.

²⁷ Permanent Census Act of 1902. 32 Stat. 51. Also cited in U.S. Bureau of the Census, *Legislation Relating to the Bureau of the Census* (Washington, DC: Government Printing Office, 1917), pp. 5–8.

²⁸ The name changed to the "Bureau of the Census" in 1903, when the agency became part of the new Department of Commerce and Labor. Legislation continued to refer to the "Census Office," however. The Census Bureau became part of the Department of Commerce in 1913 after the Department of Labor's separate establishment.

²⁹ In his book, *The Bureau of the Census*, pp. 9–10, A. Ross Eckler states on that a mid-decade economic census would not only serve the purpose of increasing the amount of economic data, but also would keep the agency's employees busy when not engaged in decennial census activities.

telegraph companies. In 1922, the "street railways" survey expanded to include motor buses and, in 1932, trolley buses. Although the "telegraph" classification included only land telegraph and ocean cable systems in 1902, the agency added wireless systems in 1907. Other special censuses included enumerations of water transportation in 1906, 1916, and 1926; express businesses in 1907; and commercial fisheries in 1908.³⁰

1905

Prior to the 1905 census, the Census Bureau created an index of manufactures names and addresses using the 1900 census results, city directories, trade publications, and state and local government lists. Using the index, the agency sent preliminary questionnaires to manufacturing establishments in October 1904 asking for basic information on their establishments (name and address, period of operation, and kind of business). The Census Bureau used the preliminary questionnaire data to update its index and—for the first time—mail the census questionnaires to establishments. Questionnaires were mailed in early December 1904. Enumerators visited nonrespondent establishments beginning in January 1905.³¹

The schedules used in the 1905 census were the same as those used in 1900. The agency redefined the scope of the census to cover only manufacturing establishments under the "factory system," excluding the neighborhood and household industries and trades³² that were included previously. Upon completion, the agency retabulated the results from the 1900 manufactures census using the new definition to provide comparability between censuses.³³

Economic Census of Puerto Rico

The Census Bureau conducted the first economic census of Puerto Rico (for manufactures) for the year 1909. With the exception of 1929, the agency conducted a census in Puerto Rico at 10-year intervals through 1949, after which it was taken concurrently with censuses of retail and wholesale trade and selected service industries, for the years 1954 and 1958. (In 1952 and

³⁰ The Census Bureau also conducted censuses of commercial fisheries in 1963 and 1967, but discontinued the program after 1967 due to a lack of interest by data users.

³¹ The Census Bureau employed 835 enumerators to conduct visits to nonrespondent establishments. These enumerators consisted of permanent Census Bureau employees and temporary employees hired specifically for the 1905 census. U.S. Bureau of the Census, *Manufactures 1905*, "Part I: United States by Industries" (Washington, DC: Government Printing Office, 1907), pp. xxvi–xxviii.

³² Examples of these industries include custom tailoring, carpentering, taxidermy, and, in general, contract work done for individual customers. The census also excluded establishments that produced products with an annual value of less than \$500.

³³ *Manufactures 1905*, "Part I: United States by Industries," p. xxvii.

1956, the Commonwealth Government of Puerto Rico conducted censuses of manufactures with more limited coverage than the stateside census.) The census in Puerto Rico has been part of the stateside economic census program since 1963.³⁴

1910 Census Act and Confidentiality

The 1910 Census Act strengthened respondents' confidentiality, particularly as it related to economic data. The Census Bureau informally considered data collected during earlier censuses confidential,³⁵ but the 1910 law codified that data furnished by business, manufacturing, and mining establishments:

... shall be used only for the statistical purposes for which it is supplied. No publication shall be made by the Census Office whereby the data furnished by any particular establishment can be identified, nor shall the Director of the Census permit anyone other than the sworn employees of the Census Office to examine the individual reports.³⁶

The Census Bureau acknowledged the importance of confidentiality by noting in the volume containing results of the 1910 manufactures census that:

It is essential to the success of the manufactures census that every concern should be assured explicitly by law that its business will not be disclosed to competitors, to the general public, to State and local officials, or even to officials of the Federal Government outside of the Census Bureau. Only with such a pledge of confidential treatment can the Bureau of the Census report expect manufacturers to furnish data promptly and accurately.³⁷

1910

The Census Bureau used one general schedule, one administrative and general office schedule, and 62 special questionnaires for the 1910 Census of Manufacturing Establishments.³⁸ Establishments completed and returned their questionnaires to the Census Bureau, and special agents visited nonrespondents.

The Census Bureau and the U.S. Geological Survey used a single schedule to collect data for mines and quarries. (This was done to decrease respondent burden, since the agencies collected similar data.) The Census Bureau assigned 1,227 special agents and 76 regular employees to enumerate factories, mines, and quarries. In sparsely settled areas, decennial census enumerators visited manufacturing and mining establishments.³⁹

For the first time, the 1910 Economic Census collected data from custom sawmills and gristmills and steam laundries. Under the definitions used in the two previous censuses of manufactures, mills that sawed lumber or ground grain for a fee did not fall under the factory system. The census covered steam laundries because they had become an important industry. Consolidating some categories reduced the number of separate industry tabulations published.⁴⁰

An amendment to the 1902 Census Act, passed February 25, 1910, required the Census Bureau to enumerate the number of animals slaughtered for food purposes and the number of hides produced during the year. This necessitated an enumeration of all butchering establishments, many of which would not have been included under the general rules defining the factory system.⁴¹

1915

For the 1915 Census of Manufactures, the Census Bureau sought help from prominent manufactures and representative commercial and trade groups to conduct the census, as well as from Congress, the Department of Agriculture, the Bureau of Corporations, and state statistical organizations, to carry out the census. The Director of the Census Bureau and the chief statistician for manufactures visited large industrial cities to obtain suggestions on the form and content of the schedules from economic census participants.⁴²

The Census Bureau published bulletins containing preliminary results by 1917; however, the United States' entry into World War I (April 1917) delayed preparation of the final printed reports until after the armistice in November 1918.⁴³

³⁴ An act to provide for the thirteenth and subsequent censuses (July 2, 1909), 36 Stat. 1, extended the 1910 censuses, including manufactures, to include "Porto Rico." For general information on the continuation of the census in Puerto Rico, see U.S. Census Bureau, *1963 Economic Censuses: Procedural History* (Washington, DC: Government Printing Office, 1968), p. 105.

³⁵ Wright and Hunt, "History and Growth of the U.S. Census," pp. 136, 145, 150, and 156.

³⁶ Stat. 1. See Section 30 (25).

³⁷ U.S. Bureau of the Census, "Manufactures 1909: General Report and Analysis," *Thirteenth Census of the United States*, Vol. VIII, (Washington, DC: Government Printing Office, 1913), p. 18.

³⁸ *Ibid.*, p. 797.

³⁹ U.S. Bureau of the Census, *Report of the Director to the Secretary of Commerce and Labor Concerning the Operations of the Bureau for the Year 1909-10* (Washington, DC: Government Printing Office, 1911), p. 36.

⁴⁰ *Ibid.*, p. 35.

⁴¹ *Ibid.*

⁴² U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ending June 30, 1914* (Washington, DC: Government Printing Office, 1914), pp. 19-20.

⁴³ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1917* (Washington, DC: Government Printing Office, 1917), pp. 16-17; and *Census Catalog*, pp. 219-21.

Special Censuses in 1917 and 1918

The urgent need for industrial data during World War I resulted in a number of special economic censuses. In late 1917 and early 1918, the Census Bureau conducted a number of mail censuses for the War Trade, War Industries, Shipping, Federal Reserve, and Commercial Economy Boards, the Food Administration, and the Council of National Defense. These censuses covered such commodities as iron and steel; wool machinery and woolen manufactures; kapok fiber, jute, and silk; leather stocks and manufactured leather goods; antimony and graphite crucibles; commercial greenhouses; materials used in the manufacture of explosives; and dental gold production.⁴⁴

1920–1927

The growing need for detailed economic statistics prompted Congress to direct the Census Bureau (in the act providing for the decennial census of 1920)⁴⁵ to conduct censuses of manufactures on a biennial basis and to collect and publish economic statistics for the years 1921, 1923, 1925, 1927, and for every tenth year thereafter. Inquiries of “economic and sociological importance” included:⁴⁶

- The size of establishments and hours of labor.
- The absolute and relative magnitude of the various branches of industry and their growth and decline.
- The industrial importance (with increase or decrease) of individual states and large cities.

In planning the 1921 Census of Manufactures, Census Bureau officials consulted the National Association of Manufacturers, the Census Bureau Advisory Committee (including members of the American Economic Association), civic associations (such as chambers of commerce), trade associations, and government and private-sector statisticians. These organizations and individuals provided recommendations that helped the Census Bureau design questionnaires, publicize the census, and encouraged industry acceptance of the census.⁴⁷

To reduce expenses and expedite the processing and publication of results, the Census Bureau omitted certain items included in previous censuses of

manufactures (capital invested, age and sex distribution of employees,⁴⁸ rent and taxes, primary horsepower used, and kind and quantity of fuel used in manufacturing). Additionally, it collected limited data on the number of wage earners and value of production from manufacturing establishments reporting products valued at less than \$5,000 for 1921.⁴⁹

For the first time in an economic census, the Census Bureau used a punch card tabulating system (similar to the one introduced during the 1890 decennial census for tabulating population data) to tabulate the 1921 census data from manufactures, mines, and quarries.⁵⁰

The Census Bureau issued preliminary summary reports of census results via press releases related to a particular industry or group of industries. A summary bulletin presented statistics for the United States by industries and for all industries combined by state. Mining data were published to reflect geographic distribution of operations, land controlled by mining operators, characteristics of organization, scale of operations, and amount and kind of power used. The general report of economic data included analytical tables and tabulations, selected by mineral industry and state, to facilitate comparisons with the mining statistics published annually by the U.S. Geological Survey.⁵¹

The procedures and coverage of the 1923 census were virtually the same as those of 1921. The 1923 mailout operation was more successful than in 1921, due in part to the expanded cooperation of chambers of commerce. In many large cities, chamber representatives were sworn in as census agents and supervised the census in their areas. The Census Bureau received approximately 65 percent of the returns by mail. By June 1924, almost 95 percent of the establishments had been canvassed by mail or by personal enumeration. Preliminary statistics first appeared in press releases, and final data were published in industry bulletins. A one-volume compendium report was published in January 1926.⁵²

For 1925, the Census Bureau again benefitted from the cooperation of local chambers of commerce and

⁴⁴ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1918* (Washington, DC: Government Printing Office, 1918), pp. 11–15.

⁴⁵ An act to provide for the fourteenth and subsequent censuses (March 3, 1919), 40 Stat. 1291.

⁴⁶ *Ibid.*, Section 29(8).

⁴⁷ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1920* (Washington, DC: Government Printing Office, 1920), pp. 29–30.

⁴⁸ U.S. Census Bureau, *Biennial Census of Manufactures 1927* (Washington, DC: Government Printing Office, 1930), p. 3.

⁴⁹ U.S. Census Bureau, “Manufactures 1919,” *Fourteenth Census of the United States. . . 1920*, Vol. VIII (Washington, DC: Government Printing Office, 1923), p. 9. Previously, data had been obtained from establishments with annual production valued at \$500 or more.

⁵⁰ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1921* (Washington, DC: Government Printing Office, 1921), pp. 13–14.

⁵¹ *Ibid.*, pp. 16–17.

⁵² *Ibid.*, p. 23, and *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1923* (Washington, DC: Government Printing Office, 1923), pp. 14–15.

professional groups to encourage response to the census. Respondents returned about 65 percent of the schedules by mail (approximately 130,000 of 200,000 sent). Census Bureau staff prepared press releases of preliminary results, plus the usual industry bulletins, and released the one-volume final report in December 1927.⁵³

The 1927 census included 335 industries. Approximately 65 percent of the respondents returned their schedules by mail. The previous publication sequence of press release, industry bulletin, and final volume was followed, with the one-volume final report published in April 1930.⁵⁴

1930

Encompassing censuses of manufactures and mineral industries, construction industries, distribution (including retail and wholesale trades), and hotels, the 1930 census was broader in scope than any previous census. These censuses covered activities for the year 1929.

The Census Bureau undertook the construction census in response to a post–World War I construction boom.⁵⁵ In 1920, fewer than 850,000 workers were employed in contract construction, and total private construction for that year was valued at \$5.4 billion. By 1928, the last full year before the start of the Depression, more than 1.6 million workers were employed in this field, and total private construction was valued at \$9.2 billion.⁵⁶

When planning the first census of construction industries, the Census Bureau consulted an advisory committee composed of representatives of national contractors' associations and individual construction companies. This cooperative effort produced one basic questionnaire designed to collect the following data:

- Organization of the establishment
- Number of salaried employees and total salaries paid
- Number of skilled and unskilled workmen employed
- Total annual wages
- Length of working day and week
- Expense for equipment, operation, and overhead

⁵³ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1925* (Washington, DC: Government Printing Office, 1925), pp. 8–10.

⁵⁴ *Biennial Census of Manufactures 1927*, pp. 3–12.

⁵⁵ U.S. Census Bureau, "Construction Industry," *Fifteenth Census of the United States: 1930* (Washington, DC: Government Printing Office, 1933), p. 2.

⁵⁶ U.S. Census Bureau, *Historical Statistics of the United States, Colonial Times to 1970* (Washington, DC: Government Printing Office, 1975), Part 1, p. 137; and Part 2, p. 618.

- Total value of materials and building equipment installed

To mail questionnaires to construction establishments, the Census Bureau prepared an address list of such establishments (approximately 144,000 names and addresses) compiled from the records provided by contractors' associations, private statistical agencies, chambers of commerce, city officials, and postmasters. Census Bureau clerks added additional names and addresses to the list collected from telephone and city directories.⁵⁷

The Census Bureau mailed the construction census questionnaire to establishments engaged in construction (except industrial concerns, public utilities, municipalities, or common carriers that maintained construction crews to repair or maintain their own property). Nonrespondents received two reminder letters, and in cities with populations of 100,000 or more, enumerators employed by the decennial census visited nonrespondent establishments.⁵⁸

The Census Bureau compiled detailed statistics only for establishments reporting gross receipts of at least \$25,000 during the 1929 calendar year. A punch card system mechanically tabulated the data, and clerks and statisticians reviewed the tabulations to ensure accuracy. The results were published in a single, bound volume in December 1932.⁵⁹

Data from the 1930 Census of Distribution (i.e., retail and wholesale trade) were collected solely via a field canvass. The retail trade inquiries covered operations of establishments involved in some manner of retail trade, including restaurants and some service businesses (such as automobile repair shops) that sold merchandise in addition to their services. Inquiries collected data on the numbers of stores, personnel, payroll, stocks, sales, operating expenses, seasonal employment characteristics, credit business, receipts from sales of meals and automotive services, value of returned goods and allowances, and type of organization. The Census Bureau classified retail establishments according to their principal sales items or popular designation and published preliminary results as press releases.⁶⁰ In February 1933, a one-volume final report included a summary of data by

⁵⁷ "Construction Industry," *Fifteenth Census: 1930*, pp. 2–4.

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*, pp. 4–5.

⁶⁰ U.S. Census Bureau, "Retail Distribution: 1929," *Fifteenth Census of the United States: 1930: Distribution*, Vol. I (Washington, DC: Government Printing Office, 1933), pp. 13–14.

states, counties, and incorporated places, and separate tables for each state.⁶¹

Wholesale trade included all establishments engaged in the purchase, sale, or distribution of goods on a conventional wholesale basis, plus other special categories such as cash-and-carry wholesalers, drop shippers (middlemen who secured orders from buyers and had merchandise shipped directly from the manufacturer to the buyer), manufacturers' sales branches, and cooperative marketing associations. Virtually all merchandising establishments not in the retail group were covered by the census of wholesale trade.⁶²

The census of wholesale trade compiled data on the number of establishments; number of employees; salaries and wages; stocks; and net sales, credit sales, sales to ultimate consumers, and sales to industrial consumers.

Enumerators visited each of approximately 1.5 million establishments involved in wholesale trade to complete one of the six questionnaires.⁶³ Clerks tabulated the wholesale data by kind of business (chemical products wholesaler, drug wholesaler, etc.), by geographic area (division and state), and by type of organization (proprietorship, partnership, etc.).⁶⁴ The Census Bureau published preliminary results as press bulletins and released the final bound volume in December 1933.

The Census Bureau planned a mailout/mailback census of hotels (which included only establishments with at least 25 guestrooms) using the directory of names and addresses it compiled of about 27,000 hotels in February 1930. However, because of changes in ownership, duplications, and classification problems, a field canvass was necessary, using decennial census enumerators. Ultimately, clerks compiled data for approximately 15,500 hotels (70 percent of which returned questionnaires by mail, while enumerators contacted the remainder). The agency published tabulations on the number of hotels, number of rooms, seating capacity of dining rooms, receipts, employment, salaries and wages, and number of proprietors and firm members. These data were classified by plan of operation (American, European, and mixed), type of occupancy

(transient, permanent, or mixed), and geographic division and state.⁶⁵

The procedures, coverage, and publication program for the 1930 manufactures census closely resembled those of the biennial censuses for 1921 through 1927. There were 165 questionnaires used to collect data for 238 industry categories. One major difference in coverage was that whereas the first four biennial censuses of manufactures included only firms reporting annual production valued of at least \$5,000, the minimum for the 1930 census was \$500.⁶⁶

The scope of the 1930 Census of Mines and Quarries differed considerably from the 1920 Census of Mineral Industries. The 1930 census excluded the petroleum and natural gas industries and did not collect data for capital, land holdings, rents, royalties, taxes, or detailed breakdowns by kind of employees. The census covered the sand and gravel, glass-sand, and molding-sand industries, and the quarrying of limestone carried on in connection with the manufacture of lime and cement. Questionnaires included new inquiries as to distribution of sales, equipment purchased, and mobile power equipment. A number of industries were consolidated and reclassified for the questionnaire. The data-collection methods and the publication program remained unchanged from previous censuses.⁶⁷

The 1930 publication program included several special reports on economic topics, including sales distribution of products from manufacturing plants; products of manufacturing industries; materials used in manufacturing; and location of industrial plants. With the addition of the censuses of distribution, construction industries, and hotels, the continuation of the manufactures and mineral industries censuses, and the coverage of special topics, the 1930 census was broader in scope than any of the previous economic censuses.

1931–1933

Congress reduced Census Bureau funding and personnel authorizations for the 1931 and 1933 Censuses of Manufactures, and the Census Bureau had to adopt new methods to reduce the cost of the enumeration.⁶⁸ The

⁶¹ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1930* (Washington, DC: Government Printing Office, 1930), p. 17.

⁶² U.S. Census Bureau, "Wholesale Distribution: Summary for the United States," *Fifteenth Census of the United States: 1930* (Washington, DC: Government Printing Office, 1933), p. 7.

⁶³ *Annual Report of the Director of the Census: 1930* (Washington, DC: Government Printing Office, 1930), p. 17.

⁶⁴ "Wholesale Distribution," *Fifteenth Census: 1930*, p. 8.

⁶⁵ U.S. Census Bureau, "Census of Hotels, 1930" *Fifteenth Census of the United States: 1930* (Washington, DC: Government Printing Office, 1931), pp. 1–3.

⁶⁶ U.S. Census Bureau, *Fifteenth Census of the United States: Census of Manufactures: 1929*, Volume I, General Report (Washington, DC: Government Printing Office, 1933), p. 1.

⁶⁷ U.S. Census Bureau, *Fifteenth Census of the United States: Mines and Quarries: 1929*, General Report and Reports for States and for Industries (Washington, DC: Government Printing Office, 1933), pp. 3–5.

⁶⁸ U.S. Census Bureau, *Annual Report of the Director of the Census to the Secretary of Commerce for the Fiscal Year Ended June 30, 1932* (Washington DC: Government Printing Office, 1932), p. 9.

1931 census covered 310 industries, but discontinued some inquiries (e.g., on salaried employees, power equipment, and coal consumption⁶⁹). The Census Bureau mailed questionnaires in January 1932, and establishments returned approximately 60 percent by mail. Officials of local chambers of commerce and census employees (in large industrial centers) conducted a telephone follow-up of nonrespondents. Decreased funding resulted in fewer field follow-ups and delayed the publication of census results. The Census Bureau released individual industry bulletins over a 2-year period (1933–1934) and a final one-volume report in 1935.⁷⁰

The agency reduced the number of special questionnaires for 1933, making greater use of the general questionnaire and of a short-form questionnaire for smaller establishments. The census used the mailout/mailback enumeration, with telephone follow-ups, and about 75 percent of the questionnaires were returned by mail. The published volume containing final census results warned data users that fewer personal follow-ups had resulted in incomplete coverage in some areas.⁷¹

President Franklin D. Roosevelt’s “New Deal” policies, and their economic data requirements, triggered several special economic census projects, such as the 1933 Business Census. This census included retail distribution, wholesale distribution, and a new category, “Services, Amusements, and Hotels.” The service classification consisted of personal services (including barber shops and beauty parlors), mechanical repair services (such as radio shops), and miscellaneous services (such as parking lots). The agency collected data exclusively in a field enumeration funded by the Civil Works Administration.⁷²

1935

The 1935 Census of Manufactures provided about the same level of detail as did the 1930 census. The Census Bureau mailed questionnaires in January 1936 and instructed establishments to hold their questionnaires until enumerators visited. Enumerators collected

data from every establishment, including those that had not received questionnaires by mail.⁷³

The 1935 Census of Business covered retail trade, wholesale trade, the construction industries, and service establishments (personal, business, repair, custom, and miscellaneous services) in an extensive field operation funded by the Works Progress Administration.⁷⁴ The census also included a miscellaneous business category encompassing many types of establishments not canvassed in any previous census including:

- Advertising agencies (received mailed questionnaires and a follow-up visit)
- Radio broadcasting stations (received mailed questionnaires, a follow-up letter, and a follow-up visit)
- Banks (data collected by mail by the Federal Reserve Board, Comptroller of the Currency, and Federal Deposit Insurance Corporation; follow-up visits were supervised by the Census Bureau)
- Insurance companies (received mailed questionnaires and a follow-up visit)

The goal of the 1935 Census of Business was to canvass every recognizable place of business and appraise the effects of the economic depression. To that end, a field enumeration collected data from real estate agencies, financial institutions other than banks (e.g., stock brokerages and finance companies), hotels, places of amusement, transportation (e.g., buses, trucks for hire, and warehousing), nonprofit organizations, property management firms, and miscellaneous business.⁷⁵

The Census Bureau tabulated some of these data at a special office opened in Philadelphia⁷⁶ and published the final business census results in 14 volumes (3 each for retail trade, wholesale trade, selected service industries, and construction; 1 for transportation and warehousing; and 1 for the miscellaneous topics), plus a series of special reports. The agency also published a one-volume census of manufactures report.⁷⁷

1937

In 1937, the Census Bureau conducted only the census of manufactures. Although the agency reduced the number of special questionnaires used, it collected more product detail than in previous censuses,

⁶⁹ U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1933* (Washington, DC: Government Printing Office, 1933), p. 20.

⁷⁰ U.S. Census Bureau, *Biennial Census of Manufactures 1931* (Washington, DC: Government Printing Office, 1935), p. 3; U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1934* (Washington, DC: Government Printing Office, 1934), pp. 18–19; and *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1935* (Washington, DC: Government Printing Office, 1935), p. 23.

⁷¹ U.S. Census Bureau, *Biennial Census of Manufactures 1933* (Washington, DC: Government Printing Office, 1935), pp. 3–4.

⁷² *Annual Report of the Secretary 1934*, pp. 24–25.

⁷³ U.S. Census Bureau, *Biennial Census of Manufactures 1935* (Washington, DC: Government Printing Office, 1938), pp. 3–5.

⁷⁴ *Annual Report of the Secretary 1935* (Washington, DC: Government Printing Office, 1935), p. 19.

⁷⁵ *Ibid.*, p. 20.

⁷⁶ *Ibid.*, p. 19.

⁷⁷ For a list and descriptions of these reports, see the *Census Catalog*, pp. 144–149 and 238–241.

including data on finished-product and work-in-progress inventories.⁷⁸

The Census Bureau developed the 1937 mailing list from 1935 census files, trade directories, license lists, etc., and mailed questionnaires in January 1938. Nonrespondents received two follow-up letters, in February and March. Enumerators visited the remaining nonrespondent establishments between April and June 1938, after which the agency made a final attempt to obtain data from nonrespondents by mail.

The preliminary data from the 1937 Census of Manufactures appeared first in press releases. The Census Bureau published final results via pamphlets and finally as a single volume released in December 1939.⁷⁹

1940

The 1940 decennial census included a field enumeration of businesses (retail and wholesale trades; selected service establishments, places of amusement, hotels, and tourist camps; and construction), manufactures, and mineral industries, for the 1939 data year.⁸⁰

The Census Bureau did not canvass the majority of the establishments classified in the 1935 miscellaneous business category (e.g., banks, advertising agencies, and radio stations).⁸¹ The agency shifted coverage of places of amusement and hotels to the selected service industry group. Furthermore, it modified the 1935 retail classifications for 1940 and published a special table on “reconciliation of classifications” to facilitate comparisons of 1935 and 1940 tabulations. The agency also extended the censuses of retail and wholesale trades and selected service industries to Puerto Rico.⁸²

Coverage of the census of manufactures was similar to that of 1937, but the enumeration shifted from a mailout/mailback operation with follow-up visits to a field enumeration. Enumerators asked a new question

on capital expenditures for plants and equipment and another on personnel, collected data on gender, and produced detailed categories of nonmanufacturing employees.⁸³

With the exception of a field enumeration for stone, clay, and sand and gravel industries, the Census Bureau collected 1939 data for mineral industries by mail enumeration. The Census Bureau conducted a mail enumeration of the bituminous coal industry with the cooperation of the Bituminous Coal Division of the Bureau of Mines, U.S. Department of the Interior. Bureau of Mines field offices distributed and collected the questionnaires from coal industry establishments.⁸⁴

In addition to distributing press releases and pamphlets, the Census Bureau published data in 10 volumes (5 for the census of business, 3 for the census of manufactures, and 2 for the census of mineral industries). The country’s involvement in World War II interrupted preparation of planned special reports, and some were abandoned, including subject reports for retail trade. The agency published the last volume of data in June 1943.

WORLD WAR II

Title 14 of the Second War Powers Act, passed March 27, 1942, permitted the Secretary of Commerce to dispense with or curtail any regular census of the U.S. Department of Commerce in order to undertake more urgent statistical work deemed vital to the war effort. Periodic economic censuses were replaced by war-related surveys that provided statistics needed by the Office of Price Administration, the War Manpower Commission, the Office of Defense Transportation, and other agencies charged with the nation’s defense. Executive Order 9152 of April 29, 1942, specifically canceled the 1941 Census of Manufactures and, later, the 1943 Census of Manufactures. The Census Bureau did not conduct a census in 1945 because Congress did not appropriate the necessary funds.⁸⁵

⁷⁸ U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1938* (Washington, DC: Government Printing Office, 1938), p. 24.

⁷⁹ See the U.S. Census Bureau, *Biennial Census of Manufactures 1937: Part I* (Washington, DC: Government Printing Office, 1939).

⁸⁰ U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1940* (Washington, DC: Government Printing Office, 1940), p. 44.

⁸¹ The Census Bureau changed the scope of the census of selected service establishments by adding the miscellaneous business classifications. U.S. Census Bureau, *Sixteenth Census of the United States: 1940 Census of Business: Volume I, Retail Trade, Part 1, United States Summary* (Washington, DC: Government Printing Office, 1943), p. 3. The reconciliation tables are contained in an appendix to the printed volume.

⁸² Fred A. Gosnell, “The 1939 Business Census Gets Under Way,” *Journal of the American Statistical Association*, Vol. 34, December 1939, pp. 667–70.

⁸³ U.S. Census Bureau, *Sixteenth Census of the United States: 1940: Manufactures 1939, Volume 1: Statistics by Subject* (Washington, DC: Government Printing Office, 1942), pp. 1 and 3.

⁸⁴ U.S. Census Bureau, *Sixteenth Census of the United States: 1940: Mineral Industries 1939, Volume I: General Summary and Industry Statistics* (Washington, DC: Government Printing Office, 1944), p. 1.

⁸⁵ U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1942* (Washington, DC: Government Printing Office, 1942), p. 15.

POST-WAR ECONOMIC CENSUSES

The Census Bureau conducted the 1947 Census of Manufactures, the first since 1939, via a mailout/mailback operation⁸⁶ in accordance with the Fifteenth Census Act of June 18, 1929.⁸⁷

A major innovation of the 1947 census was the introduction of the *1945 Standard Industrial Classification (SIC) Manual* for classifying industries covered by the census. (Prior to World War II, the Census Bureau developed and used its own classifications.) The Census Bureau sent precannvass cards to about 525,000 possible manufacturing firms before mailing the questionnaires. The cards requested responses to questions about the establishment's name and address, corporation affiliation, manufacturing process used, types of products, and number of employees.⁸⁸ Response to these inquiries enabled the Census Bureau to eliminate addresses for nonmanufacturing establishments and determine which of the 212 questionnaires should be sent to each.⁸⁹

The 1947 census collected statistics on work hours from all industries and collected data on the total number of employees, not just production workers. These more complete employee data permitted the Census Bureau to present data for industries by the total number of employees rather than the number of production workers.⁹⁰

Further innovations in the 1947 census included:⁹¹

- Use of the Social Security Administration's Old Age and Survivors Insurance (OASI) records to ensure more-complete coverage in the census. Staff reconciled the OASI establishment and industry classifications and those of the census. This improved coverage was an important initial step in further integrating Census Bureau and other federal agencies' statistics.
- Data collection from firms manufacturing products valued at \$5,000 or more during the census year, providing coverage more comparable to other federal programs.

⁸⁶ Field enumerators canvassed approximately 15,000 sawmills, which had highly mobile and sporadic operations.

⁸⁷ Stat. 21, cited in Frederick G. Bohme, "U.S. Economic Censuses 1810 to the Present," *Government Information Quarterly*, Volume 4, Number 3 (1987).

⁸⁸ The post office assisted the Census Bureau by verifying the presence or absence of establishments at specified addresses.

⁸⁹ The Census Bureau used a simplified questionnaire for small establishments to reduce reporting burden and processing costs. Similar simplified questionnaires had been used in 1933. U.S. Census Bureau, *Census of Manufactures: 1947: Vol. 1, General Summary* (Washington, DC: Government Printing Office, 1950), pp. 1–22.

⁹⁰ *Ibid.*

⁹¹ *Ibid.*

- Grouping value figures into approximately 1,000 product classes, in addition to gathering statistics for individual products ordinarily published in the census of manufactures. The Census Bureau used these classes when the number of reporting establishments was too small to permit showing data for individual products.
- Discontinued publication of data on cost of materials and value of products for the United States, major industry groups, and all geographic areas because of the unknown amount of duplication contained in these data. The Census Bureau did publish these data for most individual industries and released data on value added by manufacture and number of employees for industry groups and individual industries.
- A field enumeration of selected areas to judge the completeness of the census, the nature of problems involved in coverage, and types of establishments missed or classified incorrectly.
- Tabulating and publishing data for 147 standard metropolitan areas.⁹²

As in the past, the 1947 census results appeared first as preliminary reports, then as final reports, and finally in three volumes that included a general summary, statistics by industry, and statistics by state.

On June 19, 1948, Congress passed Public Law 80-671⁹³ authorizing the Census Bureau to conduct economic censuses for 1949 and every fifth year thereafter. The first application of the new law came with the 1948 Business Census, which included retail trade, wholesale trade, and selected service industries.⁹⁴ Significant changes in the scope of the 1948 Business Census included:

- The exclusion of the contract construction industry; the limitation of the census to those areas where coverage was mandatory under the new law (the 48 States, the District of Columbia, Alaska, and Hawaii, but not Puerto Rico).

⁹² Forerunners of the present statistical areas designated by the Office of Management and Budget, these are one or more counties around a central city or urbanized areas with 50,000 or more inhabitants. Contiguous counties were included if they had close social and economic ties with the area's population nucleus.

⁹³ An act to provide for the collection and publication of statistical information by the Bureau of the Census, 62 Stat. 478 (Public Law 80-671 was later incorporated into Title 13, U.S. Code—Census).

⁹⁴ The law authorized censuses of mineral industries and transportation in 1949, but Congress did not appropriate funds for them, and they were not taken until 1954 (minerals) and 1963 (transportation). See the "1963" section of this appendix.

- A reduced emphasis on employment and payroll information.
- The compilation of data on the number of trucks operated by business establishments.

The census collected only a limited amount of information from most small, single establishments, but obtained more detailed data from a 1-in-10 sample.⁹⁵

The Census Bureau established 308 temporary field offices for the 1948 census and carried out an address listing operation. Between May and November 1949, enumerators left 1 of 12 questionnaires (5 for selected service establishments, 5 for wholesalers, and 2 for retail stores) at most single-establishment firms, with instructions that it be completed and returned to the Census Bureau by mail. Enumerators completed the questionnaires for multiestablishments by interview, unless an establishment's management specifically requested other arrangements.

The second phase of the 1948 Business Census consisted of data collection, coding, and editing. Clerks recorded the receipt of questionnaires in listing books for each enumeration district. Nonrespondents received a reminder card and then a follow-up visit. If a questionnaire contained incomplete or incorrect data, an enumerator visited the establishment to complete or correct the questionnaire. For the first time, preliminary editing of questionnaires took place at the Census Bureau's field offices, and the agency paid enumerators on a per diem rather than a piece-rate basis.⁹⁶

After the field canvass, the Census Bureau reenumerated 2,500 representative small (substate) areas, revealing an undercoverage of 8.2 percent of service establishments and 3.6 percent of retail establishments. The undercoverage reflected a failure to list and canvass small businesses, particularly those with no employees.⁹⁷

As usual, the Census Bureau published preliminary results and final reports, the latter in bound volumes (three for retail trade, two for wholesale, and two for service industries). In addition to the usual tabulations (receipts, sales, payroll, number of establishments, etc.), the Census Bureau published special tabulations on retail store sales by merchandise line and wholesale sales by commodity line. Publications presented

statistics for 147 standard metropolitan areas (referred to as MSAs), in addition to states, counties, and cities.⁹⁸

The Electronic Computer

Processing and tabulation technology took a leap forward during World War II when the War Department began exploring the use of electronic digital computers to process ballistic information. In 1943, the National Defense Research Council approved the design and construction of the Electronic Numeric Integrator and Computer (ENIAC) to be used by the Department of Defense's Ballistic Research Laboratory. The ENIAC was built over the course of 3 years by a team of engineers led by John W. Mauchly and his former student J. Presper Eckert.

During the ENIAC project, Mauchly met with Census Bureau officials to discuss nonmilitary applications for electronic computing devices. In 1946, Mauchly and Eckert secured a contract from the National Bureau of Standards to begin work on a computer for the Census Bureau—the Universal Automatic Computer (UNIVAC).

Mauchly and Eckert began building the UNIVAC I in 1948 and delivered the completed machine to the Census Bureau in March 1951. The computer, effectively an updated version of the ENIAC, read data from punch cards or magnetic computer tape, produced tabulations, and printed or stored the results on magnetic tape.

Census Bureau analysts used the UNIVAC I to tabulate part of the 1950 Census of Population and Housing and the entire 1954 Economic Census. Throughout the 1950s, the UNIVAC also played a key role in several monthly economic surveys. The agency purchased a second UNIVAC I following the success of its first, and then bought a more powerful UNIVAC 1105 computers prior to the 1960 census, thus setting the Census Bureau on a path toward ever more powerful and advanced computer technology to collect and tabulate census data in the decades to come.

Watkins Commission: 1953–1954

Although Congress appropriated funds for planning and preparatory operations in fiscal years 1952 and 1953, it did not provide funds in the fiscal year 1954 budget for the actual taking of the economic census. Instead, it allocated money only for special surveys of manufactures and business. As a result, the Census Bureau terminated work on the economic censuses in

⁹⁵ U.S. Census Bureau, *United States Census of Business 1948, Retail Trade—General Statistics, Part I* (Washington, DC: Government Printing Office, 1952), pp. 1–3.

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*

⁹⁸ U.S. Census Bureau, "The Economic Censuses of the United States: Historical Development," by Charles G. Longham, Working Paper No. 38 (Washington, DC: U.S. Government Printing Office, 1973), p. 15.

May 1953.⁹⁹ Termination of the census programs provoked considerable alarm in many government agencies and in business and academic communities. In 1953, in response to complaints about the cancellation of the census, the Secretary of Commerce appointed a number of academicians, business executives, economists, and other specialists not affiliated with the Census Bureau to a commission, chaired by Dr. Ralph J. Watkins, director of research for Dun and Bradstreet, Inc. The Watkins Commission reviewed the overall economic census and, in March 1954, recommended that the economic censuses be resumed.¹⁰⁰

Congress enacted Public Law 83-467 in June 1954, providing for censuses of manufacturing, mineral industries, and other business (including the distributive trades and service establishments) in the year 1955 relating to the year 1954 instead of censuses in 1954 relating to the year 1953. The economic censuses became an integrated economic statistical program in which data for retail trade, wholesale trade, manufacturing establishments, and construction, mineral, and service industries were collected for the same benchmark years.¹⁰¹

1954

The 1954 Census of Business (retail and wholesale trades and selected service industries) marked the Census Bureau's first attempt since 1890 to compile census statistics from administrative records. Employers were enumerated via mailout/mailback questionnaires, and 1954 income tax records supplied by the Internal Revenue Service (IRS) provided selected data items (such as employment, payroll, and sales) for retail nonemployers with 1954 sales of at least \$2,500 and for service nonemployers.¹⁰² (Nonemployers are employers without paid employees.)

Income tax records did not contain the kind-of-business classifications necessary to determine which questionnaire should be mailed to a particular establishment, so the Census Bureau matched the IRS list with other lists—such as the employee master files from the Social

Security Administration (SSA)—that contained kind-of-business classifications.¹⁰³

For mining companies, the Census Bureau supplemented the mailing list with information provided by such agencies as the Bureau of Mines and the Federal Power Commission.¹⁰⁴

The Census Bureau conducted a mailout/mailback prec canvass in fall 1954 to secure accurate and up-to-date information for multiestablishment companies and to correct and consolidate the IRS list. The prec canvass asked multiestablishment companies to provide data about their names and addresses, employment, types of activities, etc.¹⁰⁵

The Census Bureau excluded wholesale firms without employees and retail and service nonemployers with sales and receipts below the cutoff points from the census. Nonemployers, although large in number, accounted for only a small percentage of retail sales volume and service receipts for 1954.¹⁰⁶

Prior to the mailout of the economic census questionnaires in early 1955, the Census Bureau prepared a mailing list using administrative records. For large companies, the mailing list used the 1953 Annual Survey of Manufactures (ASM).¹⁰⁷ Census Bureau headquarters staff supervised the mailout and follow-up operations for, generally, establishments with at least six employees. Field offices oversaw these operations for smaller companies. Respondents returned the questionnaires by mail. Nonrespondents received follow-up letters, and the Census Bureau telephoned or visited establishments that did not respond to the letters.¹⁰⁸

As in past censuses, the Census Bureau published 1954 census results in preliminary bulletins, final reports,

⁹⁹ United States Department of Commerce, *Annual Report of the Secretary for the Fiscal Year Ended June 30, 1952* (Washington, DC: Government Printing Office, 1953), p. 40.

¹⁰⁰ United States Department of Commerce, *Appraisal of Census Programs: Report of the Intensive Review Committee to the Secretary of Commerce* (Washington, DC: Government Printing Office, 1954), pp. 8–10.

¹⁰¹ *Encyclopedia of the U.S. Census*, s.v. "Economic Census," by Paul T. Zeisset (Washington, DC: CQ Press, 2000), p. 187.

¹⁰² U.S. Census Bureau, *United States Census of Business 1954*, Vol. I, *Retail Trade: Summary Statistics* (Washington, DC: Government Printing Office, 1957), p. 1.

¹⁰³ The names on these lists could often be linked through the use of the employer identification number (EIN) assigned to each case by the SSA, and matched mechanically on punch card collating equipment.

¹⁰⁴ U.S. Census Bureau, *United States Census of Mineral Industries 1954*, Vol. 1, *Summary and Industry Statistics* (Washington, DC: Government Printing Office, 1958), p. 9.

¹⁰⁵ Frank A. Hanna, *Compilation of Manufacturing Statistics* (Washington, DC: Government Printing Office, 1959), pp. 142–143.

¹⁰⁶ U.S. Census Bureau, *United States Census of Business: 1954*, Vol. I, *Retail Trade: Summary Statistics*, p. 1; and Vol. III, *Wholesale Trade: Summary Statistics* (Washington, DC: Government Printing Office, 1957), p. 1.

¹⁰⁷ U.S. Census Bureau, *United States Census of Manufactures 1954*, Vol. I, *Summary Statistics* (Washington, DC: Government Printing Office, 1958), p. xvii. The ASM was first conducted in 1949 to provide data for intercensal years. The survey covered all large establishments (those having 100 employees or more from 1954 through 1967 and, from 1972, those with 250 employees or more) and a representative sample of smaller establishments. Large establishments remained in the ASM; however, the Census Bureau replaced smaller establishments every 5 years. During census years, the ASM questionnaire became the first two pages of the questionnaire used for the economic census.

¹⁰⁸ Frederick G. Bohme, "U.S. Economic Censuses 1810 to the Present," *Government Information Quarterly*, Volume 4, Number 3 (1987), p. 235.

and bound volumes. In addition to the usual summary, industry, subject, and area reports, special tabulations were produced for central business districts.¹⁰⁹ Using the 1954 definition of a central business district, the agency also published retroactive retail trade and selected service data for 1948.

1958

The Census Bureau mailed questionnaires (similar to the 1954 questionnaires) between January and May 1959 from the newly established census operations office in Jeffersonville, IN. (The Jeffersonville office also handled receipt, check-in, clerical editing and coding, and card punching.)¹¹⁰ The Census Bureau also introduced more sophisticated computer systems and expanded computerized processing to include mailing list controls, more extensive editing, some coding operations, and other functions previously performed manually or with punch card equipment for the 1958 Economic Census.¹¹¹

For the 1958 Economic Census, the Census Bureau introduced a new statistical geographic area for the business census—the “major retail center” (MRC)—which represented outlying business areas like shopping centers. The agency published MRC data in a series of 97 reports, each covering a standard metropolitan statistical area (SMSA) and included information for central cities and their central business districts.

The Census Bureau also included Guam and the U.S. Virgin Islands to the geographic scope of the economic censuses for the first time.¹¹²

1963

Although a census of transportation was authorized for 1949 and 1953 in Public Law 80-672, Congress did not appropriate funds for such a census until 1963.¹¹³ The census of transportation collected data on the

nation’s transportation that augmented (without duplication) those data already collected by other government agencies and the private sector. To achieve this objective, the Census Bureau developed the following surveys to fill specific gaps in the nation’s transportation data collection:¹¹⁴

- *The Passenger Transportation Survey.* This survey produced statistics showing national and regional passenger patterns and their relationship to socio-economic and geographic factors. The Census Bureau collected data quarterly through personal interviews from a probability sample of about 6,000 households.
- *The Truck Inventory and Use Survey (TIUS).* This survey collected data on the nation’s truck resources, such as the number of trucks classified by physical characteristics, occupational use, intensity of vehicle utilization, and geographic distribution of vehicles. The Census Bureau mailed questionnaires to a sample of about 100,000 truck and truck-tractor owners selected from state motor vehicle registration records.
- *The Commodity Transportation Survey (CTS).* This survey collected data concerning the geographic distribution of tons and ton-miles of commodities, by type, shipped by the manufacturing sector. The survey obtained basic information from a probability sample of bills of lading or other shipping records maintained in company files.
- *The Motor Carrier Survey.* This survey produced statistics concerning “for-hire” carriers not subject to economic regulation by the Interstate Commerce Commission. The Census Bureau conducted a complete mailout/mailback enumeration of bus companies and public warehouses that also provided trucking services, plus a mailout/mailback enumeration of a probability sample of trucking firms.

At the request of the U.S. Department of the Interior’s Bureau of Commercial Fisheries, the 1963 Economic Census resumed the collection of data from commercial fisheries following a 55-year hiatus. The census included a mailout/mailback enumeration of commercial fisheries that had supplied employment data to the Social Security Administration. The questionnaires contained inquiries on employment, payroll, receipts, characteristics of vessels, and landed catch. The

¹⁰⁹ Central business districts were newly defined geographic entities encompassing the downtown business areas of large cities.

¹¹⁰ U.S. Department of Commerce, *Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1958* (Washington, DC: Government Printing Office, 1958), p. 27.

¹¹¹ Duncan and Shelton, *Revolution in United States Government Statistics: 1926–1976* (Washington, DC: Government Printing Office, 1978) pp. 135–136.

¹¹² U.S. Census Bureau, *United States Census of Business 1958, Vol. 1, Retail Trade: Summary Statistics* (Washington, DC: Government Printing Office, 1961), pp. 1 and APP-17.

¹¹³ Earlier economic censuses had collected data on transportation, but these had covered only specific areas of transportation, such as water transportation (in periodic censuses between 1880 and 1926) and street and electric railways, together with affiliated motorbus lines (in censuses of electrical industries taken at 5-year intervals between 1902 and 1926).

¹¹⁴ Bohme, “U.S. Economic Censuses,” p. 237.

Census Bureau used a sample of administrative records to compile limited statistics for part- and full-time fishermen who did not have paid employees.¹¹⁵

The 1963 Censuses of Retail and Wholesale Trades, selected service industries, manufactures, and mineral industries closely resembled those conducted in 1958. The Census Bureau again updated its computer systems and expanded the use of electronic equipment to automate geographic coding of establishment addresses, to better control mailout and follow-up operations as well as systems for reporting progress on census operations, and to expedite the transfer of data from Jeffersonville to the computer facility at Census Bureau headquarters. The 1963 Economic Census also saw the substitution of magnetic tape for punch cards in developing the census mailing list and launched the production of computer-generated news stories for releasing census results and for automatically mailing these stories to news outlets.¹¹⁶

The Census Bureau obtained selected information, such as value of receipts and sales, from nonemployers' tax returns. It also used administrative records to assemble mailing lists and obtain preliminary industry classifications for employer firms to be included in the mailout/mailback enumeration. In total, about 3 million establishments were asked to complete questionnaires (which were mailed between November 1963 and March 1964). The agency also derived statistics for approximately 1.5 million nonemployer establishments from administrative records.

For more information on the 1963 Economic Census, see U.S. Census Bureau, *1963 Economic Census: Procedural History*, U.S. Government Printing Office, Washington D.C., 1968.

1967

In 1967, Congress modified Title 13 of the U.S. Code—Census, changing the reference years for the economic censuses to those ending in “2” and “7.” This was done to distribute the staff and computer workload generated by the economic and demographic censuses more evenly. The 1967 Economic Census included censuses of retail and wholesale trades, selected services, construction and mineral industries, manufactures, commercial fisheries, and

¹¹⁵ U.S. Census Bureau, *Census of Commercial Fisheries, 1963* (Washington, DC: Government Printing Office, 1966), pp. 1, 15–23. Because the mailing list used to collect data from commercial fisheries was later found to be incomplete, a supplemental vessel survey was conducted in 1964.

¹¹⁶ U.S. Census Bureau, *1963 Economic Census: Procedural History*, p. 22.

transportation; it also included the enterprise statistics program.^{117, 118}

The Census Bureau expanded the scope of the 1967 Economic Census to include:¹¹⁹

- Conducting a census of construction industries (the first since 1939), which, for the first time, included Puerto Rico.
- Adding architects and engineers, law firms, and arrangement of passenger transportation (travel agents and tour operators) to the census of selected service industries.
- Adding the National Travel Survey (called the Passenger Transportation Survey in 1963), the Truck Inventory and Use Survey, and the Commodity Transportation Survey to the census of transportation.
- Doubling the Commodity Transportation Survey sample size in the major population centers to improve the quality of the point-of-origin to point-of-destination commodity flow data, and extending the survey's scope to include printing and publishing establishments (except newspaper and periodical publishers).

Data for all nonemployers in retail trade and selected service and construction industries were obtained from IRS income tax records. In addition, the Census Bureau expanded the use of these records to compile statistics for selected single-establishment small employers (firms with few employees during 1967).¹²⁰

In total, the Census Bureau used administrative records for 60 percent (about 2.9 million establishments) covered by the economic census.¹²¹

The census of commercial fisheries expanded to collect statistics on the number of vessel operators, catch, fishing gear, and various vessel characteristics. The Census Bureau obtained some basic information (gross receipts and industry classification) from the IRS and Social Security Administration for part- and full-time fishermen without paid employees. The agency did

¹¹⁷ Arthur W. Horowitz, “1967 Economic Censuses,” *Statistical Reporter*, No. 67-3 (September 1966), pp. 41–42.

¹¹⁸ The enterprise statistics program provided periodic and comprehensive company-wide data, including company support organizations and selected financial activities.

¹¹⁹ U.S. Census Bureau, *1967 Economic Censuses: Procedural History* (Washington, DC: Government Printing Office, 1972), pp. iv–vi.

¹²⁰ For details, see U.S. Census Bureau, *Census of Business 1967*, Vol. I, *Retail Trade: Subject Reports* (Washington, DC: Government Printing Office, 1971), p. A-1; and *Census of Manufactures 1967*, Vol. I: *Summary and Subject Statistics* (Washington, DC: Government Printing Office, 1971), pp. 7 and 11.

¹²¹ U.S. Census Bureau, *1967 Procedural History*, p. 4.

not publish the 1967 data from administrative records because of classification problems.¹²²

For more information on the 1967 Economic Census, see U.S. Census Bureau, *1967 Economic Censuses: Procedural History*, U.S. Government Printing Office, Washington D.C., 1972.

1972

For the 1972 Economic Census, the Census Bureau mailed 2.9 million questionnaires between December 1972 and February 1973. It collected additional information using administrative records from approximately 2.6 million additional establishments.

The 1972 Economic Census incorporated several changes, including:¹²³

- Collecting construction industries data in Guam and the U.S. Virgin Islands.
- Precanvassing all out-of-scope activities of companies that reported on an establishment basis in previous economic censuses.
- Increasing the sample size for the National Transportation Survey from 18,000 households (in 1967) to 24,000.
- Conducting the first Survey of Minority-Owned Business Enterprises (SMOBE). The SMOBE presented tabulations by major Standard Industrial Classification industry or industry group by race (Black, Asian American, American Indian, and “Other”) and Hispanic origin for metropolitan statistical areas. After 1972, the Census Bureau collected these data along with data for counties and places with specified numbers of minority-owned firms. The published data from the SMOBE was usually limited to legal form of organization and receipt- and employment-size of firm.

The first reports from each of the censuses appeared within 1 year of the period covered by the 1972 censuses. Recognizing the increasing ability of data users to work with data in large quantities, the Census

Bureau also issued public-use computer tape files of economic census statistics.

Standard Statistical Establishment List

In 1977, The Census Bureau made changes in its prec canvassing of all known multiestablishment companies. (The agency conducted this prec canvass once every 5 years, so the company and establishment address records quickly became obsolete.) Following the 1972 Economic Census, the Census Bureau created the Standard Statistical Establishment List (SSEL) and began an annual Company Organization Survey (COS) to update the SSEL's address files. The SSEL was a central, multipurpose computerized name and address file of all known single- and multiestablishment employers (and nonemployer agricultural establishments) in the nation. Through the combined use of the SSEL file number and the employer identification number, the Census Bureau linked and identified the affiliation of parent companies, subsidiary firms, and their establishments throughout all phases of economic activity.¹²⁴

For more information on the 1972 Economic Census, see U.S. Census Bureau, *1972 Economic Census: Procedural History*, U.S. Government Printing Office, Washington D.C., 1976.

1977

The 1977 Economic Census covered retail trade, wholesale trade, service industries, construction industries, mineral industries, manufactures, and transportation; the enterprise statistics program; the SMOBE; and the Survey of Women-Owned Business Enterprises (SWOBE).¹²⁵ Between December 1977 and April 1978, the Census Bureau mailed more than 3 million questionnaires and obtained data for about 4 million small firms from administrative records.

In preparation for the 1977 census, the Census Bureau also conducted the 1976 Recordkeeping Practices Survey. This survey obtained information on the ability of respondents to provide data not previously requested in the Census Bureau's economic censuses and surveys. As a result, the Census Bureau began to:¹²⁶

¹²² U.S. Census Bureau, *1967 Census of Commercial Fisheries* (Washington, DC: Government Printing Office, 1970), pp. 1–2.

¹²³ See U.S. Census Bureau, *Census of Construction Industries 1972*, Volume I: *Industry and Special Statistics* (Washington, DC: Government Printing Office, 1976), p. v (fn); U.S. Census Bureau, *Census of Wholesale Trade 1972*, Volume I: *Summary and Subject Statistics* (Washington, DC: Government Printing Office, 1976), p. A-1; U.S. Census Bureau, *Census of Transportation 1972*, Volume I: *National Travel Survey* (Washington, DC: Government Printing Office, 1973), p. ix; and *1972 Survey of Minority-Owned Enterprises, Special Report: Minority-Owned Businesses—Black*, MB72-1 (Washington, DC: Government Printing Office, 1974), p. 1.

¹²⁴ U.S. Census Bureau, Technical Paper 44, *The Standard Statistical Establishment List Program* (Washington, DC: Government Printing Office, 1979), pp. 1–3.

¹²⁵ The SWOBE collected more specific information about the demographic and economic characteristics of women-owned businesses and their owners. U.S. Census Bureau, *History of the 1977 Economic Censuses* (Washington, DC: Government Printing Office, 1980), pp. 4–6.

¹²⁶ *Ibid.*, pp. 10–11.

- Collect additional data needed to improve the gross national product accounts.¹²⁷
- Expand the coverage of the service industries census.
- Develop a common set of commodity lines for all types of operations in the wholesale trade census.
- Develop a better geographic coding system to improve the classification of data by areas.
- Improve the quality of the national travel survey.
- Conduct evaluation programs.

In expanding product-line detail for the census of manufactures and census of mineral industries, the Census Bureau gave priority to the growing need for more data to compare domestic output to imports and exports. Section 608, “Uniform Statistical Data on Imports, Exports, and Production,” of the 1974 Trade Act mandated that a comparability study be made of the commodity classification systems used for imports, exports, and domestic production. This 1975–1976 study was a joint effort of the Census Bureau and the International Trade Commission and resulted in proposed modifications that would make data collected for individual products or groups of products more compatible with each other. Some of the product line classifications for the 1977 censuses were developed or revised as a result of the study. The censuses incorporated new product-line classifications, identified during the trade act review, for questionnaires that had not already cleared the Office of Management and Budget (OMB).¹²⁸ Changes identified after OMB clearance were not used for the 1977 Economic Census, but were included in the 1982 census.

The 1977 census coverage included nonregulated motor carriers and public warehousing as well as the National Transportation Survey, Truck Inventory and Use Survey, and Commodity Transportation Survey. While the Census Bureau based the last three surveys on probability samples, it obtained data for nonregulated (by the Interstate Commerce Commission) motor carriers and public warehousing firms with employees in an enumeration of establishments in the same manner as the other economic censuses.¹²⁹

¹²⁷ These accounts broadly represent the production, income, and expenditure activities of the economy (including corporations, government and households).

¹²⁸ *Ibid.*, pp. 3–4.

¹²⁹ U.S. Census Bureau, *1977 Census of Transportation: Nonregulated Motor Carriers and Public Warehousing* (Washington, DC: Government Printing Office, 1978), p. iv.

Coverage of service industries expanded for 1977 to include privately owned hospitals; elementary and secondary schools; colleges, universities, and professional schools; junior colleges and technical institutes; labor unions; and political organizations.

For more information on the 1977 Economic Census, see U.S. Census Bureau, *History of the 1977 Economic Census*, U.S. Government Printing Office, Washington D.C., 1980.

1982

The Census Bureau mailed more than 3 million 1982 Economic Census questionnaires and classification forms between December 1982 and March 1983. (See Chapter 5, “Preparations for Data Collection,” for information about classification forms.) The enumeration included censuses of retail trade and wholesale trade; service, construction, and mineral industries; manufactures; and transportation; the Surveys of Minority- and Women-Owned Businesses; the Survey of Characteristics of Business Owners (an expanded version of the 1977 special survey of women-owned businesses); and the enterprise statistics program.¹³⁰ The census also included the first collection of data for the Commonwealth of the Northern Mariana Islands on retail trade, wholesale trade, manufacturing, and construction and service industries.¹³¹ Some of the service industries included for the first time in the 1977 census were dropped for 1982.¹³²

For more information on the 1982 Economic Census, see U.S. Census Bureau, *History of the 1982 Economic Census*, U.S. Government Printing Office, Washington D.C., 1987.

1987

The general plan for the 1987 Economic Census program was similar to that of 1982, but included a number of significant changes in specific censuses. For retail trade, the number of broad merchandise lines increased from 34 to 41, providing data users more detailed information on the kinds of merchandise sold by different kinds of retail establishments. The agency dropped the major retail center reports due to increasing costs.

The census of service industries collected data on health services as well as educational services; social

¹³⁰ U.S. Census Bureau, *1972 Census of Retail Trade, Geographic Area Series, United States* (Washington, DC: Government Printing Office, 1984), pp. iii–v.

¹³¹ U.S. Census Bureau, *History of the 1982 Economic Censuses* (Washington, DC: Government Printing Office, 1987), pp. 4–7.

¹³² *Ibid.*, p. 6.

services; museums, art galleries, and botanical and zoological gardens; membership organizations (except religious organizations); rooming and boarding houses; etc. In addition, the census collected additional information on international service transactions. Four more industries reported data on exported services—advertising agencies; accounting, auditing, and book-keeping services; research, development, and testing services; and legal services.

The Census Bureau published retail trade and service industries data for individual ZIP Codes (for employer establishments only) and moved published data on establishments with no paid employees from the *Geographic Area Series* to a new *Nonemployer Statistics Series*.¹³³

The census of transportation was similar to that conducted in 1982 except for the cancellation of the Commodity Transportation Survey as a result of the deficit-reduction guidelines mandated by the 1986 Deficit Reduction Act.¹³⁴

For construction industries, the Census Bureau collected data on the value of construction work done rather than receipts, as was the case previously. In addition, the number of construction questions increased from 8 to 24, to tailor inquiries to particular industries.¹³⁵

The census of manufactures collected aggregate data on the foreign content of domestically produced products for the first time.¹³⁶ Additionally, as a result of revisions to the Standard Industrial Classification system for 1987 and the United States' adoption of the Harmonized Coding system as the official classification for import and export statistics, the Census Bureau published comprehensive data on exporting manufacturers and made production statistics more comparable with foreign trade statistics.¹³⁷

¹³³ U.S. Census Bureau, *1987 Census of Service Industries, Geographic Area Series, United States*, SC87-A-52 (Washington, DC: Government Printing Office, 1991), pp. iv–v; and U.S. Census Bureau, *Guide to the 1987 Economic Censuses and Related Statistics*, EC87-R-2, January 1990, pp. iii–v.

¹³⁴ *1987 Guide*, p. 87.

¹³⁵ U.S. Census Bureau, *1987 Census of Construction Industries, Industry Series, United States Summary*, CC87-1-28 (Washington, DC: Government Printing Office, 1990), pp. iii–v.

¹³⁶ *1987 Guide*, p. 52; and U.S. Census Bureau, *1987 Census of Manufactures, Subject Series, MC87-S-1, General Summary* (Washington, DC: Government Printing Office, 1991), p. A-5.

¹³⁷ The Harmonized Commodity Description and Coding System, developed and maintained by the World Customs Organization, is an internationally standardized system of names and numbers for classifying traded products. For more information, see U.S. Census Bureau, "Guide to Foreign Trade Statistics," <<http://www.census.gov/foreign-trade/guide/sec1.html>> (August 11, 2008).

The 1987 censuses witnessed the following significant data-processing changes:¹³⁸

- Use of minicomputers, which gave analysts interactive access to microrecords and summary data, reduced the amount of paper listings, and improved data quality.
- Upgrades to the Census Bureau's automated photo-composition system, the TIPS II. Laser printers in each of the subject-matter divisions (business, construction, and industry) significantly reduced the time required to produce photo-composed proof copies of data tables, which contributed to the release of the final publications several months earlier than they had been in 1982.
- Establishment of the Economic Programming Division in January 1987 to better utilize computer programming personnel. The staff and programming activities for the census or census-related surveys were consolidated into one division to allow computer staff to move among projects as required.
- Data published in manipulable form on CD-ROM and diskette. The publication of data on computer tape was discontinued.

Effective June 1983, the Office of Management and Budget established a new set of metropolitan statistical areas (MSAs): consolidated metropolitan statistical areas (CMSAs) and primary metropolitan statistical areas (PMSAs). These replaced the two former types of metropolitan areas (standard metropolitan statistical areas and standard consolidated statistical areas). The Census Bureau used the two-level system to report data for 21 metropolitan areas in 1987.¹³⁹

For more information on the 1987 Economic Census, see U.S. Census Bureau, *History of the 1987 Economic Census*, U.S. Government Printing Office, Washington D.C., 1992.

1992

The 1992 Economic Census covered retail trade; wholesale trade; service industries; transportation, communications, and utilities; finance, insurance, and real estate; construction industries, manufactures, and mineral industries; and the Truck Inventory and Use

¹³⁸ U.S. Census Bureau, *History of the 1987 Economic Censuses* (Washington, DC: Government Printing Office, 1992), p. 7.

¹³⁹ *Ibid.* For further information on the statistical area definitions, see the U.S. Office of Management and Budget, *Metropolitan Statistical Areas* (Washington, DC: Government Printing Office, 1983).

Survey.¹⁴⁰ The program also included the 1992 Survey of Minority-Owned Business Enterprises, the 1992 Survey of Women-Owned Businesses, the 1992 Survey of Characteristics of Business Owners, and the 1992 Enterprise Statistics Program. The census and surveys were conducted in the 50 states and the District of Columbia.¹⁴¹ The 1992 Economic Census of Outlying Areas collected data on retail and wholesale trades, service industries, manufactures, and construction industries in Puerto Rico, the U.S. Virgin Islands, Guam, and the Commonwealth of the Northern Mariana Islands.¹⁴²

By adding coverage of financial, insurance, real estate industries, communications, and utilities, and several industry groups within transportation, the 1992 census marked the most significant expansion of the census in half a century. Together with the censuses of agriculture and governments, published separately, the economic census covered approximately 98 percent of the nation's economic activity. The economic census, per se, increased from covering about 75 percent of economic activity in 1987 to approximately 85 percent in 1992.

The Census Bureau introduced various industry-specific output measures for some of the newly covered industries. For most industries, the basic output measures varied from sales (for retail establishments) to operating receipts (for taxable service establishments), revenue (for tax-exempt establishments), value of shipments (for manufactures), or value of construction (for construction industries). Several newly covered industries included as operating revenue items that were nonoperating for most industries, such as rents, interest, investment income, grants, contributions, and gifts. This required adjustment in the data to be collected. For the finance, insurance, and real estate industries, the Census Bureau asked for total revenue and used a supplemental question on the major sources of revenue; this separated the components so users could tailor output measures for their own use. The item on "sources of revenue" also provided important information that could be used by the agency to

¹⁴⁰ The Census Bureau, for much of its history, used the term "economic censuses" to cover all of its economic data-collection activities. For 1992, on the advice of the Advertising Council, the agency used the term "economic census" primarily to assist its promotional activities and because data users frequently did not understand what "economic censuses" meant.

¹⁴¹ U.S. Census Bureau, *1992 Census of Transportation, Communications, and Utilities, Geographic Area Series, UC92-A-1, Summary* (Washington, DC: Government Printing Office, 1995), p. A-2.

¹⁴² Data for the individual outlying areas were published in U.S. Census Bureau, *1992 Economic Census of Outlying Areas, Geographic Area Series, OA92-E-1 through -7* (Puerto Rico [OA92-E-1 through -4], Virgin Islands [OA92-E-5], Guam [OA92-E-6], and Northern Mariana Islands [OA92-E-7]) (Washington, DC: Government Printing Office, 1994-1995).

identify secondary activity. Similarly, the questionnaire for transportation, communications, and utilities asked for operating revenues basis data.¹⁴³

In the past, the IRS supplied the Census Bureau with gross receipts or sales (less returns and allowances) for relevant businesses. In 1992, the agency asked the IRS also to supply administrative gross rents and interest income for partnerships and corporations from IRS administrative records. These data did not comprise total revenue (e.g., dividend and royalty income and net capital gains were not included), but did include additional major sources of revenue for the newly covered industries.¹⁴⁴

Because of a lack of data in past censuses on the contribution of services to the volume of exports, the Census Bureau asked respondents to report information on exported services for additional service industries as well as for selected financial services. These financial services included depository banking, business credit and other nondepository institutions, securities, brokers and dealers, and electric utilities.¹⁴⁵

In the census of manufactures, the number of purchased services categories expanded from three to eight, and the Census Bureau collected additional information on an auxiliary questionnaire. The agency restructured the receipts inquiry for the census of construction to improve data quality and response. It also streamlined inquiries on manufacturing output and materials consumed to reduce reporting burden and improve response rates. As required by the 1988 Women-Owned Business Act, the Census Bureau collected information on women-owned corporations for the first time in 1992.¹⁴⁶

In an effort to improve and accelerate response, the Census Bureau:¹⁴⁷

- Used more effective direct-mail techniques.
- Standardized the size of most economic questionnaires.
- Improved instructions and streamlined transmittal letters.
- Increased the emphasis on mandatory reporting.

¹⁴³ U.S. Census Bureau, *History of the 1992 Economic Census, EC92-R-5* (Washington, DC: Government Printing Office, 1996), pp. 65-66.

¹⁴⁴ *Ibid.*, pp. 63, 65-66.

¹⁴⁵ *Ibid.*

¹⁴⁶ U.S. Census Bureau, *1992 Census of Manufactures, Subject Series, MC92-S-1, General Summary* (Washington, DC: Government Printing Office, 1996), pp. v-viii.

¹⁴⁷ *History of the 1992 Economic Census*, pp. 6-7.

- Implemented more effective follow-up strategies; e.g., using questionnaire follow-ups for single-establishment companies and multiestablishment companies.
- Listed a toll-free telephone number on all questionnaires.

The Census Bureau implemented a proactive “company contact” program to encourage the nation’s largest establishments to respond. In December 1991, the agency mailed an information booklet to the 10,000 largest establishments with details about the 1992 Economic Census. The 1,000 largest establishments received special attention, including a contact person in the agency to whom any questions could be directed.¹⁴⁸

In November 1992 (about 1 month before the census mailout), the Census Bureau called each company contact person at the 1,000 largest companies to notify them that the questionnaires would soon be mailed. A second call placed in January 1993 ensured that the firms received the census packages, and a third call to nonrespondent firms occurred in April 1993. Census Bureau analysts encouraged reporting and collected data by telephone from nonrespondents that had not reported by late June 1993.¹⁴⁹

Census reports for 1992 were for the first time published on the Internet in PDF format, as well as in print. In addition, selected data extracts were provided as text files on the Census Bureau’s new Web site.

For more information on the 1992 Economic Census, see U.S. Census Bureau, *History of the 1992 Economic Census*, U.S. Government Printing Office, Washington D.C., 1996.

1997

While the economic coverage of the 1997 census was similar to preceding enumerations, budget cuts compelled the Census Bureau to reduce the operation’s overall scope, with the principal casualty being the enterprise statistics program. Other aspects of the census were in jeopardy during census planning, including data collection for the mineral and construction industries, the Vehicle Inventory and Use Survey, the Surveys of Minority- and Women-Owned Business Enterprises, and the census of outlying areas; however, Congress provided the majority of funds needed to continue collecting these vital data. Statistics for mining and

construction below the state level were, however, curtailed.¹⁵⁰

The most significant change to the 1997 Economic Census was the replacement of the Standard Industrial Classification (SIC) system with the North American Industry Classification System (NAICS). The increasing obsolescence of the SIC codes (by the mid-1990s, the fastest-growing industry sector was “business services, not elsewhere classified”) and the passage of the North American Free Trade Agreement (NAFTA) produced tremendous pressure for an overhaul of the SIC. This situation resulted in the development of the NAICS, a cooperative effort among the Census Bureau, the Bureau of Economic Analysis, and the statistical agencies of Canada and Mexico, and replaced the three separate national systems used by the NAFTA signatories. In February 1997, the Office of Management and Budget directed the Census Bureau to adopt the NAICS for the 1997 Economic Census.¹⁵¹

In other preparations for the 1997 enumeration, the Census Bureau undertook a significant upgrading of its data-processing infrastructure. It replaced the local area network servers with more powerful equipment and faster systems and applications. Ultimately, the Census Bureau moved away from subject area-specific processing to more “generalized” processing for data edits and data analysis.¹⁵²

To collect the 1997 Economic Census data, the Census Bureau mailed questionnaires to approximately 4.3 million companies in December 1997. The agency used administrative records from the IRS and the SSA to compile basic economic information on a further 1.5 million small employer businesses and some 14 million nonemployer businesses. Telephone and mail follow-up operations continued into June 1998.¹⁵³

The Census Bureau published nearly all of the 1997 Economic Census data electronically. This required a greater degree of product standardization than in

¹⁵⁰ U.S. Census Bureau, “What Are the Economic Program Implications of the 1997 Budget?” Minutes and Report of Committee Recommendations: Census Advisory Committee of Professional Associations, October 24–25, 1996, p. 34.

¹⁵¹ The Census Bureau used classified establishments using the NAICS in the 50 states and District of Columbia (with the exception of portions of wholesale trade and construction industries). At their request, Puerto Rico and the Island Areas postponed the transition from the SIC to NAICS until the 2002 Economic Census. Office of Management and Budget, *North American Industry Classification System: United States 1997* (Lanham, MD: Bernam Press, 1998), p. 22. For more detailed information on the development and implementation of the NAICS, see Chapter 3, “The Introduction of the North American Industry Classification System (NAICS)” in U.S. Census Bureau, *History of the 1997 Economic Census* (Washington, DC, Government Printing Office, 2000).

¹⁵² *History of the 1997 Economic Census*, pp. 59–60.

¹⁵³ *Ibid.*

¹⁴⁸ *Ibid.*, pp. 76–77.

¹⁴⁹ *Ibid.*

previous censuses, as well as user-access software improvements. (Standardization across product lines was critical for the cross-referencing permitted through the manipulation of electronic data files.)

Electronic publication of data for the 1997 Economic Census took four forms:¹⁵⁴

- Print images in portable document format (PDF) on the Census Bureau's Web site.
- "Drill down" static hypertext tables on the Census Bureau's Web site, for the first time linking definitions, maps, and more detail in the first true application for the Web.
- The American FactFinder (AFF) system, allowing database query on the Census Bureau's Web site.
- CD-ROMs, with software providing access similar to that in AFF, but with more extensive data selection and downloading options.

An *Advance Report*, issued in March 1999, initiated the publication program, with a preliminary look at the 1997 census tabulations, including the first data ever published on a NAICS basis. In addition to the standard data reports series, the Census Bureau also released the *Bridge Between NAICS and SIC*, which showed 1997 data cross-tabulated by both the old and the new classification systems, identifying the lowest common denominators between the two.¹⁵⁵

For more information on the 1997 Economic Census, see U.S. Census Bureau, *History of the 1997 Economic Census*, U.S. Government Printing Office, Washington D.C., 2000; or <<http://www.census.gov/prod/ec97/pol00-hec.pdf>>.

2002

The 2002 Economic Census mailed questionnaires and used administrative records to compile statistics on approximately 23 million business establishments covering 96 percent of the nation's economic activity. The 2002 Economic Census was the first time the NAICS was used with the collection, tabulation, and dissemination of census data for all industries in the states and Island Areas. Although the Census Bureau introduced the NAICS in the 1997 Economic Census, the system

initially was not used for the surveys of minority- and women-owned businesses or for the Island Areas.¹⁵⁶

Following the successful implementation of the NAICS, the governments of the United States, Canada, and Mexico began development and implementation of a joint classification system for the products of industry—the North American Product Classification System (NAPCS). The NAPCS is a market-oriented classification system for products that can be linked to the NAICS industry structure. The NAPCS promotes improvements in the identification and classification of services products in particular.¹⁵⁷

Most questionnaire inquiries remained consistent with those asked in 1997. However, following consultation with professional organizations and data users, the Census Bureau added inquiries concerning e-commerce, leased employees, and supply chain activities. Although content changes were minor, the Census Bureau's Economic Directorate developed or redesigned several critical databases, database tools, and computer systems to upgrade its infrastructure, facilitate electronic reporting, and reduce operational costs. Notable improvements included:

- Redesign of the Business Register (BR), which replaced the Standard Statistical Establishment List. The BR provided analysts a central repository for administrative records and support for collection, processing, and tabulation for all economic programs, as well as research into business ownership, demographics, etc.¹⁵⁸
- Development of the Economic Metadata Repository (EMR) and the Generalized Instrument Design System (GIDS), which improved overall consistency and quality of forms design, as well as facilitated data capture. The Census Bureau's expanded use of electronic data reporting in 2002 meant the agency had to coordinate the content of the paper-based questionnaires, requiring a database to house the content and software to compose electronic and paper-based questionnaires. The agency developed the EMR to store questionnaire content and the GIDS

¹⁵⁶ For more information on the development of the NAICS, see the *History of the 1997 Economic Census*, Chapter 3, "Introduction of the North American Industry Classification System (NAICS)."

¹⁵⁷ For more information on the development and implementation of the NAPCS, see U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, Chapter 3, "Industry and Product Classification," EC02-00R-HIST, September 2002, pp. 21–27.

¹⁵⁸ Eddie J. Salyers, "An Assessment of Current Quality Assurance Practices and Ongoing Work to Develop a Comprehensive Quality Plan for U.S. Census Bureau Business Register," 18th International Roundtable on Business Survey Frames, Beijing, China, October 18–22, 2004, pp. 1–2.

¹⁵⁴ *History of the 1997 Economic Census*, pp. 3–4, <<http://www.census.gov/prod/ec97/pol00-hec.pdf>> (May 26, 2010); and U.S. Census Bureau, "Guide to the 1997 Economic Census," <<http://www.census.gov/epcd/www/guide.html>>.

¹⁵⁵ *History of the 1997 Economic Census*, pp. 119–120, <<http://www.census.gov/prod/ec97/pol00-hec.pdf>> (May 26, 2010).

to compose the 545 electronic and paper-based questionnaires from the EMR's content.

- Development of an optical mark recognition (OMR)/key from image (KFI) system for capturing data from the paper questionnaires. This system used questionnaire information provided by the GIDS to create and register templates for each of the more than 5,000 unique questionnaire pages used in the census.

The KFI system streamlined data capture of the paper questionnaires by eliminating much of the manual keying and automatically capturing the check-box responses. It also provided the images for the edit referral review processes used to check that the data was captured correctly.

- Expanded availability of electronic reporting, with electronic questionnaires and reporting software tools available via the Internet. Electronic reporting

reduced respondent burden, improved data quality, and sharply reduced paper handling costs.

At the conclusion of the 2002 data collection, review, and dissemination cycle, the Census Bureau published all 2002 data products electronically. Data users downloaded reports and tables, or created custom tabulations via the Internet, CD-ROM, and the agency's American FactFinder Web site.¹⁵⁹

For more information on the 2002 Economic Census, see U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, U.S. Government Printing Office, Washington D.C., 2006; or <<http://www.census.gov/prod/ec02/ec02-00r-hist.pdf>>.

¹⁵⁹ U.S. Census Bureau, *Procedural History of the 2002 Economic Census*, Chapter 1, "Introduction," EC02-00R-HIST, September 2006, pp. 1-10, <<http://www.census.gov/prod/ec02/ec02-00r-hist.pdf>> (May 26, 2010).

Appendix C: Definitions and Descriptions of Geographic Areas

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INTRODUCTION¹

The boundaries used for the geographic areas for the 2007 Economic Census were those in effect on January 1, 2007. Boundary changes occurring after these effective dates are not recognized in the 2007 Economic Census and are not reflected in the data tabulations. The boundaries used by the Census Bureau for counties and selected incorporated places are based on responses to the annual Boundary and Annexation Survey (BAS).²

To qualify as an economic census place, a place had to meet a specified population threshold. The count used for qualification was the higher of:

- Population estimates for July 1, 2007 (for all areas except census designated places, for which the

¹ The information in this appendix is drawn from the minutes of the 2007 Geographic Interface Team, <<http://cww.census.gov/econ/epcd/GIT/GIT-meetings.htm>> (July 13, 2007) and the *User Guide to the 2007 Economic Census*, <<http://www.census.gov/econ/census07/www/geography/>>.

² The U.S. Census Bureau conducts the BAS annually to collect information about selected legally defined geographic areas. The BAS is used to update information about the legal boundaries and names of all governmental units in the United States. The Census Bureau uses the boundary information collected in the BAS to tabulate data for various censuses, surveys, and other Census Bureau programs. U.S. Census Bureau, "2007 Boundary and Annexation Survey (BAS)," <<http://www.census.gov/geo/www/bas/bashome.html>> (July 13, 2007).

corrected Census 2000 population was used; that is, the Census 2000 population adjusted for Count Question Resolution [CQR]³).

- The number of persons employed in the area, as determined in Census 2000.

UNITED STATES

The United States comprises the 50 states and the District of Columbia.

CENSUS REGIONS AND DIVISIONS

Regions

The Census Bureau recognized four regions within the 50 states and the District of Columbia: Northeast, Midwest, South, and West. Each region was identified by a one-digit code. Puerto Rico and the Island Areas were not part of any region; they were assigned a region code of 9. Each of the regions was composed of one or more census divisions.⁴

³ The CQR adjustments are based on the results of a comparison of the count obtained in the 2000 Census of Population, and state and local data supporting a different count. The CQR adjustment is recognized by the Census Bureau for certain purposes, but is not an "official" population count.

⁴ U.S. Census Bureau, "Census Regions and Divisions of the United States," <http://www.census.gov/geo/www/us_regdiv.pdf> (July 13, 2007).

Census Divisions

The Census Bureau recognized nine census divisions within the 50 states and the District of Columbia: East North Central, East South Central, Middle Atlantic, Mountain, New England, Pacific, South Atlantic, West North Central, and West South Central. Divisions are identified by a one-digit code. Puerto Rico and the Island Areas were not part of any division and were assigned a division code of 0. Census divisions contained two or more states each.⁵

STATES

For the 2007 Economic Census, the Census Bureau recognized the following areas as states or statistically equivalent entities:

- The 50 states of the United States
- The District of Columbia
- The Commonwealth of Puerto Rico
- American Samoa
- Guam
- The Commonwealth of the Northern Mariana Islands
- The Virgin Islands of the United States
- Offshore Areas

The state codes used for the economic census were the two-digit Federal Information Processing Standard (FIPS) state codes. The FIPS codes were assigned in alphabetic sequence for the 50 states and the District of Columbia (e.g., 01 for Alabama, 02 for Alaska, etc.). For census processing, codes were assigned in a separate alphabetic sequence following the states for Puerto Rico and the Island Areas.⁶

For special situations involving Nationwide, Foreign, Offshore Areas, and Undistributed entities, state-equivalent codes were used as follows:

United States—a state-equivalent code of “00” was used in the FIPS state code field. This code was provided in the stub file for publication purposes only. The geographic coding system did not assign this code to any establishment records.

Nationwide—The geocoding system assigned a Nationwide state equivalent code of “97” to any establishment that could not be assigned an acceptable

confidence-level geocode or when the post office name was “nationwide.” Establishments so coded were resolved to a valid state code during subsequent processing.

Foreign—Foreign establishments of U.S. companies were assigned a foreign state equivalent code of “98” in the FIPS state code field and were not tabulated in any census report. The county and place codes in these records were filled with zeroes. Further, any establishment record that met any of the conditions below also were assigned foreign state codes:

State abbreviation	State name equivalent represented by abbreviation	ZIP Code
ZZ	Foreign (assigned by the Economic Planning and Coordination Division [EPCD])	00000 or blank
AE	Armed Forces, Europe	09000-09899
AA	Armed Forces, the Americas	34000-34099
AP	Armed Forces, Pacific	96200-96699

Offshore Areas—The mineral industries geographic code structure provided for a two-digit FIPS state code or a three-digit pseudo-county code. The codes for offshore areas were:

Area	State abbreviation	Offshore state	Offshore county
Offshore totals	OT	80	886
Atlantic	AT	81	886
Northern Gulf of Mexico	NG	82	886
Pacific	PC	83	886

The offshore area codes were not assigned directly by the geographic coding system, but by the Census Bureau’s Manufacturing and Construction Division (MCD) where applicable. Where the geocoding system assigned addresses identified as “offshore” or “onshore,” the appropriate FIPS state code and the county, minor civil division, and place codes were zero-filled.

Undistributed—The Undistributed category for each state was used by the Census Bureau for selected industries that had operations not designated to specific counties. The appropriate FIPS state code was retained, and the remaining geographic classification

⁵ Ibid.

⁶ The Island Areas comprise American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Virgin Islands of the United States.

codes were zero-filled. As for the offshore areas, the codes were not assigned by the geographic coding system. In this case, the Economic Programs Directorate assigned codes were applicable. For data presentation purposes, a county-level record designated “undistributed” and county code of “000” was included within each state record’s stub file.

COUNTIES

The Census Bureau recognized the following areas as counties or as entities statistically equivalent to counties for the 2007 Economic Census:

In all states except Alaska and Louisiana—Counties.

In Alaska—Boroughs, census areas, city and boroughs, and municipalities.

Louisiana—Parishes.

District of Columbia—The District of Columbia was recognized as the statistical equivalent of both a state and a county. In this case, the state and county were coextensive (i.e., had the same boundaries).

Maryland, Missouri, Nevada and Virginia—Independent cities are independent of any county and, thus, constitute primary divisions of their states. Independent cities differ from coextensive cities and counties because no county exists for an independent city. The data tabulated and presented for independent cities were identical to the data for their county equivalents.

Hawaii—Kalawao County, which had no functioning local government, was included with Maui County for statistical purposes in the 2007 Economic Census publications.

Puerto Rico—Municipios were recognized as the statistical equivalents of counties. Municipios are grouped into nine commercial regions for economic census data presentation purposes only. No place-level data were tabulated for Puerto Rico; the place code fields on all Puerto Rico records were zero-filled. The geographic coding system assigned the FIPS state, county, Puerto Rico Commercial Region, and core based statistical area (CBSA) codes. The minor civil division and place code fields on all Puerto Rico records were zero-filled.

American Samoa—Districts and islands were recognized as the statistical equivalent of counties. For data presentation purposes, minor civil divisions (known as counties in American Samoa) and Rose and Swains Islands were recognized as place equivalents. Geographic codes below the state level were not assigned directly by the geographic coding system. The county,

minor civil division, and place code fields for American Samoa records were zero-filled. The Census Bureau’s Company Statistics Division (CSD) clerically researched and assigned the remaining geocodes required for data presentation.

Guam—For data presentation purposes, election districts (minor civil divisions) in Guam were recognized as county equivalents. No place-level data were tabulated for Guam. Geographic codes below the state level were not assigned directly by the geographic coding system, and the county, minor civil division, and place code fields were zero-filled. The CSD clerically researched and assigned the remaining geocodes required for data presentation.

Northern Mariana Islands—Municipalities were recognized as the statistical equivalents of counties. No place-level data were tabulated for the Northern Mariana Islands. Geographic codes below the state level were not assigned directly by the geographic coding system, and the county, minor civil division, and place code fields were zero-filled. The CSD clerically researched and assigned the remaining geocodes required for data presentation.

Virgin Islands of the United States—Each island was recognized as the statistical equivalent of a county, and place-level data were tabulated for three towns: Charlotte Amalie, Christiansted, and Fredericksted. Geographic codes below the state level were not assigned directly by the geographic coding system, and the county, minor civil division, and place code fields were zero-filled. The CSD clerically researched and assigned the remaining geocodes required for data presentation.

PLACES

Places for the 2007 Economic Census were identified by five-digit FIPS codes. A four-digit census place code also was used for internal processing. These place codes were assigned in alphabetic sequence within state and state-equivalent areas. Additional place-equivalent codes were assigned in the sequence, as needed. For the 2007 Economic Census, the Census Bureau recognized the following areas as places or as statistically equivalent entities. Collectively, these are referred to as “economic places”:

Incorporated places—Incorporated places were recognized for economic census data tabulations if they had populations of 5,000 or more in the latest population estimates or had 5,000 or more workers in Census 2000. New places that were reported to the Census Bureau and legally incorporated on January 1, 2007, were recognized if they met the population or worker

threshold. In cases where a city and a county were coextensive, both were recognized, and the data for the city were identical to the data for the county. The 2007 Economic Census marks the first time that the number of workers has been introduced into the criterion, and helps make sure that economically important places are published, even if they have few inhabitants. For example, Lake Buena Vista, FL, has many thousands of workers, but had only 16 residents in 2000. The worker data are primarily from Census 2000 tabulated by place of work, so that all sectors can be included.⁷

Census designated place (CDP)—For the first time, the Census Bureau tabulated economic census data for CDPs with 5,000 or more inhabitants or 5,000 or more workers.⁸

Consolidated city—Six consolidated governments in the United States included separate incorporated municipalities. These consolidated cities were the result of legal action between a city and its surrounding county—and any governmental units within that county—and were represented in census publication as a single entity. Each consolidated city had a five-digit FIPS place code.

Balance of consolidated city—For the 2007 Economic Census, the Census Bureau recognized the “balance of” a consolidated city, which excluded the incorporated place(s) that were recognized separately as places. The balance of a consolidated city may refer to a whole consolidated city if none of the included places has a population of 5,000 or more. (An entity containing a population of 5,000 or more was treated as a separate place and is excluded from the balance of the consolidated city.) Each such balance of a consolidated city had a five-digit FIPS place code.

Towns or townships in selected states—Townships in Michigan (including charter townships), Minnesota, New Jersey, and Pennsylvania; and towns in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, and Wisconsin with a population of 5,000 or more inhabitants or 5,000 or more workers were recognized in the 2007 Economic

Census. If a town or township qualified as an economic place and contained an incorporated place that was recognized separately for economic census data presentation, the Census Bureau recognized the balance of the special economic urban area (SEUA) as a separate place-equivalent if it had a population of 5,000 or more.

Balance of county—included those areas not recognized as places or place-equivalents under the above definitions. A census place code of “9999” and a FIPS code of “99999” indicated “balance of county.”

METROPOLITAN AND MICROPOLITAN AREAS

Metropolitan and micropolitan areas are also referred to as core based statistical areas (CBSAs). The CBSAs were established by the Statistical Policy Office of the Office of Management and Budget’s (OMB’s) Office of Information and Regulatory Affairs and included two different types of areas—metropolitan statistical areas and micropolitan statistical areas. Both of these areas included at least one population core and adjacent territory with a high degree of social and economic integration with the core area. Metropolitan areas included an urbanized area with a population of at least 50,000, while micropolitan areas included an urban cluster with a population of 10,000 to 49,999. Both kinds of CBSAs were defined by county, including those in the New England states. CBSAs could be combined to form larger combined statistical areas (CSAs). Metropolitan statistical areas with large populations could be subdivided into metropolitan divisions (MDs).

The 2007 Economic Census recognized the boundaries for CBSAs and contained codes for all the area types. Internal files also provided codes for OMB-defined New England city and town areas (NECTAs)⁹—geographic

⁹ New England states have traditionally been defined by NECTAs instead of CBSAs. A NECTA is a geographic and statistical entity, defined by the U.S. Office of Management and Budget, for use in describing aspects of the New England region of the United States. A NECTA is a region associated with a core urban area with a population of at least 10,000, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting and employment. NECTAs are analogous to CBSAs and are similarly classified as either metropolitan NECTAs (corresponding to metropolitan statistical areas) or micropolitan NECTAs (corresponding to micropolitan statistical areas). A micropolitan NECTA has an urban core with a population of at least 10,000 but less than 50,000, while a metropolitan NECTA has an urban core with a population of at least 50,000.

The principal difference between a CBSA and a NECTA is that NECTAs use New England towns as building blocks instead of counties. In the New England region, towns (which are minor civil divisions) are a much more important level of government than counties. Because of this, NECTAs are usually a much closer approximation to metropolitan areas in New England than metropolitan statistical areas. For more information, see Office of Management and Budget, *OMB Bulletin No. 06-01: Update on Statistical Area Definitions and Guidance on Their Use*, “Appendix-Metropolitan Statistical Areas, Metropolitan Divisions, Micropolitan Statistical Areas, Combined Statistical Areas, New England City and Town Areas, and Combined New England City and Town Areas,” December 5, 2005. pp. 2–3.

⁷ U.S. Census Bureau, “Guide to the 2007 Economic Census: What’s New for 2007,” <<http://www.census.gov/econ/census07/guide/index.html>> (December 18, 2007).

⁸ CDPs are defined by local statistical area committees and have sometimes been referred to as unincorporated places. Some CDPs, such as East Los Angeles, are quite large. The same 5,000 population/worker threshold will apply all places. At the same time, the 5,000 threshold eliminates data for many small incorporated places, for which the previous threshold was 2,500 inhabitants. The 5,000 threshold increases the number of towns and townships shown in the 12 northern states with strong minor civil divisions; the previous threshold was 10,000 population. U.S. Census Bureau, “Guide to the 2007 Economic Census: What’s New for 2007,” <<http://www.census.gov/econ/census07/guide/index.html>> (December 18, 2007).

entities defined using cities, towns, and other types of legal minor civil divisions as building blocks and conceptually similar to CBSAs. No data were published for NECTAs.

The codes for metropolitan statistical areas and micro-politan statistical areas consisted of five digits. Metro-politan division codes also consisted of five digits. All codes were assigned based on an alphabetic sort of titles within each category of area.

ZIP CODES

ZIP Codes are administrative entities of the U.S. Postal Service. As such:

- They do not coincide with the Census Bureau's geographic or political areas.
- They change according to postal requirements.
- They do not have specific boundaries.
- Their implied boundaries do not necessarily follow clearly identifiable physical features.

ZIP Codes are summarized in the 2007 Economic Census for individual five-digit ZIP Codes in the retail trade sector and several of the services sectors. These statistics are limited to a count of the establishments in each industry by sales/receipts/revenue-size range of establishments. No data are summarized for nine-digit ZIP Codes.

Note that these ZIP Codes are reported by businesses or coded from addresses. They are not the ZIP Code tabulation areas (ZCTAs) published following the decennial census.

AREAS NOT TABULATED

Although the 2007 Economic Census did not tabulate data for the following types of areas, the codes for these entities were provided in the code structure as a reference.

Census Tracts and Blocks

The geocoding system assigned specific census tract and block numbers to as many economic establishments as possible. These census tract and block numbers were stored in the Census Bureau's Business Register and were used as linkages to the higher level geographic codes required for economic census data publications. No economic census data were tabulated at the tract or block level.

American Indian, Alaska Native, and Hawaiian Homeland Areas (AIANHH)

The FIPS code scheme for American Indian, Alaska Native, or Hawaiian Homeland areas is state-based, and the Census Bureau uses the codes for processing. Since many of the geographic entities for which data are collected, processed, and published cross state boundaries, the Census Bureau assigns the FIPS codes nationwide. The agency grouped the codes into code ranges for the various geographic entity types, and the geocoding system assigned AIANHH codes to establishments coded to the tract and block level.

Description	Code range
American Indian reservation and/or off-reservation trust land entities (federally recognized tribes only)	0001-4999
Hawaiian Homelands	5000-5499
Oklahoma tribal statistical areas (OTSAs) (formerly tribal jurisdiction statistical areas [TJSAs])	5500-5999
Alaska Native village statistical areas (ANVSAs)	6000-7999
Tribal designated statistical areas (TDSAs)	8000-8999
State recognized American Indian reservations	9000-9499
State designated American Indian statistical areas (SDAISAs)	9500-9998

Appendix D: Glossary of Terms

A

account manager (AM)/account management

The Census Bureau assigned analysts to serve as AMs for approximately 1,300 of the nation's largest companies. These AMs communicated regularly with company reporting officials before and during census collection operations, negotiated reporting arrangements (e.g., arrangements for organizing and mailing census questionnaires according to the company's preferences), encouraged and assisted electronic reporting, followed up for nonresponse, and otherwise worked to facilitate complete, timely response. AMs also provided these services by visiting up to 200 of the largest companies. This work was supported by a customer relationship management computer application that displays company organization and collection information from the Business Register, schedules calls, and records the results of company contacts.

administrative records

Under authority of Title 26, U.S. Code, the Internal Revenue Service supplies information on business taxpayers that includes name, address, and other identifying facts; industrial and other classifications; measures of sales/receipts/revenue, payroll, employment, expenses, inventories, and assets; and other content needed to conduct Census Bureau statistical programs authorized by Title 13, U.S. Code, Chapter 5. The Social Security Administration and the Bureau of Labor Statistics also provide data—chiefly industrial classifications. These administrative data are the foundation of the Business Register; further, the economic census considerably reduces reporting burden on businesses by using administrative data in lieu of direct collection to represent smaller single units with paid employees and all businesses without paid employees—accounting for about 40 percent of covered employer establishments and more than 80 percent of all covered establishments, including nonemployers.

alternate reporting unit (ARU)

ARU is a term used by the Census Bureau to describe a unit that includes all the domestic establishments for a company that operates in a specified industry. ARUs apply to networked industries where the production of goods or services cannot be attributed to a single individual physical location. ARU report forms, designated as “Consolidated,” collect consolidated data for revenue/receipts, employment, payroll, kind of business, and other industry-specific data. Establishment listings collect end-of-year operating status, kind of business, payroll, and employment for individual physical locations.

auxiliary

See “enterprise support establishment.”

B

basis of reporting

The economic census is conducted on an establishment basis. A company operating at more than one location is required to provide data for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

births

Births are establishments that have zero employment in the first quarter of the initial year and positive employment in the first quarter of the subsequent year.

Bureau of Economic Analysis (BEA)

Part of the Department of Commerce, the BEA's goal is to provide a clear picture of the United States economy by preparing, developing, and interpreting the national income and product accounts (summarized by the gross domestic product) as well as aggregate measures of international, regional, and state economic activity.

Bureau of Labor Statistics (BLS)

Part of the Department of Labor, the BLS is the principal fact-finding agency for the federal government in the broad field of labor economics and statistics.

Business Register (BR)

The Census Bureau's BR, which resides in an Oracle® database, provides the mailing list (frame) upon which the economic census data collection is based; further, it serves as the repository for federal administrative data that the census uses in lieu of direct collection for most smaller single units. The BR also receives census response data from electronic instruments and from data capture from paper forms and serves as the processing database for front-end edits that perform basic coverage and validity checks. Once these front-end edits are complete, the Census Bureau staff uses an interactive BR problem-solving application to review edit referrals and make corrections. The response data then go to the Micro-Analytical Database for further processing. Other BR services that are important to the census include support and control for data collection and support for account management and other respondent-assistance activities.

C

Census File Number (CFN)

Identifies each business location (or establishment). The CFN is uniquely assigned by the Census Bureau, has ten digits, and is printed on each official census form.

classification form

The classification form is intended to collect information on the industry in which a business operates. Classification forms collect the minimum amount of information necessary to properly classify businesses, while at the same time making the reporting process as easy as possible for respondents. (For more information, see Chapter 5, "Preparations for Data Collection.")

company

A company (or "enterprise") is comprised of all the establishments that operate under the ownership or control of a single organization. A company may be a business, service, or membership organization; consist of one or several establishments; and operate at one or several locations. It includes all subsidiary organizations, all establishments that are majority-owned by the

company or any subsidiary, and all the establishments that can be directed or managed by the company or any subsidiary.

Company Organization Survey (COS)

The COS is the Census Bureau's main tool for identifying changes in a multiunit enterprise structure in non-census years (a multiunit enterprise owns more than one establishment). In the COS Report of Organization form, a company identifies establishments that have been sold, closed, continued, started, and acquired; reports for each establishment's first quarter and annual payroll, and employment during the pay period that includes March 12; indicates any large foreign equity positions; and indicates controlling interests held by other domestic or foreign-owned organizations.

This survey samples only the larger multiunit enterprises each year. As a result, some intercensal multiunit births exist as single-establishment enterprises on the Census Bureau's register until the enterprise is selected for the COS or until the next quinquennial census. Similar timing problems exist in identifying deaths, acquisitions, and divestitures of multiunit establishments.

Computerized Self-Administered Questionnaire (CSAQ)

An electronic questionnaire used to facilitate the entry of data by respondents.

D

data users

Data users are the final consumers of economic census data. They include key federal users, such as the Bureau of Economic Analysis, the Council of Economic Advisors, the Federal Reserve Board, the Bureau of Labor Statistics, and the Bureau of Transportation Statistics; other federal agencies; state and local governments; businesses; trade and professional associations; economic researchers; academic audiences; other nonprofit organizations; and the general public. The Census Bureau also consults with key data users about economic census content.

deaths

Establishment deaths are establishments that appear in the records for one time period but do not appear in the records for a subsequent time period, usually because of a closure, but sometimes associated merely with the relocation of an establishment in a multiunit firm.

E

e-commerce

E-commerce (or electronic commerce) is any business transaction for which the price or essential terms were negotiated over an online system such as an Internet, extranet, electronic data interchange network, or electronic mail system. E-commerce does not include transactions negotiated via facsimile machine or switched telephone network, or payments made online for transactions in which terms were negotiated offline.

economic census

The economic census (or “census” in this publication) is a periodic statistical program that obtains information about virtually every U.S. business and publishes our nation’s most used and useful business statistics. The Census Bureau conducts the census every 5 years. It provides information for calendar years ending in “2” and “7.”

Economic Metadata Repository/Collection

This database stores collection metadata, including question wording; descriptive text and codes for industry, product, and other classifications; name and other attributes of associated data variables; validity checks and other behavior for electronic instruments; and related instrument design/composition information. Census analysts use the Questionnaire User Interface to prepare and maintain these metadata, and the General Instrument Design System (see entry) uses the metadata to automate composition/layout of collection instruments.

Employer Identification Number (EIN)

The EIN uniquely identifies every corporate or partnership entity in the United States. EINs are assigned by the Internal Revenue Service to organizations with paid employees. An organization may have one or several EINs, and an EIN may cover one or several locations. The EINs have nine digits and are reported on the census form.

enterprise

An enterprise (or “company”) is comprised of all the establishments that operate under the ownership or control of a single organization. An enterprise may be a business, service, or membership organization; consist of one or several establishments; and operate at one or several locations. It includes all subsidiary

organizations, all establishments that are majority-owned by the enterprise or any subsidiary, and all the establishments that can be directed or managed by the enterprise or any subsidiary.

enterprise support establishment

An enterprise support establishment is an establishment that primarily provides services to other subsidiaries or establishments of the same enterprise, and does not provide, or provides limited, services to the general public or another company. For example, an enterprise support establishment may provide oversight, management, administrative, or information services. In prior economic censuses, enterprise support establishments were called auxiliary establishments.

establishment

An establishment is a single physical location where business is conducted or where services or industrial operations are performed. A company may have one or many establishments. Examples include product and service sales offices (retail and wholesale), industrial production plants, processing or assembly operations, mines or well sites, and support operations (such as an administrative office, warehouse, customer service center, or regional headquarters). Each establishment should receive, complete, and return a separate census form.

F

Feith® Document Database

The Feith Document Database records digital images of scanned paper questionnaires. It makes these images available to an interactive image retrieval and display application that supports problem-solving and analysis.

firm

While generally synonymous with a company or enterprise defined above, the term “firm” is also applied to that part of a company that is present in a given data cell. For example, a business with establishments in multiple states is counted as one firm in each state, but also one firm at the national total. Similarly, a business with establishments in more than one industry is counted as one firm in each industry category in which it operates, but only one firm in higher-level aggregations. Thus, while establishments are additive, firm counts are not.

G

Generalized Instrument Design System (GIDS)

GIDS uses information from the Economic Metadata Repository/Collection to automate composition of more than 560 distinct collection instruments (electronic and paper versions), each tailored to a group of related industries. Further, a “Surveyor” component of the system presents electronic instruments, known as Computerized Self-Administered Questionnaires (CSAQs), on respondents’ desktop computers, guides respondents through the inquiries, and performs simple validity and consistency checks on the data they enter. Lastly, GIDS produces templates of paper questionnaires that supply answer zone coordinates required by the key-from-image data capture system.

gross domestic product (GDP)

GDP is the most important current measure of our nation’s economic performance. Estimated quarterly by the Bureau of Economic Analysis, GDP is a measure of the total market value of all final goods and services produced in our country during any quarter or year. GDP equals total consumer spending, business investment, and government spending and investment, plus the value of exports, minus the value of imports. GDP estimates are based on current statistics from the Census Bureau and other sources. Every 5 years, GDP estimates are benchmarked to the economic census.

I

industry

An industry is the most detailed category available in the North American Industry Classification System (NAICS) to describe business activities. The NAICS provides hundreds of separate industry categories, unique categories that reflect different methods used to produce goods and services. Statistical agencies use industry categories to classify, collect, process, publish, and analyze business statistics. The census uses industry categories to customize census forms, combine information from establishments in the same industry, and publish census statistics.

Internal Revenue Service (IRS)

The IRS is the U.S. Treasury Department agency responsible for collecting taxes and for administering business and individual tax programs.

Island Areas (IA)

IAs, formerly Outlying Areas (OA), are islands outside the United States that are included in the economic census. Islands included are Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and American Samoa.

L

leased employee

A leased employee is a full- or part-time employee of a business or organization that has contracted with an employee leasing service (also known as a professional employer organization) to obtain human resource management services. The employee leasing company provides a wide range of human resource and personnel management services, such as payroll accounting, payroll tax return preparation and filing, benefits administration, recruiting, and labor relations management, to the client business. The employee leasing company and client organization operate as coemployers with regard to the human relations responsibilities to the employees covered by their contract. The employee leasing company pays wages and employment taxes of the leased employees out of its own accounts.

Although a question on leased employees was added in 2002, it was not included in the 2007 Economic Census.

legal form of organization

- a. Corporation—an enterprise legally incorporated under state laws.
- b. Partnership—an unincorporated enterprise owned by two or more persons having financial interest in the business.
- c. Sole proprietorship—an unincorporated enterprise owned by one person.
- d. Nonprofit organization—an enterprise with nonprofit status (tax-exempt)—in Puerto Rico only.
- e. Other (association, trust, joint venture, estate, etc.)—an enterprise that is formed by another legal form of organization.

M

macro-analytical review

This family of processes and interactive applications support thorough quality review for tabulated data. They include the Macro-Analytical Review System (MARS) that presents a variety of analytical computations and comparisons, the Outliers System that identifies extreme period-to-period changes in summary data for a particular industry and/or geographic area, and a reconciliation application that compares economic census data with corresponding data from current surveys. An analyst toolkit, which is a new development for 2007, strengthened macro-analytical review by integrating analytical functions within a portal environment; phased toolkit development will continue for the 2012 census.

merchandise line (ML)

This is also known as a product line. It is an inquiry for the Retail Trade sector and Accommodation and Food Services sector requesting composition of sales by merchandise category. Merchandise categories basically follow a departmental concept and are used in assigning kind-of-business code of establishments.

Micro-Analytical Database (MADb)

After front-end edit processing is complete, the Business Register marks eligible establishment records, and those records are loaded into the MADb, also an Oracle® database, for further processing by back-end trade edits. Separate front- and back-end processing databases are needed to permit sufficient daily throughput for the very large daily volume of census processing and to make effective database back-up and recovery possible.

multiestablishment company

See “multiunit company.”

multiunit company (MU)

Companies that have more than one location. See also “single-unit company (SU).”

N

networked industry-alternate reporting unit (ARU)

See “alternate reporting Unit (ARU).”

North American Industry Classification System (NAICS)

An industry classification system used by statistical agencies to facilitate the collection, tabulation, presentation, and analysis of data relating to establishments, the NAICS is erected on a production-oriented conceptual framework that groups establishments into industries according to similarity in the process used to produce goods or services. Under the NAICS, an establishment is classified to one industry based on its primary activity. The NAICS was developed jointly by Canada, Mexico, and the United States to provide comparability in economic statistics. It replaced the Standard Industrial Classification (SIC) system in 1997.

North American Product Classification System (NAPCS)

The NAPCS is a multiphase effort by Canada, Mexico, and the United States to develop a comprehensive list of products, product definitions, and product codes that are organized into an integrated demand-based classification framework that classifies both goods and services according to how they are principally used. It is intended that the NAPCS will be used throughout the statistical community to coordinate the collection, tabulation, and analysis of data on the value of products produced by both goods- and services-producing industries and on the prices charged for those products. In the initial phases, through 2007, the NAPCS defined the products of services-producing industries. The NAPCS will be a complementary but independent classification system to the NAICS.

P

payroll service

A payroll service obtains information on hours worked, pay rates, and other payroll-related data from client organizations on their workers and uses that information to generate paychecks, payroll reports, and payroll tax filings.

Producer Price Index (PPI)

A family of indexes developed and published by the Bureau of Labor Statistics that measures the average change over time in selling prices received by domestic producers of goods and services, PPIs measure price change from the perspective of the seller. This contrasts with other measures, such as the Consumer Price Index (CPI), that measure price change from the purchaser's perspective. Sellers' and purchasers' prices may differ due to government subsidies, sales and excise taxes, and distribution costs.

R

Report of Organization

See “Company Organization Survey.”

sector

A sector is the broadest category available in the North American Industry Classification System (NAICS) to describe business activities. The NAICS provides 20 separate sector categories. (See Chapter 2, “Industrial and Product Classification.”)

single-unit company (SU)

Companies in which the location and the company are one and the same. See also “multiunit company (MU).”

Standard Industrial Classification (SIC)

A numerical code scheme previously used for classifying industries and products. In January 1997 the SIC was replaced by the North American Industry Classification System (NAICS).

subsidiary

A subsidiary is a business entity that is owned or controlled by another firm or company. Subsidiaries include businesses in which a company owns more than 50 percent of the outstanding voting stock, as well as businesses in which a company has the power to direct or to cause the direction of the management and policies.

Survey of Business Owners

Provides statistics that describe the composition of U.S. businesses by gender, race, and ethnicity.

Additional statistics include owner’s age, education level, veteran status, and primary function in the business; family- and home-based businesses; types of customers and workers; and sources of financing for expansion, capital improvements, or start-up.

T

tax-exempt organization

A tax-exempt organization is one whose operations are not subject to taxation under provisions of the Internal Revenue Code. Examples include charitable, social welfare, educational, and research organizations.

temporary staff

Temporary staff are workers supplied by one company (called a staffing service) for the temporary use of another company. Temporary staff are supplied for limited periods to supplement the workforce of the using company. Temporary staff are employees of the supplying company, although their worksite activities are supervised by the using company.

Title 13

Title 13 is the title of the U.S. Code that authorizes the economic census and assures the confidentiality of census information. It requires the Census Bureau to conduct the census, requires businesses and individuals to complete and return their census forms, requires the complete confidentiality of information provided for the census, and authorizes criminal penalties for any confidentiality violations. (See Appendix A.)

Appendix E: 2007 Economic Census Questionnaires—By NAICS Sector

The 2007 Economic Census covers business establishments in all or part of the 18 business sectors defined by the North American Industry Classification System (NAICS).¹ Census coverage by NAICS sector is summarized in the following table.

NAICS sector	Sector number	Number of forms
Arts, Entertainment and Recreation	71	9
Accommodation and Food Services	72	5
Administrative and Support and Waste Management and Remediation Services	56	13
Construction	23	7
Educational Services	61	2
Finance and Insurance	52	17
Health Care and Social Assistance	62	15
Information	51	22
Manufacturing	31–33	294
Mining	21	19
Management of Company and Enterprises	55	2
Supplemental Forms	99	29
Other Services (except Public Administration)	81	13
Professional, Scientific and Technical Services	54	21
Real Estate and Rental and Leasing	53	9
Retail Trade	44–45	35
Transportation and Warehousing	48–49	8
Utilities	22	2
Wholesale Trade	42	42

¹ U.S. Census Bureau, "2007 Census Forms," <http://bhs.econ.census.gov/BHS/CEN_2007FORMS.html> (July 5, 2007).

Arts, Entertainment and Recreation

AE-71101	Performing Arts Companies and Independent Artists, Writers, and Performers
AE-71102	Spectator Sports
AE-71103	Promoters, Agents, and Managers
AE-71190	Classification Form—Promoters, Agents/Managers, Independent Artists, and Miscellaneous Recreation
AE-71191	Classification Form
AE-71201	Museums, Art Galleries, Botanical and Zoological Gardens
AE-71302	Other Amusement and Recreation Industries
AE-71303	Amusement Parks and Arcades
AE-71304	Gambling Industries

Accommodation and Food Services

AF-72101	Traveler Accommodation
AF-72102	RV Parks and Recreational Camps
AF-72201	Food Services and Drinking Places
AF-72202	Special Food Services
AF-72290	Classification Form—Accommodation and Food Services

Administrative and Support and Waste Management and Remediation Services

AS-56059	Administrative and Support and Waste Management and Remediation Services (Enterprise Support)
AS-56101	Employment Services
AS-56102	Administrative and Other Support Services
AS-56103	Travel Arrangement and Reservation Services
AS-56104	Security and Investigative Services
AS-56105	Services to Buildings and Dwellings
AS-56106	Office Administration and Facilities Support Services
AS-56190	Classification Form—Employment, Travel Arrangement, and Security Services
AS-56191	Classification Form—Business and Other Support Services
AS-56192	Classification Form—Services to Buildings and Dwellings
AS-56202	Waste Collection, Treatment and Disposal
AS-56203	Remediation and Other Waste Management Services
AS-56290	Classification Form—Waste Management and Remediation Services

Construction

CC-23601	Residential & Nonresidential Building Construction
CC-23701	Heavy Construction (Utility, Land Subdivision, and Other)
CC-23702	Highway, Street, and Bridge Construction
CC-23801	Foundation, Structure, and Building Exterior Contractors
CC-23802	Building Equipment Contractors
CC-23803	Building Finishing Contractors
CC-23804	Other Specialty Trade Contractors

Educational Services

ED-61101	Educational Services
ED-61190	Classification Form—Educational Services

Finance and Insurance

FI-52101	Monetary Authorities
FI-52201	Commercial Banking, Savings Institutions, and Other Depository Credit Intermediation, Except Credit Unions
FI-52202	Other Banks and Depository Institutions, Except Credit Unions
FI-52203	Credit Unions
FI-52204	Credit Card Issuing and Sales Financing
FI-52205	Nondepository Credit Intermediation, Except Credit Card Issuing and Sales Financing
FI-52206	Activities Related to Credit Intermediation
FI-52250	Commercial Banking, Savings Institutions, and Other Depository Credit Intermediation, Except Credit Unions (Consolidated)
FI-52301	Securities and Commodity Exchanges
FI-52360	Securities and Commodity Contracts Intermediation and Brokerage and Other Financial Investment Activities
FI-52401	Life, Health, and Medical Insurance Carriers
FI-52402	Insurance Carriers, Except Life, Health, and Medical
FI-52403	Insurance Agencies and Brokerages
FI-52450	Life, Health, and Medical Insurance Carriers (Consolidated)
FI-52451	Insurance Carriers, Except Life, Health, and Medical (Consolidated)
FI-52460	Other Insurance Related Activities and Employee Benefit Funds
FI-52490	Insurance Classification

Health Care and Social Assistance

HC-62102	Outpatient Care Facilities and Medical and Diagnostic Laboratories
HC-62104	Office of Physicians and Other Health Practitioners
HC-62105	Offices of Dentists
HC-62106	Home Health Care Services
HC-62107	Ambulance Services
HC-62108	Other Ambulatory Health Care Services
HC-62190	Classification Form—Ambulatory Health Care Services
HC-62201	Hospitals
HC-62301	Nursing and Residential Care Facilities
HC-62390	Classification Form—Nursing and Residential Care Facilities
HC-62401	Services for Children and Youth
HC-62402	Services for The Elderly, Mentally Retarded, and Disabled
HC-62403	Service for Families and Individuals
HC-62404	Food, Shelter, Relief, and Job Training Services
HC-62490	Classification Form—Social Assistance

Puerto Rico

IA-97120	Puerto Rico—Utilities, Transportation, and Warehousing
IA-97123	Puerto Rico—Construction
IA-97130	Puerto Rico—Manufacturing
IA-97142	Puerto Rico—Wholesale Trade
IA-97144	Puerto Rico—Retail Trade
IA-97152	Puerto Rico—Finance, Insurance, Real Estate, Rental and Leasing
IA-97172	Puerto Rico—Accommodation Services
IA-97180	Puerto Rico—Services
IA-97190	Puerto Rico—General Schedule
IA-97220	Puerto Rico—Utilidades, Transportación y Almacenaje
IA-97223	Puerto Rico—Industrias de Construcción

Puerto Rico (con.)

IA-97230	Puerto Rico—Manufactura
IA-97233	Puerto Rico—Industrias de Construcción
IA-97242	Puerto Rico—Comercio al Por Mayor
IA-97244	Puerto Rico—Comercio al Detal
IA-97252	Puerto Rico—Finanzas y Seguros, Bienes Raíces, Alquiler y Arrendamiento
IA-97272	Puerto Rico—Sevicios de Alojamiento
IA-97280	Puerto Rico—Servicios
IA-97290	Puerto Rico—Cuestionario General

U.S. Virgin Islands

IA-98173	U.S. Virgin Islands
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The Northern Mariana Islands

IA-98183	The Northern Mariana Islands
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Guam

IA-98163	Guam
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American Samoa

IA-98193	American Samoa
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Information

IN-51059	Data Processing, Hosting, and Related Services (Enterprise Support)
IN-51101	Newspaper Publishing
IN-51102	Book Publishing
IN-51103	Periodical Publishing
IN-51104	Greeting Card and Other Miscellaneous Publishing
IN-51105	Directory and Mailing List Publishing
IN-51106	Software Publishing
IN-51202	Motion Picture and Video Exhibition
IN-51204	Motion Picture and Video Production and Distribution
IN-51205	Postproduction Services and Other Motion Picture and Video Industries
IN-51206	Record Production and Music Publishing
IN-51207	Sound Recording Studios and Other Sound Recording Industries
IN-51250	Motion Picture and Video Production (Consolidated)
IN-51251	Integrated Record Production and Distribution (Consolidated)
IN-51501	Broadcasting Services
IN-51701	Cable Services
IN-51702	Telecommunications
IN-51750	Telecommunications (Consolidated)
IN-51751	Cable and Other Program Distribution (Consolidated)
IN-51801	Data Processing, Hosting, and Related Services
IN-51901	Libraries and News Syndicates
IN-51902	Internet Publishing and Broadcasting

Manufacturing

MA-10000	Annual Survey of Manufactures
MC-31000	MC-31000
MC-31101	Animal Food Manufacturing
MC-31102	Flour and Other Grain Mill Products
MC-31103	Fats and Oils
MC-31104	Cereal Breakfast Foods
MC-31105	Sugar
MC-31106	Confectionery
MC-31107	Frozen Food Manufacturing
MC-31108	Canned Food Manufacturing
MC-31109	Dried and Dehydrated Food and Pasta Manufacturing
MC-31110	Dairy Products
MC-31111	Animal Slaughtering and Processing (Except Poultry)
MC-31112	Rendering and Meat By-Product Processing
MC-31113	Poultry Processing
MC-31114	Fish and Other Seafood
MC-31115	Retail Bakeries
MC-31116	Commercial Bakeries
MC-31117	Flour Mixes and Cookie and Cracker Manufacturing
MC-31118	Tortillas
MC-31119	Coffee and Tea
MC-31120	Miscellaneous Foods
MC-31171	Retail Bakeries
MC-31201	Soft Drink Manufacturing
MC-31202	Bottled Water Manufacturing
MC-31203	Ice Manufacturing
MC-31204	Malt Beverage Manufacturing
MC-31205	Wine, Distilled, and Blended Liquors
MC-31206	Tobacco Manufacturing
MC-31301	Yarn
MC-31302	Thread
MC-31303	Broadwoven Fabrics
MC-31304	Narrow Fabrics
MC-31305	Schiffli Machine Embroideries
MC-31306	Nonwoven Fabrics
MC-31307	Knitting Mill Products
MC-31309	Textile Finishing
MC-31311	Coated Fabrics
MC-31401	Carpet and Rugs
MC-31402	Household Textile Products
MC-31403	Textile Bags
MC-31404	Canvas and Related Products
MC-31405	Rope, Cordage, and Twine
MC-31406	Tire Cord and Tire Fabrics
MC-31407	Miscellaneous Textile Products
MC-31471	Household Textile Products
MC-31472	Canvas and Miscellaneous Textile Products
MC-31501	Hosiery and Socks
MC-31505	Contract Cut and Sew Apparel
MC-31506	Apparel and Apparel Accessories
MC-31507	Hats, Caps, and Millinery
MC-31508	Gloves and Mittens

Manufacturing (con.)

MC-31509	Men's and Boys' Neckwear
MC-31571	Cut and Sew Apparel Contractors
MC-31601	Leather Tanning
MC-31602	Footwear
MC-31603	Luggage and Leather Goods Manufacturing
MC-32000	MC-32000
MC-32101	Sawmills and Cut Stock, Resawing, and Planing
MC-32102	Wood Preservation
MC-32103	Hardwood and Softwood Veneer and Plywood Manufacturing
MC-32105	Engineered Wood Member, Truss, and Prefab. Wood Bldgs. Mfg.
MC-32107	Reconstituted Wood Product Manufacturing
MC-32108	Wood Window, Door, and Other Millwork Manufacturing
MC-32111	Wood Container and Pallet Manufacturing
MC-32112	Manufactured Home (Mobile Home) Manufacturing
MC-32114	All Other Miscellaneous Wood Product Manufacturing
MC-32171	Sawmills
MC-32172	Wood Container and Pallet Manufacturing
MC-32173	All Other Miscellaneous Wood Product Manufacturing
MC-32201	Pulp Mills
MC-32202	Paper and Paperboard Mills
MC-32205	Paperbox and Container Manufacturing
MC-32210	Plastics, Foil, and Paper Packaging Manufacturing
MC-32211	Coated and Laminated Paper and Paperboard Manufacturing
MC-32214	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses
MC-32216	Paper Office Supply Manufacturing
MC-32219	Sanitary Paper Product Manufacturing
MC-32301	Commercial Printing
MC-32302	Manifold Business Forms and Checkbooks
MC-32303	Book Printing
MC-32304	Bookbinding, Blankbooks, Binders, and Postpress Services
MC-32305	Service Industries for the Printing Trade
MC-32371	Commercial Printing
MC-32372	Service Industries for the Printing Trade
MC-32401	Petroleum Refineries, Lubricating Oils and Coal Products
MC-32402	Asphalt and Tar Roofing, Siding and Paving Products
MC-32501	Petrochemical Manufacturing
MC-32502	Industrial Gas Manufacturing
MC-32503	Inorganic Dye and Pigment Manufacturing
MC-32504	Synthetic Organic Dye and Pigment Manufacturing
MC-32505	Alkalies and Chlorine Manufacturing
MC-32506	Carbon Black Manufacturing
MC-32507	All Other Basic Inorganic Chemical Manufacturing
MC-32508	Gum and Wood Chemical Manufacturing
MC-32509	Cyclic Crude and Intermediate Manufacturing
MC-32510	Ethyl Alcohol Manufacturing
MC-32511	All Other Basic Organic Chemical Manufacturing
MC-32512	Plastics Material Resin and Synthetic Rubber Manufacturing
MC-32514	Organic Fiber Manufacturing
MC-32516	Fertilizer and Related Chemicals
MC-32519	Pesticide and Other Agricultural Chemical Manufacturing
MC-32520	Drugs and Medicinal Chemical Manufacturing
MC-32524	Paint and Coating Manufacturing

Manufacturing (con.)

MC-32525	Adhesive Manufacturing
MC-32526	Soaps, Detergents, Polishes and Related Products
MC-32529	Toilet Preparation Manufacturing
MC-32530	Printing Ink Manufacturing
MC-32531	Explosives Manufacturing
MC-32532	Custom Compounding of Purchased Resin
MC-32533	Photographic Film, Paper, Plate, and Chemical Manufacturing
MC-32534	All Other Miscellaneous Chemical Products and Preparations
MC-32602	Unlaminated Plastics Film and Sheet (Except Packaging)
MC-32603	Plastic Bottles and Plastics Profile Shapes
MC-32604	Plastics Pipe and Fittings
MC-32605	Laminated Plastics Plate, Sheet, and Shapes
MC-32606	Plastic Foam Products
MC-32607	Plastics Plumbing Fixtures
MC-32608	Resilient Floor Coverings and Asbestos Products
MC-32609	Miscellaneous Plastics Products, N.E.C.
MC-32610	Tire Manufacturing (Except Retreading)
MC-32611	Tire Retreading
MC-32612	Rubber and Plastics Hoses and Belting Manufacturing
MC-32613	Rubber Product Manufacturing
MC-32701	Vitreous China, Fine Earthenware and Porcelain Products
MC-32704	Brick and Other Structural Clay Products, Except Refractories
MC-32705	Clay and Nonclay Refractory Manufacturing
MC-32707	Flat Glass Manufacturing
MC-32708	Pressed and Blown Glass and Fabricated Glass Products
MC-32709	Glass Container Manufacturing
MC-32710	Cement, Lime, and Gypsum Products Manufacturing
MC-32711	Ready-Mix Concrete Manufacturing
MC-32712	Concrete Products Manufacturing
MC-32715	Abrasive Product Manufacturing
MC-32716	Cut Stone and Stone Product Manufacturing
MC-32717	Ground or Treated Mineral and Earth Manufacturing
MC-32718	Misc. Nonmetallic Mineral Products and Mineral Wool Mfg.
MC-32771	Ready-mix Concrete Manufacturing
MC-32772	Other Concrete Products
MC-33101	Iron, Steel Mill, and Electrometallurgical Products Mfg.
MC-33106	Alumina Refining
MC-33107	Primary Aluminum Production
MC-33108	Secondary Smelting and Alloying of Aluminum
MC-33109	Aluminum Sheet, Plate, Foil, and Extruded Products
MC-33111	Other Aluminum Rolling and Drawing
MC-33112	Primary Smelting and Refining of Nonferrous Metals
MC-33114	Copper Rolling, Drawing, and Extruding
MC-33115	Copper Wire (Except Mechanical) Drawing
MC-33116	Secondary Smelting, Refining, and Alloying of Copper
MC-33117	Rolling, Drawing, and Extruding of Other Nonferrous Metals
MC-33118	Secondary Smelting and Refining of Other Nonferrous Metals
MC-33119	Iron, Steel and Steel Investment Foundries
MC-33122	Nonferrous Foundries Including Aluminum, Copper, and Other
MC-33201	Forging
MC-33203	Custom Roll Forming

Manufacturing (con.)

MC-33204	Crown and Closure Manufacturing (Including Metal Stamping)
MC-33206	Powder Metallurgy Parts Manufacturing
MC-33207	Cutlery and Flatware (Except Precious) Manufacturing
MC-33208	Hand and Edge Tool Manufacturing
MC-33209	Saw Blade and Handsaw Manufacturing
MC-33210	Kitchen Utensil, Pot, and Pan Manufacturing
MC-33211	Prefabricated Metal Building and Component Manufacturing
MC-33212	Fabricated Structural Metal Manufacturing
MC-33213	Plate Work Manufacturing
MC-33214	Metal Window and Door Manufacturing
MC-33215	Sheet Metal Work Manufacturing
MC-33216	Ornamental and Architectural Metal Work Manufacturing
MC-33217	Power Boilers, Heat Exchangers, and Heavy Gauge Metal Tanks
MC-33219	Metal Can and Other Metal Container Manufacturing
MC-33221	Hardware Manufacturing
MC-33222	Spring (Heavy and Light Gauge) Manufacturing
MC-33224	Other Fabricated Wire Product Manufacturing
MC-33225	Machine Shops
MC-33226	Precision Turned Product Manufacturing
MC-33227	Bolt, Nut, Screw, Rivet, and Washer Manufacturing
MC-33228	Metal Heat Treating
MC-33229	Metal Coating, Engraving and Allied Activities
MC-33231	Industrial Valve Manufacturing
MC-33232	Fluid Power Valve and Hose Fitting Manufacturing
MC-33233	Plumbing Fixture Fitting and Trim Manufacturing
MC-33234	Other Metal Valve and Pipe Fitting Manufacturing
MC-33235	Ball and Roller Bearing Manufacturing
MC-33236	Small Arms and Ammunition Manufacturing
MC-33240	Fabricated Pipe and Pipe Fitting Manufacturing
MC-33241	Industrial Pattern Manufacturing
MC-33242	Enameled Iron and Metal Sanitary Ware Manufacturing
MC-33243	Other Miscellaneous Fabricated Metal Product Manufacturing
MC-33271	Fabricated Structural Metal Manufacturing
MC-33272	Sheet Metal Work Manufacturing
MC-33273	Ornamental and Architectural Metal Work Manufacturing
MC-33274	Machine Shops
MC-33275	Precision Turned Product Manufacturing
MC-33276	Electroplating, Coating, Engraving and Allied Activities
MC-33277	Other Miscellaneous Fabricated Metal Product Manufacturing
MC-33301	Farm, Turf, Lawn, and Garden Machinery and Equipment
MC-33302	Construction and Mining Machinery and Equipment
MC-33303	Oil and Gas Field Machinery and Equipment
MC-33304	Woodworking Machinery and Equipment
MC-33305	Pulp and Paper Industries Machinery
MC-33306	Textile Machinery
MC-33307	Printing Trades Machinery and Equipment
MC-33308	Food Products Machinery and Equipment
MC-33309	Special Industry Machinery, N.E.C.
MC-33310	Automatic Merchandising (Vending) Machines
MC-33311	Commercial Laundry Equipment
MC-33312	Optical Instrument and Lens Mfg
MC-33313	Photographic Equipment and Supplies

Manufacturing (con.)

MC-33314	Service Industry Machinery, N.E.C.
MC-33315	Blowers, Exhaust, and Ventilating Fans
MC-33316	Heating Equipment, Except Warm Air Furnaces
MC-33317	Refrigeration, Air-Conditioning and Warm Air Heating Equip.
MC-33318	Machine Tool Access. and Dies, Tools, Jigs, and Fixtures
MC-33319	Metalworking Machinery
MC-33320	Turbines, Turbine Generators, and Other Engine Equipment
MC-33321	Mechanical Power Transmission Equipment; Gears
MC-33322	Pumps and Compressors; Measuring and Dispensing Pumps
MC-33323	Conveying and Elevating Equipment and Industrial Trucks
MC-33324	Hoists, Cranes, and Monorails
MC-33325	Power-Driven Handtools
MC-33326	Welding Apparatus
MC-33327	Packaging Machinery and Equipment
MC-33328	Industrial Furnaces and Ovens
MC-33329	Fluid Power Equipment, Except Valves
MC-33330	Scales and Balances
MC-33331	Industry Machinery and Equipment
MC-33371	Special Dies, Tools, Jigs, Fixtures and Mold Manufacturing
MC-33372	Cutting Tool and Machine Tool Accessory Manufacturing
MC-33373	Industry Machinery and Equipment
MC-33401	Computing and Office Machines
MC-33402	Communications Equip.; Search and Detection Equip.
MC-33403	Radio Receivers and Television Sets and Related Equipment
MC-33404	Electronic Components and Accessories
MC-33405	Electromedical, and Electrotherapeutic Apparatus
MC-33406	Instruments
MC-33407	Clocks, Watches, and Watchcases
MC-33408	Prerecorded Records, Magnetic Tapes, and Discs
MC-33409	Magnetic and Optical Recording Media (Unrecorded)
MC-33501	Electric Lamps
MC-33502	Lighting Fixtures
MC-33503	Household Appliances
MC-33504	Power, Distribution, and Specialty Transformers
MC-33505	Motors, Generators, and Motor-Generator Sets
MC-33506	Switchgear, Switchboard Apparatus and Industrial Controls
MC-33507	Storage Batteries, Primary Batteries
MC-33508	Fiber Optic Cable, Other Communication and Energy Wire
MC-33509	Wiring Devices
MC-33510	Carbon and Graphite Products
MC-33511	Miscellaneous Industrial Electrical Equipment
MC-33601	Motor Vehicles and Passenger Car Bodies
MC-33602	Truck and Bus Bodies; Truck Trailers
MC-33603	Travel and Camping Trailers and Motor Homes
MC-33604	Carburetors, Pistons, Piston Rings, and Valves
MC-33605	Vehicular Lighting Equipment Manufacturing
MC-33606	Motor Vehicle Parts and Accessories
MC-33607	Motor Vehicle Seating and Interior Trim
MC-33608	Motor Vehicle Metal Stampings
MC-33609	Aircraft Industries
MC-33610	Aerospace Industries
MC-33611	Rail Transportation Equipment

Manufacturing (con.)

MC-33612	Ship Building and Repairing
MC-33613	Boat Building
MC-33614	Motorcycles, Bicycles, and Parts
MC-33615	Military Armoured Vehicle, Tank and Tank Components
MC-33616	Miscellaneous Transportation Equipment
MC-33701	Wood Kitchen Cabinets and Countertops
MC-33702	Household Furniture and Wood Housings
MC-33703	Fixtures and Office and Institutional Furniture
MC-33711	Mattresses
MC-33712	Blinds and Shades
MC-33771	Wood Kitchen Cabinets and Countertops
MC-33772	Nonupholstered Wood Household Furniture Manufacturing
MC-33773	Fixtures and Custom Architectural Woodwork
MC-33901	Surgical and Medical Instruments, Apparatus, and Supplies
MC-33902	Dental Equipment and Supplies
MC-33903	Ophthalmic Goods
MC-33904	Dental Laboratories
MC-33905	Jewelry, Jewelers' Findings, and Lapidary Work
MC-33906	Hollowware and Flatware
MC-33907	Sporting and Athletic Goods
MC-33908	Toys, Games, Dolls, and Children's Vehicles, Exc. Bicycles
MC-33909	Pens, Pencils, Marking Devices, and Artists' Materials
MC-33910	Carbon Paper and Inked Ribbons
MC-33911	Signs, Displays, and Advertising Specialties
MC-33912	Gaskets, Packings, and Seals
MC-33913	Musical Instruments
MC-33914	Buttons, Needles, Pins, Fasteners, and Similar Notions
MC-33915	Brooms, Brushes, and Mops
MC-33916	Burial Caskets
MC-33917	Miscellaneous Manufactured Products
MC-33971	Dental Laboratories
MC-33972	Jewelry, Jewelers' Findings, and Lapidary Work
MC-33973	Sporting and Athletic Goods
MC-33974	Signs, Displays, and Advertising Specialties
MC-33975	Miscellaneous Manufactured Products

Mining

MI-21101	Crude Petroleum and Natural Gas Extraction
MI-21102	Natural Gas Liquid Extraction
MI-21171	Crude Petroleum and Natural Gas Extraction
MI-21201	Coal Mining
MI-21202	Iron Ore Mining
MI-21203	Copper, Lead, Zinc, Gold, and Silver Ore Mining
MI-21204	Uranium-Radium-Vanadium Ore Mining
MI-21205	Miscellaneous Metal Ore Mining
MI-21206	Stone, Sand, and Gravel Mining or Quarrying
MI-21207	Clay, Ceramic, and Refractory Mineral Mining
MI-21208	Potash, Soda, and Borate Mineral Mining
MI-21209	Phosphate Rock Mining
MI-21210	Miscellaneous Chemical and Fertilizer Mineral Mining
MI-21211	Miscellaneous Nonmetallic Mineral Mining

Mining (con.)

MI-21271	Stone Mining and Quarrying, and Sand and Gravel Mining
MI-21301	Oil and Gas Field Services
MI-21302	Mineral Contract Services
MI-21351	Oil and Gas Field Services (Consolidated)
MI-31352	Mineral Contract Services (Consolidated)

Management of Company and Enterprises

MN-55101	Holding Companies
MN-55102	Corporate, Subsidiary, and Regional Managing Offices

Supplemental Forms

NC-99001	Report of Organization (multi-location companies only)
NC-99002	Report of Organization (multi-location companies with activities not covered by the 2007 Economic Census)
NC-99003	Report of Organization (multi-location companies with activities not covered by the 2007 Economic Census)
NC-99023	Classification Form
NC-99026	Classification Form
NC-99510	Ownership or Control (single location companies only)—General NC Form for Use In Most Sectors Except Wholesale
NC-99511	Ownership or Control Form (single establishment companies only)
NC-99512	Propiedad Y Control Form (single establishment companies only)
NC-99513	Ownership or Control Form (single establishment companies only)
NC-99520	Ownership or Control Form (single location companies only)
NC-99521	Ownership or Control Form (single location companies only)
NC-99523	Ownership or Control Form (single location companies only)
NC-99530	Ownership or Control Form (single location companies only)
NC-99542	Ownership or Control (single location companies only)—Wholesale—All Forms
NC-99550	Ownership or Control (single location companies only)—Real Estate Form RE-53630
NC-99553	Ownership or Control (single location companies only)—Real Estate Form RE-53201
NC-99554	Ownership or Control (single location companies only)—Professional Services Forms PS-54103, PS-54104, PS-54105
NC-99557	Ownership or Control (single location companies only)—Professional Services Form PS-54102
NC-99562	Ownership or Control (single location companies only)—Health Care Form HC-62101
NC-99563	Ownership or Control (single location companies only)—Professional Services Forms PS-54103
NC-99572	Ownership or Control (single location companies only)—Accommodations and Food Services Form AF-72101
NC-99581	Ownership or Control (single location companies only)—Other Services Form OS-81301
NC-99623	List of Establishments (single location companies only)
NC-99631	List of Establishments
NC-99632	List of Establishments
NC-99650	List of Establishments (single location companies only)
NC-99651	List of Establishments (single location companies only)
NC-99653	List of Establishments (single location companies only)
NC-99655	Ownership or Control Form (single location companies only)

Other Services (Except Public Administration)

OS-81059	Repair, Laundry, and Other Selected Services (Enterprise Support)
OS-81101	Motor Vehicle Repair and Maintenance
OS-81102	Repair and Maintenance Services
OS-81190	Classification Form
OS-81191	Classification Form—Other Repair and Maintenance Services
OS-81201	Personal Care Services
OS-81203	Laundry Services
OS-81204	Funeral Services, Cemeteries, and Crematories
OS-81205	Other Personal Services
OS-81290	Classification Form—Personal Care and Laundry Services, except Pet Care
OS-81301	Grantmaking and Advocacy
OS-81302	Civic, Social, and Other Membership Organizations
OS-81390	Classification Form—Civic, Social, and Other Membership Organizations

Professional, Scientific and Technical Services

PS-54059	Professional, Scientific, and Technical Services (Enterprise Support)
PS-54101	Legal Services
PS-54102	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
PS-54103	Architectural Services
PS-54105	Surveying and Mapping Services
PS-54107	Computer Systems Design and Related Services
PS-54110	Advertising and Related Services
PS-54111	Other Professional, Scientific, and Technical Services
PS-54112	Engineering Services
PS-54113	Building Inspection Services
PS-54114	Drafting Services
PS-54115	Specialized Design Services
PS-54116	Management Consulting Services
PS-54117	Environmental Consulting and Other Scientific and Technical Consulting Services
PS-54118	Testing Laboratories
PS-54119	Scientific Research and Development Services
PS-54190	Classification Form—Legal, Accounting, and Bookkeeping Services
PS-54191	Classification Form—Computer, Management, and Consulting Services
PS-54192	Classification Form—Architecture, Engineering, Surveying, Design, and Research and Development Services
PS-54193	Classification Form—Advertising and Other Professional Services
PS-54194	Classification Form—Veterinary and Pet Care Services

Real Estate and Rental and Leasing

RE-53101	Real Estate Services
RE-53160	Real Estate Lessors
RE-53190	Real Estate Lessors Classification
RE-53191	Real Estate Services Classification
RE-53201	Rental and Leasing of Automotive Equipment (Without Drivers)
RE-53202	Equipment Rental and Leasing: Consumer Goods
RE-53203	Equipment Rental and Leasing: Commercial and Industrial
RE-53290	Rental and Leasing Classification
RE-53301	Miscellaneous Financial Investment Activities

Retail Trade

RT-44101	Automobile Dealers
RT-44102	Recreational Vehicle, Boat, and Other Motor Vehicle Dealers
RT-44103	Automotive Parts, Accessories, and Tire Stores
RT-44190	Classification Form—Retail Gasoline Stations and Motor Vehicle and Parts Dealers
RT-44191	Classification Form—Retail Furniture, Home Furnishings, Electronics, Appliances, and Computer Hardware and Software
RT-44192	Classification Form—Retail Building Materials, Hardware, and Lawn and Garden Equipment
RT-44193	Classification Form—Retail Food and Beverages
RT-44194	Classification Form—Retail Clothing and Clothing Accessories
RT-44195	Classification Form—Miscellaneous Retailers
RT-44201	Furniture Stores
RT-44202	Home Furnishings Stores
RT-44301	Electronics and Appliance Stores
RT-44401	Building Material and Supplies Dealers
RT-44402	Lawn and Garden Equipment and Supplies Dealers
RT-44501	Food and Beverage Stores
RT-44601	Health, Optical Goods, and Personal Care Stores
RT-44701	Gasoline Stations
RT-44801	Clothing and Clothing Accessories Stores
RT-44802	Shoe Stores
RT-44803	Jewelry Stores
RT-45101	Sporting Goods Stores
RT-45102	Hobby, Toy, and Sewing Stores
RT-45103	Musical Instrument, Music, and Video Stores
RT-45104	Book Stores and Newsstands
RT-45201	Department, Variety, and Other General Merchandise Stores
RT-45202	Warehouse Clubs and Supercenters
RT-45301	Florists
RT-45302	Pet and Pet Supplies Stores
RT-45304	Antique and Used Merchandise Stores
RT-45305	Manufactured (Mobile) Home Retailers
RT-45306	Tobacco Stores
RT-45307	Art Dealers and Miscellaneous Store Retailers
RT-45360	Office Supply, Stationery, and Gift Stores
RT-45401	Electronic Shopping, Vending Operators, and Direct Selling
RT-45402	Fuel Dealers

Transportation and Warehousing

TW-48160	Air Transportation
TW-48360	Water Transportation
TW-48459	Trucking and Warehousing (Enterprise Support)
TW-48460	Trucking and Warehousing
TW-48490	Trucking Classification
TW-48560	Transit and Ground Passenger Transportation
TW-48601	Pipelines
TW-48801	Transportation Services

Utilities

UT-22101	Electric, Gas, and Water Utilities
UT-22150	Electric, Gas, and Water Utilities (Consolidated)

Wholesale Trade

WH-42301	Motor Vehicles
WH-42303	Motor Vehicles Parts and Supplies
WH-42305	Furniture and Homefurnishings
WH-42307	Lumber and Other Construction Materials
WH-42309	Photographic and Commercial Equipment
WH-42311	Computers and Office Equipment
WH-42313	Professional Equipment and Supplies
WH-42315	Ferrous and Nonferrous Metals
WH-42317	Coal, Coke, and Other Minerals and Ores
WH-42319	Electrical Goods
WH-42321	Hardware, and Plumbing and Heating Equipment and Supplies
WH-42323	Construction and Mining Machinery and Equipment
WH-42325	Farm and Garden Machinery and Equipment
WH-42327	Industrial Machinery and Equipment
WH-42329	Industrial Supplies
WH-42331	Service Establishment Equipment and Supplies
WH-42333	Transportation Equipment and Supplies
WH-42335	Sporting, Recreational, Hobby Goods, Toys, and Supplies
WH-42337	Scrap and Recyclable Materials
WH-42339	Jewelry, Watches, and Precious Stones and Metals
WH-42341	Miscellaneous Durable Goods
WH-42401	Paper and Paper Products
WH-42403	Pharmaceuticals, Pharmaceutical Supplies, Cosmetics, and Toiletries
WH-42405	Piece Goods and Notions
WH-42407	Apparel and Footwear
WH-42409	Grocery Wholesalers
WH-42411	Frozen Food
WH-42413	Dairy Products
WH-42415	Meat, Poultry, and Seafood Products
WH-42417	Confectionaries
WH-42419	Fresh Fruits and Vegetables
WH-42421	Farm-Product Raw Materials
WH-42423	Chemicals and Allied Products
WH-42425	Petroleum and Petroleum Products
WH-42427	Beer, Wine, and Distilled Alcoholic Beverages
WH-42429	Farm Supplies
WH-42431	Books, Periodicals, Flowers, and Florists' Supplies
WH-42433	Tobacco and Tobacco Products
WH-42435	Paints, Varnishes, Wallpaper and Supplies
WH-42437	Miscellaneous Nondurable Goods
WH-42501	Agents, Brokers, and Electronic Markets, Durable Goods
WH-42503	Agents, Brokers, and Electronic Markets, Nondurable Goods