



# Factfinder for the Nation

Issued May 2000

CFF-4

## History and Organization

### Introduction

Factfinding is one of America's oldest activities. In the early 1600s, a census was taken in Virginia, and people were counted in nearly all of the British colonies that became the United States at the time of the Revolutionary War. (There also were censuses in other areas of the country before they became parts of the United States.)

Following independence, there was an almost immediate need for a census of the entire Nation. Both the number of seats each state was to have in the U.S. House of Representatives, and the states' respective shares in paying for the war were to be based on population. Article I, Section 2 of the U.S. Constitution, adopted in 1787, provided:

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers.... The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct.

Our Founding Fathers had concluded that the states' wishes to report few people in order to lower their shares in the war debt would be offset by a desire for the largest possible representation in Congress. Thus, the census would be fairly accurate.

### The First U.S. Census—1790

Shortly after George Washington became President, the first census was taken. It listed the head of household, and counted (1) the number of free White males age 16 and over, and under 16 (to measure how many men might be available for military service), (2) the number of free White females, all other free persons (including any Indians who paid taxes), and (3) how many slaves there were. Compared with modern censuses, this was a crude operation. The law required that the returns be made in a specified form, but the enumerators (U.S. marshals and their assistants) had to furnish their own paper, using all sorts of books and sheets to record the information. It took 18 months to complete the census.<sup>1</sup>

After the returns were completed, the enumerator was required to post them "at two of the most public places...to remain for the inspection of all concerned." By contrast, modern-day censuses maintain strict confidentiality of the information collected about individual persons or business firms.

The 1790 census counted 3.9 million inhabitants—a number which some people thought low—and raised membership in the U.S. House of Representatives from an original 65 to 105.<sup>2</sup>

### The Expanding Censuses...

Down through the years, the Nation's needs and interests became more

complex. This meant that there had to be statistics to help people understand what was happening and have a basis for planning. The content of the decennial census changed accordingly. For example, the first inquiry on manufactures was made in 1810; it concerned the quantity and value of products. Questions on agriculture, mining, and fisheries were added in 1840; and in 1850, the census included inquiries on social issues—taxation, churches, pauperism, and crime. (Later in this booklet, we explore the inclusion of additional subjects and the establishment of separate censuses.)

The censuses also spread geographically, to new states and territories added to the Union as well as to other areas under U.S. sovereignty or jurisdiction.<sup>3</sup>

There were so many more inquiries of all kinds in the censuses of 1880 and 1890 that almost a full decade was needed to publish all the results. Although the census furnished large quantities of statistics, it was failing to provide information when it was most needed. Accordingly, Congress limited the 1900 census to questions on population, manufactures, agriculture, and mortality. Many of the dropped topics reappeared in later censuses as advances in technology made it possible to process and publish the data faster. (See p. 11).

<sup>1</sup>Eighteen months elapsed between the time Congress passed the Census Act on March 1, 1790, and September 1, 1791, when the data were provided to President Washington.

<sup>2</sup>In 1796, Tennessee was given an additional seat in the U.S. House of Representatives after apportionment had taken place.

<sup>3</sup>The first Federal enumerations occurred in Puerto Rico in 1910; the Virgin Islands of the United States, 1917; Guam and American Samoa, 1920; the Panama Canal Zone, 1920 (last in 1970); the Trust Territory of the Pacific Islands, 1970; and, separately, the Northern Mariana Islands in 1980. There also were one-time U.S. censuses in the Philippine Islands in 1903 and in Cuba in 1907.

The Census Bureau began using statistical sampling techniques in the 1940s in order to gather data on most of the subjects the various censuses needed to cover without unduly burdening the respondents. Further assistance came through the use of electronic computers in the 1950s and mail enumeration in the 1960s. All of these made it possible to publish more data sooner and at a lower cost, and with less burden on the public that had to provide the information.

### **... and Surveys**

As the Nation grew, changes in the economy became more frequent and far-reaching. Since government officials and businesses had to adjust their plans as these changes occurred, they needed more frequent reports on them.

An effective way to provide current statistics is to collect data from samples of people and businesses, such as every 20th household or every 100th firm. Using experts in sampling and survey techniques to plan the surveys, an efficient field organization to collect the data, and modern technology to process the results, the Census Bureau can publish some reports less than 2 weeks after a nationwide collection of the data. It produces monthly, quarterly, and annual reports on population, housing, manufactures, business, constructions, and governments, virtually all limited to the 50 states and the District of Columbia, and with most of the data published at the national level only. Many of these surveys are integrated with their respective censuses, so that they have parallel concepts and classifications, and the census and survey results can be used in tandem to fulfill data users' needs.

Since 1941, the Census Bureau has had responsibility for compiling current statistics on foreign trade, and it publishes reports on exports, imports, and shipping.

Censuses and surveys are described in greater detail under the subject headings; the resultant reports are listed in separate FactFinder brochures (see p. 13) carrying the same headings.

### **The American Community Survey**

In response to the common complaints that sample data from the decennial censuses are published too late and

quickly out of date, the Census Bureau began its American Community Survey (ACS) program in 1996, with full implementation scheduled for 2003. The ACS is a way to provide the data communities need every year instead of once in 10 years. It is an ongoing survey that the Census Bureau plans will replace the long form in the 2010 census.

Full implementation in 2003 (3 million households) includes every county of the United States. The ACS will provide estimates of demographic, housing, social, and economic characteristics every year for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 or more. For smaller areas, it will take 2-to-5 years to accumulate sufficient sample to produce data for areas as small as census tracts. For example, areas of 20,000 to 30,000 can use data averaged over 3 years. For rural areas and city neighborhoods or population groups of less than 15,000 people, it will take 5 years to accumulate a sample that is similar to that of the decennial census. These averages can be updated every year, so that eventually, we will be able to measure changes over time for small areas and population groups.

### **How the Census Bureau Came Into Being...**

U.S. marshals supervised their assistants' enumeration of the first nine censuses and reported to the President (1790), the Secretary of State (1800-1840), or the Secretary of the Interior (1850-1870). Census Bureau work, however, was only a small part of their regular duties, and they could not give it adequate time and attention. For the 1880 census, Congress established a census office in the U.S. Department of the Interior, with decennial census supervisors to be appointed by the President and confirmed by the Senate. Each supervisor was to select, solely for their job fitness, the enumerators, who were forbidden to disclose any of the information they collected. These changes improved public relations and speeded the collection process. Nevertheless, the census organization still had to begin anew every 10 years; a large staff had to be recruited from "scratch," learn its duties, and then be disbanded as soon as the results were announced. There was no continuity from one census to the next. In 1902,

Congress authorized the President to set up a permanent Census Office in the Interior Department. In 1903, the agency was transferred to the new Department of Commerce and Labor. When that Department was split in 1913, the U.S. Census Bureau was placed in the Department of Commerce. During World War II, in 1942, Census Bureau headquarters was moved from downtown Washington, DC, to a nearby suburb, Suitland, MD.

### **... and Its Present Organization**

The Census Bureau is headed by a Director, nominated by the President and confirmed by the U.S. Senate, and is assisted by a Deputy Director and an Executive Staff composed of Principal Associate Directors, Associate Directors, and Assistant Directors, respectively. The Executive Staff oversees specific divisions, offices, and staffs that have to do with administration, planning, and subject matter; data collection, processing, and publication; and consultation within the Census Bureau, with other Federal, state, and local agencies, with interested organizations in the academic and private sectors, and with statistical establishments in foreign countries.

The Census Bureau has 12 regional offices Atlanta, GA; Boston, MA; Charlotte, NC; Chicago, IL; Dallas, TX; Denver, CO; Detroit, MI; Kansas City, KS; Los Angeles, CA; New York, NY; Philadelphia, PA; and Seattle, WA—and processing and support facilities in Jeffersonville, IN. The regional offices deal principally with data collection and assistance to data users. Additional processing centers are set up temporarily for the decennial censuses.

### **The Census Bureau Works for the Government...**

If another Federal, state, or local government agency needs data not already provided by the Census Bureau, but doesn't have the facilities for collecting or tabulating them, it may contract with the Census Bureau to do this work. The other agency then can concentrate its efforts on analyzing the resultant data according to its own program needs. Both agencies gain from this specialization. Random examples of such work at the Federal level are the American Housing Survey for the Department of Housing and Urban Development, the National Crime

Survey for the Department of Justice, the Health Interview Survey for the Department of Health and Human Services, and the Consumer Expenditure Surveys for the Department of Labor.

### **... and the Government Works for the Census**

To avoid duplication of effort and expense on the government's part, as well as by individuals and companies who must respond, the Census Bureau makes extensive use of other Federal agencies' administrative records in compiling statistical data. In the economic censuses, for example, this virtually eliminates the need to collect data from approximately 2.5 million small establishments and 15 million nonemployer establishments and the need for them to fill out additional census reports. Once in the Census Bureau's possession, these other agencies' records are protected by the same confidentiality provisions of the census law as the Census Bureau's own questionnaires.

### **The Law States What the Census Bureau Shall Collect**

For many years, each census had to be authorized by a specific act of Congress. In 1954, that body brought together in Title 13 of the United States Code the laws under which the Census Bureau operates. This title spells out the basic scope of the censuses and surveys, the requirements for the public to provide information as well as for the Census Bureau to keep that information confidential, and the penalties for violating any of these obligations.

The Secretary of Commerce (and through him/her, the Census Bureau) is now directed by law to take censuses of population, housing, manufactures, mineral industries, other businesses (wholesale trade, retail trade, services), construction, transportation, and governments at stated intervals, and it also may take surveys related to any of these subjects.

### **Reports Are Confidential**

The sole purpose of the censuses and surveys is to secure general statistical information. Replies are obtained from individuals and establishments only to enable the compilation of such general statistics. The confidentiality of these replies is very important. By law, no one—neither the census takers nor any

other Census Bureau employee—is permitted to reveal identifiable information about any person, household, or business.

In current censuses, once the information, with individuals' names and addresses dropped, has been transferred to machine readable form and processed through the computer to produce statistical tables, the original questionnaires can be destroyed and the waste recycled.

Finally, before any census tabulation is published, it is carefully checked to make certain that no individual, household, or organization can be identified, or information about it inferred by reading the table or by analyzing the figures it contains.

In the case of the population and housing census, the questionnaires are microfilmed before destruction, and the microfilm is stored under strict security conditions for use in the Census Bureau's National Processing Center at Jeffersonville, IN. Here, people who need proof of age or residence (for example), or their heirs or legal representatives, may obtain this evidence in the form of an official transcript.

Copies of population census schedules from 1790 through 1920, usually on microfilm, are available for appropriate research at the National Archives and at libraries in various parts of the country, but subsequent records are closed to the public for 72 years to protect the confidentiality of the information they contain. (The Freedom of Information Act, designed to make records available to individuals, does not apply to identifiable data the Census Bureau collects for statistical purposes.)

### **How Important Are Census Statistics?**

Ever since 1790, the population census statistics have been the official figures used every 10 years to compute the number of congressional representatives allowed each state, and also in conformity with the Supreme Court's 1965 one-man-one-vote ruling, to align congressional district boundaries so that each member of Congress represents approximately the same number of people. For the same reason, the census figures are used in redistricting state legislatures and other local governing bodies. In recent years, many Federal, state, and local

government plans, grants-in-aid, and revenue-sharing programs have been based by law on factors calculated from census statistics for population, per capita income, geographic distribution, and other items. Likewise, census data of all types—population, housing, and all of the economic subjects, including transportation—are crucial for market analysis, for planning new services and facilities, for affirmative action programs, for studying environmental impact, and for basic research in many academic fields. Thus, it is even more important now than it was in 1790 that every person and business establishment be counted and that the information about each be accurate and complete.

## **Population**

### **Censuses, 1790 to the Present**

From 1790 through 1840, the population censuses listed the names of household heads only and tallied the number of people in each family according to their age, sex, race, and (later) employment, and the number of slaves held. Beginning in 1850, all free persons were listed by name with their characteristics, which then included occupation, place of birth (state or country) and school enrollment. (See "Content" p. 4).

The development of sampling techniques early in the 20th century made it possible, beginning with the 1940 census, to ask some of the census questions of 5 percent of the population to yield reliable estimates for most of the 1940 census areas. Thereafter, the proportion of the households included in the sample varied from one census to the next. Nationwide, for Census 2000, the sample questions were asked at every sixth household. In places with less than 2,500 inhabitants, every second household was sampled, while more heavily populated areas were sampled at either a 1-in-6 or a 1-in-8 rate.

Experiments in self-enumeration led to its successful use in the 1960 census, when householders in urban areas were asked to complete and mail back questionnaires containing the sample items.

For Census 2000, approximately 95 percent of the households received and were asked to return—questionnaires in the mail. For households that received

a questionnaire in the mail, enumerators telephoned or visited only in those cases where the questionnaires were not returned, the data were incomplete, or where information was needed for people living in institutions, dormitories, or other such quarters. There also were special procedures for enumerating the homeless, people on maritime vessels, and members of the Armed Forces. In a few remote or sparsely populated areas, enumerators visited each housing unit and completed a short-form or long-form census questionnaire.

Self-enumeration by mail has several advantages; for example, it allows householders to report directly to the Census Bureau rather than through a face-to-face interview with an enumerator (who might have to call several times to find a respondent at home), and it permits the agency to concentrate its resources in those areas where the greatest effort is needed to complete the census.

## Content

The principal topics listed below will indicate how the range of the population censuses grew during the past 2 centuries.

- Age and sex, 1790-present (but only for free Whites until 1820)
- Slave status, 1790-1860
- Color or race, 1790-present (see section below)
- Citizenship, 1820-1830, 1870, 1890-present
- Physical or mental handicap, 1830-1930, 1970-present
- Education or literacy, 1840 present
- Marital status, 1880-present
- Occupation, 1850-present
- Industry, 1820, 1840, 1910-present
- Employment status, 1880-present (except 1920)
- Crime, 1850-1910
- Mortality, 1850-1890
- Place of birth, 1850-present
- Wage rates, 1850-1890
- Income, 1940-present
- Pauperism, 1850-1860, 1880-1890, 1910
- Prisoners, 1880-1910
- Institutionalized persons, 1880-1890, 1910
- Year of immigration, 1890-1930, 1970-present

- Number of children ever born, 1890-1910, 1940-1990
- Language (or whether the person could speak English), 1890-1940, 1960-present
- Language of parents, 1910-1920
- Spanish/Hispanic origin or descent, 1970-present

In the 20th century, interest focused as well on people's economic characteristics—their jobs and how they traveled to work, their income, and how well they were housed. Most of these questions are asked on a sample basis.

## Race and Ethnic Origin

The concept of color or race in the censuses has never denoted any scientific definition of biological stock. "White" and "Black" persons have been identified in every decennial census since 1790. American Indians were first enumerated as a separate group in the 1870 census; however, until 1890, those in the Indian Territory or on reservations were not included in the official U.S. population count used for congressional apportionment. Data have been collected on the Chinese population since the 1870 census, and on the Japanese beginning in 1890.

Until recently, the census taker determined a person's color or race according to the Census Bureau's guidelines. Beginning with the 1960 census, however, respondents who completed their own census questionnaires were able to classify themselves and other household members. Census 2000 made provision for each person's race to be marked as White, Black, African American, or Negro, American Indian or Alaska Native, Asian Indian, Japanese, Chinese, Filipino, Hawaiian, Korean, Vietnamese, Guamanian or Chamorro, Samoan, or to be written in if none of these applied. In addition, American Indians were asked to report their tribe. The Hispanic population, which the Census Bureau recognizes as an ethnic group, now is identified primarily by a question on Hispanic origin or descent (Mexican, Mexican American, or Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino), although other measurements are also available in terms of language spoken at home.

Prior to Census 2000, respondents were asked to select only one category when

identifying their racial group. With the Office of Management and Budget's (OMB) decision in July 1998 to revise its standards for the classification of Federal data on race and ethnicity (according to Directive 15), however, the Census 2000 questionnaire allowed the respondent to mark one or more races depending on what that person considered himself/herself to be.

## Special Censuses ...

Since 1915, the Census Bureau has conducted an increasing number of special enumerations for local governments at their request and expense, to measure demographic changes that affect such things as the allocation of money from Federal and state agencies, especially where there is considerable population growth between censuses.

## ... and Current Surveys

Sampling techniques developed for the censuses led to the use of demographic surveys in the 1940s. The resultant statistics would be representative of the Nation as a whole, or in some cases of regions, states, or smaller areas, depending on the size of the sample. The two principal surveys in which population data are gathered are the Current Population Survey (CPS), first begun in 1942, and the American Community Survey (ACS) begun in 1996. At that time, the ACS covered about 7,400 households per month, which equaled about 88,000 households per year. The CPS now covers approximately 60,000 households across the United States that are interviewed monthly to obtain labor-force statistics for the U.S. Department of Labor and current data on a variety of subjects for the Census Bureau and other agencies. Beginning in November 2002, the ACS will cover approximately 250,000 households per month and 3 million households annually. At that time, data will be provided down to the block group level. Other surveys include such topics as household income and participation in government programs, consumer buying, health, crime, and education. (Many surveys are done on a reimbursable basis for other government agencies and under their authority.)

In addition to conducting demographic surveys, the Census Bureau produces

population estimates and projections. The current total population is estimated monthly for the United States and annually for the states; the national population is estimated annually by age, sex, and race. Since 1959, the Federal-State Cooperative Program for Population Estimates has been carried out as a joint effort of the Census Bureau, the states, and Puerto Rico. The participants follow the Census Bureau's methodology to prepare annual population estimates for counties and metropolitan areas. More recently, these figures have been supplemented by occasional estimates of population and per capita income for counties, incorporated places, and other governmental units. Projections of future population are made periodically for the Nation and the various states. The Census Bureau also analyzes major demographic and socioeconomic developments both in this country and abroad.

## Housing

### Censuses, 1940 to the Present...

In the 1850 and 1860 Censuses of Population, the number of slave houses was asked, and enumerators inquired about housing on Indian reservations in 1880. There were no general questions on housing in the censuses until 1890. From 1890 to 1920, interest in housing data was concentrated principally on whether or not residences were on farms, whether they were occupied or vacant, and, if owned, whether they were mortgaged. There have been detailed decennial censuses of housing from 1940 on.

The housing censuses are taken in conjunction with, and in the same manner as, the population censuses. (See p. 10.) The housing censuses cover only those residences that meet the definition of a "housing unit." In general, a housing unit is a group of rooms or a single room occupied or (if vacant) intended for occupancy as separate living quarters; that is, the occupants do not live and eat with any other persons in the building, and there is direct access from the outside or through a common hall. A mobile home also can be a housing unit. Transient accommodations, barracks for workers or members of the Armed Forces, and institutional-type quarters (dormitories, wards, large rooming houses, etc.) have

not been counted as housing units, although their residents are included in the population census.

Below are some examples of the subject items covered in past censuses. A 100-percent question is asked for all housing units, and a sample item only at designated units.

#### **100-percent (short-form questionnaire)**

Tenure (owned or rented)

#### **Sample (long-form questionnaire)**

Complete plumbing facilities

Tenure (owned or rented)

Value or contract rent

Vacancy status and months vacant

Components of gross rent

Heating equipment

Year structure built

Number of rooms

Source of water

Sewage disposal

Bedrooms and bathrooms

Air conditioning

Automobiles, vans, and trucks

Elevator

Fuels

Shelter costs for homeowners

### ... and Surveys, 1956-Present

As World War II drew to a close in 1945, the Census Bureau began conducting a number of intercensal surveys of the Nation's housing, most of them concentrating on physical characteristics in selected local areas. A national housing survey, taken in 1956, was the first of its kind to deal with components of change in the housing inventory and to provide intercensal data on the financing of residential properties. Similar surveys were parts of the 1960, 1970, 1980, 1999, and the Census 2000 decennial programs. Other Census Bureau surveys in the housing area include the following:

*Housing Vacancy Survey.* Since 1955, quarterly and annual reports have been issued that contain data on selected characteristics of vacant units (for rent, for sale, rented or sold but not yet occupied, etc.), with comparative vacancy rates for previous periods.

*Market Absorption of Apartments.* Because of interest in the extent to which apartments in recently completed, privately financed structures are absorbed into the

housing market, the Census Bureau began publishing relevant annual and quarterly data in 1969.

*American Housing Survey.* Formerly called the Annual Housing Survey, this activity dates from 1975 and consists of two different sample surveys. One is conducted nationally every other year; the other, for rotating groups of selected metropolitan areas, is annual. These surveys cover a number of population, housing, and financial characteristics, including some data on the condition of the units and of the neighborhoods in which they are located.

## Agriculture

### Transfer to the United States Department of Agriculture

Responsibility for the census of agriculture was transferred from the Census Bureau to the United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) in 1995. The 1992 Census of Agriculture was the last agriculture census conducted by the Census Bureau, with NASS being responsible for the 1997 and future censuses of agriculture. The high priority placed on the census by the USDA assures the continuation of the census of agriculture and that adequate resources were available to conduct a 1997 census comparable to the 1992 census.

Planning, collection, and release of census results will be more efficient by consolidating the experience and resources of NASS and the Census Bureau. The consolidation will reduce response burden. Previously NASS and the Census Bureau were required to maintain separate lists of farms and ranches. Now, with the census responsibility, NASS can develop one master list that can be used both for the census and ongoing sample surveys.

### Censuses, 1840-1992

Agriculture censuses were conducted by the Census Bureau and its predecessors from 1840 through 1992. Although the 1820 population census counted the number of people engaged in farming, little was done about collecting data on agriculture itself until 1840. That first census was very limited; it had questions about numbers of livestock,

grain, and other crops such as cotton and sugar, gardens and nurseries, and forest products including skins and furs. The number of farms and their acreage were first collected in 1850.

Facts about farms and the country's food and fiber production were essential as the U.S. frontier moved westward, new lands were opened to settlement, and foreign trade grew. After 1830, as American agriculture became more varied and complex, the censuses of agriculture that were taken every 10 years did too. Technological changes, such as irrigation, pest control, the use of chemical fertilizers, and mechanized and custom farming, became even more rapid in the 20th century, so that conditions had to be measured more often. Since 1920, there has been an agriculture census every 5 years that collected information on tractors and other important farm machines, farm facilities (such as electricity and telephones), land use and ownership, value of products sold, and the characteristics of people on farms, and data about various kinds of expenses. Beginning in 1900, the agriculture censuses were extended to U.S. territories, although some were taken only at the time of the population and housing censuses in the years ending in "0."

Ten-year censuses of irrigation were added in 1910 and of drainage in 1920. There were special censuses of horticultural specialty production for 1890 and 1930, and on a 10-year basis beginning with 1950. The drainage census was abolished after 1978. Information about agricultural services—custom plowing, crop dusting, veterinary services, etc.—was collected for 1969 through 1978.

In the 1950s, the agriculture censuses were moved to the years ending in "4" and "9." A 1976 change in the law required the census of agriculture to be taken for 1978, 1982, and every 5 years thereafter, providing data for the same years as the economic censuses. Thus, census data became available for the same time period as the Nation's food and fiber system, including agricultural production (agriculture), food processing (manufactures), and distribution (wholesale and retail trade). Similar relationships became possible for farm supplies and equipment.

### **... and Surveys**

Through the years, the Census Bureau also conducted special surveys dealing with agriculture. The principal of these is the Cotton Survey, which has been taken every year since 1902 to cover each ginning season by state, and since 1913, to cover each ginning season by county; to report monthly activities or conditions from August through February; to detail production by crop year; and to provide cotton statistics for agriculture, foreign trade, and industry programs.

## **Economic Statistics**

### **The Unit of Enumeration**

From the beginning, data for the Census Bureau's economic programs have been collected and summarized for publication primarily in terms of the establishment. An establishment, as defined for census and survey purposes, is a business or industrial unit at a single geographic location that produces or distributes goods, or performs services.

When more than one economic activity is conducted at a single location, each activity under separate ownership is regarded as a separate establishment. Furthermore, if the same ownership has substantially different kinds of activity at a single location, each activity of significant size and with its own records is treated as a separate establishment.

In the economic censuses, information is obtained for each establishment operated by a company (an organization consisting of one or more commonly owned or controlled establishments) whose primary activity falls within the scope of the censuses. The reporting units for the current surveys vary, but generally are designed to link the survey information with the censuses. The term firm is used interchangeably with company.

### **The Classification System**

Beginning with the 1947 Census of Manufactures, the Census Bureau began tabulating data from the economic censuses and surveys (except for some transportation and construction surveys), and later from some parts of the agriculture and foreign trade

programs, on the basis of the *1945 Standard Industrial Classification (SIC) Manual*.<sup>4</sup>

The SIC system classified establishments by the type of activities in which they were engaged. It made it easier to collect, tabulate, present, and analyze data relating to establishments engaged in all types of economic activity. The SIC also promoted uniformity and comparability in the presentation of statistics by various Federal and state agencies, trade associations, and private research organizations.

In some instances, more detailed classifications were derived for census purposes, so that additional industries, kinds of business, or specific products could be identified within the SIC categories.

On April 9, 1997, responding to increasing and serious criticism about the SIC and the need for a common North American Industry Classification System (NAICS) for Canada, Mexico, and the United States, the Office of Management and Budget (OMB) announced its decision to adopt the NAICS. In early 1999, the publication of 1997 Economic Census data based on the NAICS provided the first glimpse of data based on the new system. The system was developed by the Economic Classification Policy Committee (ECPC), on behalf of the OMB, in cooperation with Statistics Canada and Mexico's Instituto Nacional de Estadística, Geografía e Informática (INEGI) to provide comparable statistics across the three countries.

The NAICS is a unique, all-new system for classifying business establishments. It is the first economic classification system to be constructed based on a single economic concept. Economic units that use like processes to produce goods or services are grouped together. The NAICS reflects the structure of today's economy in the United States, Canada, and Mexico, including the emergence and growth of the service

<sup>4</sup>The SIC system was a significant innovation for the 1947 Census of Manufactures and subsequent economic censuses until the development of the NAICS system. Prior to 1947, the Census Bureau had developed its own classifications after consultation with specialists in the Federal Government and the private sector.

sector and new and advanced technologies. It is a flexible system that allows each country to recognize important industries below the level at which comparable data will be shown for all three countries.

## **Manufactures and Mineral Industries**

### **Censuses, 1810 to the Present**

As noted earlier, the 1790 and 1800 censuses were restricted to a count of the population. There was little consideration given to collecting economic statistics because agriculture was by far the most important occupation of the American people. By 1810, however, the fragile beginnings of industrialization had begun; therefore, in an act passed on May 1, 1810, the Congress directed the Federal marshals and their assistants responsible for conducting the 1810 Census of Population to take “an account of the several manufacturing establishments and manufactures within their several divisions.”

The first census of manufactures was very limited; it collected information for 25 broad categories, encompassing more than 220 kinds of goods. The 1840 Census of Population included a census of manufactures and also a series of questions about mining and fisheries to measure the extent of commercial activities. Thereafter, these were enumerated at approximately 10-year intervals as part of the censuses of population up to and including the year 1900 for manufactures and 1940 for mineral industries. (In addition, the 1933 census included retail trade, wholesale trade, and a new category, “services, amusements, and hotels.” For 1935, the 1933 category, “services, amusements, and hotels” was renamed service establishments, which included hotels, personal and business services, automotive repair, amusements, and dental laboratories). Minerals data were collected as part of the 1935 Census of Wholesale Trade.

At the beginning of the 20th century, the United States found itself the world’s leading industrial Nation with an economy characterized by the increasing dominance of manufacturing. As a result of this development, Federal Government decisionmakers, members of the academic community, business

leaders, and other experts were faced with an urgent need for more current data on the economy. Congress, therefore, directed that quinquennial censuses of manufacturing be taken beginning with 1905. From 1919 through 1939, however, the census of manufactures took place every 2 years. The extent of the procedures, coverage, and publication programs for the biennial censuses fluctuated according to the economic conditions of the period.

During World War II, the periodic economic censuses were discontinued in favor of war-related current surveys, so that the next census of manufactures was for 1947. Because of a lack of funding, there was no census of manufactures and mineral industries in 1954. However, a census was taken in 1955 for the year 1954. In that operation, the program became known as the economic censuses, and, as such, was the first integrated economic statistical program in which data for retail trade, wholesale trade, manufacturing establishments, and construction, mineral, and selected service industries were collected for the same benchmark years.

The first manufacturing census for an outlying area was conducted in Puerto Rico for the year 1909. Thereafter, excepting 1929, a census was taken at 10-year intervals through 1949. Censuses of manufactures also were taken concurrently with the census of business for the years 1954, 1958, 1963, and since 1967, at 5-year intervals as part of the regular economic censuses program. These censuses began in Guam and the Virgin Islands of the United States in 1958, and in the Northern Mariana Islands in 1982. A census of mineral industries has never been taken in any of the outlying areas.

In the 1990s, the manufactures and minerals censuses collected major data items, such as the number of plants or factories and workers, payroll, cost of materials, capital expenditures, and value of shipments or production.

These censuses cover all establishments primarily engaged in manufacturing and mining (the extraction of minerals in the questionnaire covering solids, liquids, and gases) as defined in the Standard Industrial Classification (SIC) Manual for the 1992 census and the North

American Industry Classification System (NAICS) Manual for the 1997 census. Data were collected in two different ways: The questionnaire mailout/mailback method was used for multiestablishment companies and large and medium single-establishment companies. Data for most single-establishment small employers were extracted from Federal administrative records.

### **... and Surveys**

Even quinquennial manufactures and minerals censuses could not keep pace with the rapid changes that are created by new processes, new materials, and the shifting demands for goods. Accordingly, a survey program was begun in 1906, and the results were published in a series of *Current Industrial Reports* (CIRs; prior to 1960, the CIRs were titled *Facts for Industry*). Another integral part of the manufacturing statistics program is the Annual Survey of Manufactures that, since 1949, occurs in every year in which a census is not taken (during census years it is part of the census). All of these surveys are carried out by mail. Some examples of data collected in the Annual Survey of Manufactures are the number of employees, production workers’ hours, and value of shipments. The CIRs generally present data on commodity products, shipments, consumption, and/or inventories.

## **Business**

### **Censuses, 1929-Present...**

Census coverage of the distributive trades and services encompasses three separate censuses—retail trade, wholesale trade, and service industries. These sometimes are called the business censuses.

Although limited data were collected in the 1840 Census of Population to measure business enterprise in various categories, there are virtually no statistics on business until the first censuses of retail trade and wholesale trade conducted in 1930 (covering the year 1929). The census of retail trade covered operations of “all establishments doing business in a retail manner,” including some service businesses such as garages. As noted above, the census of selected service

industries, which began in 1933, included hotels, personal and business services, automotive repair, amusements, and dental laboratories.

The 1935 censuses were more comprehensive and were an effort to provide the “first factual appraisal ever available on the effects of a serious business depression.” These censuses were taken again for 1939 (as part of the 1940 Censuses of Population and Housing<sup>5</sup>, and included business in Alaska, Hawaii, and Puerto Rico for the first time) and 1948. Since 1955, the scope of the economic censuses has been successively enlarged. These censuses began in Guam and the Virgin Islands of the United States for 1958, and in the Northern Marianas for 1982.

The censuses of retail trade, wholesale trade, and service industries in the 1980s collected basic data, such as the number of establishments, sales or receipts, employment, and payroll, plus specialized information about specific kinds of businesses. As in the censuses of manufactures and mineral industries, retail trade, wholesale trade, and service industries’ statistics are published primarily in terms of the establishment, and are collected both by mail and the use of administrative records.

### ... and Current Surveys

As with other censuses, those dealing with the Nation’s economic activities cannot always keep pace with rapid changes in technology and marketing. Because of the shifts in business conditions, Federal Government and private sector economists need prompt and reliable information. Accordingly, since the early 1950s, the Census Bureau has conducted monthly and annual surveys of retail and wholesale trade. Basically, these are taken by mail and produce dollar-volume and percent-change (trend) estimates on such items as sales and merchandise inventories. Estimates are developed both on an unadjusted basis and adjusted for seasonal variation. Also, there is an annual survey of receipts or revenues for selected service industries. Other annual surveys estimate revenues, expenses, and inventories of revenue-producing equipment in the trucking industry, and revenue and expenses in public warehousing.

<sup>5</sup>For the first time, a census of housing was added to the decennial censuses in 1940.

## Construction

### Censuses of Construction Industries, 1929 to the Present

Certain data on building activity, compiled from historical files of permits and from surveys by private firms and other Federal agencies, are available for years as early as 1868, and the development of construction industries in this country can be inferred from these. In 1930, however, the U.S. Census Bureau began collecting data on the entire range of these industries and publishing statistics as part of the business census reports for 1929, 1935, and 1939. Data for construction establishments were not collected again until the 1967 Economic Censuses<sup>6</sup>, of which the census of construction industries became an integral part, and the pattern of enumeration every 5 years was resumed.

The 1997 Economic Census included 45 construction industries and industry groups—general building, heavy construction, and special trade contractors (subcontractors); subdividers and developers; and operative or merchant builders. There were about 2.6 million construction establishments in the country. Around 830,000 of them have paid employees, and most of these establishments receive census questionnaires by mail. The results are published by state and large metropolitan area for major items such as receipts (or value of construction work done), employment and payroll, selected operating expenses, assets, and inventories. Receipts are further broken down by specific kind of business and type of construction (commercial, industrial, etc.). Limited data, based on administrative records, are published for the approximately 1,770,000 firms without paid employees.

### .. and Surveys

Since 1959, there have been monthly, quarterly, and annual surveys that focus primarily on the volume of residential construction and the dollar value of

<sup>6</sup>The Census Bureau used the term “economic censuses” to cover all of its economic data-collection activities between 1954 and 1987. 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.

work done on all types of construction. Statistics are published monthly on such topics as building permits, housing starts and completions, new houses sold, and the value of new construction put in place. In addition, there are quarterly and/or annual series on expenditures for residential upkeep and improvements, housing characteristics, new mobile-home placements, and a price index of new houses sold.

## Transportation

The first available statistics from the Census Bureau on rail and water transportation date from the 1880 and 1890 Census of Population. There were special censuses of water transportation in 1906, 1916, and 1926, plus one on the express business in 1907. Some transportation data were included in the monthly Survey of Current Business in the 1920s and early 1930s.

The inadequacy of transportation data and the need for appropriate action by the Federal Government to overcome these deficiencies were recognized in a law Congress passed in 1948 authorizing a census of transportation in 1949, but funds were not appropriated except for preparatory work in the early 1950s. A National Travel Survey, which the travel industry sponsored, was conducted in 1957 as a pilot project, but the first census (actually several different surveys, as described below) did not take place until 1963.

The 1963 Census of Transportation was a pioneering effort with respect to the economic areas covered as well as the survey techniques used. The primary objective was to close—or at least narrow—major gaps in statistical knowledge without duplicating data already available from other government or private sources. This objective led to the adoption of a program consisting of four individual surveys, each aimed at a specific gap in knowledge, rather than a unified project as is common in other censuses. The transportation census consisted of a passenger transportation survey (designated the National Travel Survey in 1967 but discontinued in 1977) based on a nationwide probability sample of households, and surveys of truck inventories and use, commodity transportation, the last one being nonregulated motor carriers, and later called public warehousing.



There were similar censuses for 1967, 1972, and 1977 as part of the economic census program. (Transportation data are collected by mail, and only in the 50 states and the District of Columbia.) The 1992 census included the truck inventory and use survey—information on the physical characteristics and operational use of the Nation’s 59 million private and commercial trucks. For the 1997 census, the name changed to the vehicle inventory and use survey, included establishment-based data for the motor carrier industry, water transportation, and services such as the arrangement of passenger transportation. The survey counted over 72 million private and commercial trucks registered in the United States during 1997.

## Foreign Trade

In 1790, the Federal Government embarked on a program to compile general statistics on foreign commerce and navigation from annual reports submitted by the collectors of customs and assembled by the U.S. Department of the Treasury. Since 1941, these figures have been prepared by the U.S. Census Bureau. Monthly statistics have been compiled since 1866, and cumulative data continue to be available in some reports. In addition to the data on the Nation’s trade with foreign countries, the Census Bureau also compiles separate statistics on the Nation’s trade with Puerto Rico, the Virgin Islands of the United States, and other U.S. possessions.

The Census Bureau has the primary responsibility for the collection, compilation, and dissemination of the official export and import statistics of the United States. This program produces critical statistics for virtually all Federal agencies and businesses concerned with the Nation’s international trade. The first priority of the foreign trade program is the preparation and release of the monthly U.S. International Trade in Goods and Services report (Balance of Trade), one of the Nation’s “principal economic indicators.” This report and the entire foreign trade database of the United States is available about 45 days after the end of the calendar month.

The foreign trade statistical program is unique among the Census Bureau’s

other economic programs in that the information is not collected from forms sent to respondents soliciting responses as in the case of surveys. Rather, the information is compiled from forms and automated reports filed initially with the U.S. Customs Service or, in some cases, directly with the Census Bureau, for virtually all shipments leaving (exports) or entering (imports) the United States.

Government uses foreign trade statistics to develop merchandise trade figures in balance of payment accounts and to appraise and analyze major movements and trends (commodity and geographic) in international trade. Foreign trade data also are used extensively as the statistical base to implement and analyze operations under various international agreements, such as the North America Free Trade Agreement (NAFTA).

Nongovernment users in industry, finance, research institutions, transportation use the foreign trade data to appraise the general trade situation and outlook. These data also are used in share-of-the-market analyses and market penetration studies, and for product and market development.

## Governments

The Census Bureau’s governmental statistics programs are concerned primarily with the organization, finances, and employment of state and local governments. These are important economic statistics because they represent a significant slice of the Nation’s economy. Purchases of goods and services by state, county, municipal, township, special district, and school district governments account for approximately 11 percent of the gross domestic product.

The universe of state and local governments is large—there are more than 87,000 such entities—and has considerable complexity and diversity. These governments run the gamut from simple organizations, such as cemetery special districts or small Midwest townships, to highly developed, extremely large governments, such as the state government of California or New York City. These mega-governments have financial activity equivalent to the largest private businesses catalogued in the Fortune 500.

## Census of Governments— a Brief History

The 1840 Census of Population, which gathered data about numbers and kinds of schools and pupils, was the first that sought information about state and local governments. This pattern of data collection about governments continued in subsequent censuses of population, through the 19th century at the constitutionally specified 10-year intervals. The scope expanded to include information about property values, local property taxes, and schools and their revenues. At the start of the 20th century, the Census Bureau split the collection of demographic and economic data into separate canvasses. The first state and local government data collection under this new pattern, done as part of the 1902 Survey of Wealth, Debt and Taxation, extended the data collection to the areas of revenues, expenditures, estimates of national wealth by state and class of property, and public debt. Once each in the next 3 decades, the Census Bureau repeated this collection pattern.

The current system of state and local government economic data collection began with the 1957 Census of Governments. Since then, the Census Bureau conducted a census of governments every 5 years in the “2” and “7” years of each decade. From 1957 through 1992, the Census of Governments covered four major subject fields—

1. *Governmental organization.* Numbers, characteristics, and descriptions of state and local governments, by type.
2. *Government finance.* Taxes and other revenues, expenditures, indebtedness and debt transactions, and cash and securities holdings.
3. *Government employment.* Public employment and payrolls for a representative month.
4. *Taxable property values.* Assessed property valuations, market valuations, and nominal and effective tax rates.

The 1992 Census of Governments marked the final compilation of taxable property value data. Subsequent censuses of governments excluded this segment.

There were some variations in the data collections following 1957. Data collection relating to publicly elected officials took place once every decade, usually in the “7” year. Public employee organization and employee benefit studies occurred frequently in a number of the censuses between 1977 and 1992. Also, there were a few iterations of studies concerning outlying territories of the U.S. (Puerto Rico, Guam, and the Virgin Islands of the United States).

Every census of governments has employed data collection through mail and compilation by trained representatives from publicly available records. Since the mid-1970s, the Census Bureau has used, also, a third data collection method known commonly as central collection. These are cooperative local government data collection programs run by state governments that share the local government data with the Census Bureau. Central collection programs account for a significant percentage of the national data.

The censuses of governments data have some unique features in comparison to other economic data; they are voluntary and not subject to confidentiality provisions of the U.S. Code. The only exception to this in the census of governments series has been individual property value data, which are no longer collected. The voluntary aspects of the surveys derive from our Federal system of government, which defines the relationships between levels of government. The nonconfidentiality aspects arise from the circumstance that all the data are developed from public records, and, therefore, not subject to any restrictions.

### Recurring Surveys

Between each census of governments, the Census Bureau conducts several periodic surveys, mostly annual, but supplemented with a few quarterly canvasses. These regular surveys include—

- Financial statistics aggregated for states, local governments, public employee retirement systems at the state area and national level (annual).
- Employment statistics aggregated for states, local governments at

the state area and national level (annual).

- Quarterly summary of state and local government tax revenue.
- Quarterly summary of public employee retirement system finances.
- Federal expenditures by state (annual).
- Federal assistance awards (quarterly).

In addition, there are several related programs that the Census Bureau conducts for other Federal agencies that had their genesis in the basic finance and employment surveys. These fall generally into two areas, criminal justice programs and education related programs. The former includes a series of surveys conducted for the Department of Justice. The latter are surveys that are within the purview of the U.S. Department of Education.

### Statistics That Cross Subject Lines

Over the years, the Census Bureau developed a number of programs to provide data that cross economic or demographic sectors. These are briefly described below; the years in parentheses are the ones when the programs were begun or transferred from other Federal agencies.

One type of program involves the manner in which census results are presented.

- The concepts, definitions, classification schemes, and reporting units used in the economic censuses, surveys, and related programs generally have been made uniform across economic sectors (1954). This allowed the data user to compare different industries or kinds of business in given geographic areas.
- Both population and housing statistics were cross-tabulated in one series (PHC) of reports (1960). Thus, the user could find housing characteristics shown by such things as the householder’s race or ethnic origin for a small geographic area.
- *Enterprise Statistics (1954)* regroups economic census data for business establishments under common ownership or control to show

various economic characteristics of the owning or controlling firms and to present information about establishments that provide centralized management or supporting services for the owning companies’ other establishments rather than for other firms or the general public. The economic characteristics of companies engaged in agricultural production were included for the first time for 1982. The other approach is to collect data across sector lines and then either publish them as such or augment them with existing census statistics.

- *County Business Patterns (1946)* is an annual series of reports that profile the economic structure of every U.S. county. They show employment, number and size of establishments, and payrolls, by county for the United States and Puerto Rico, for the following economic areas: agricultural services, forestry, and fisheries; mining; contract construction; manufacturing; transportation and other public utilities (except the U.S. Postal Service); wholesale trade; retail trade; finance, insurance, and real estate; and services (except in private households).
- *Minority-Owned Business Enterprises (1969)* determines the extent of business ownership by specific minority groups in the United States Blacks, persons of Hispanic origin, Asian Americans, American Indians, and others. The program covers the United States, states, and areas with 250 or more minority firms. This series contains useful information on finance, insurance, real estate, and other service-related industries not covered in other economic census reports.
- *Women-Owned Business (1972)* parallels the Minority-Owned program, and is based on administrative records used in the economic censuses. It covers U.S. places with 250 or more firms owned by women.
- *Characteristics of Business Owners (1982)* covers firms owned by minority groups and women, plus a comparison groups of businesses owned by nonminority males.

- *Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations (1982)* is the only Bureau program that collects profit-or loss-related information. This survey provides current estimates of income, assets, liabilities, stockholders' equity, and related financial and operating ratios, classified by industry and asset size.

## Tools for the Census

While planning, taking, processing censuses and surveys, and publishing the results still requires the work of thousands of people (over 860,000 in the case of the decennial censuses of population and housing), many advances have been made over the years in the speed of publication and the multiplication of statistical and geographic detail through the development of mechanical and electronic tools.

For nearly a 100 years, census data were tabulated by clerks who made tally marks or added columns of figures with a pen or a pencil. As the Nation grew, and there were more people, items, and characteristics to count, speedier tabulation methods had to be invented or the results of one census would never be processed before it was time for the next one.

In 1880, a "tabulating machine"—a wooden box in which a roll of paper was threaded past an opening where a clerk marked the tallies in various columns and then added up the marks when the roll was full—made tabulating at least twice as fast as before. The first real breakthrough came when a punchcard tabulating system was developed for the 1890 Census of Population. Certain facts about a person, family, farm, or business were recorded by punching holes in cards. The cards were mechanically fed through a machine that counted the different holes by means of an electric current that passed through each hole and tripped a counter. This system could count 250 items a minute. Mechanical tabulating improved over the years, and by 1950 its speed had increased to 2,000 items per minute.

The next major speedup of data processing came in 1951 with the first large-scale electronic computer, UNIVAC I, designed and built specifically for the Census Bureau. This machine was able

to tabulate 4,000 items per minute, but subsequent generations of computers have increased this speed to around a million items per minute.

To take advantage of these computers, there also had to be advances in getting the data ready for processing. Punching cards, although far faster than writing, is still basically a hand operation that is subject to human error and creates quantities of perishable records. During the 1950s, the National Bureau of Standards and the Census Bureau developed a system called FOSDIC (film optical sensing device for input to computers). Questionnaires that were completed by using a pencil to blacken dots opposite the appropriate answers were permanently photographed onto microfilm with automatic cameras. FOSDIC then "read" the blackened dots and transferred the data to magnetic tape for the computer at speeds that ranged from 3,000 items a minute with the earliest models to 70,000 items a minute in more recent versions. In the 1980s, FOSDIC also could transmit the data over long distances to the computers at Census Bureau headquarters. FOSDIC also performed simple checks and tabulations so that discrepancies could be reviewed before the computer began its work. Other equipment allowed data from survey or census report forms to be keyed directly to the computer tape and checked for acceptability at the same time.

At the other end of the computer process, high-speed electronic printers were utilized, beginning in the 1950s, that produced tabulations in forms that required only the addition of headings to be published by offset processes. From 1970 on, the Census Bureau took advantage of new high-speed compositors that converted the data on computer tape directly to words and numbers on off-set negative film used in publishing. A variety of electronic data plotters came into use to produce maps, charts, and graphs from the computerized data.

The Census Bureau began making unpublished data available to users in typed or manuscript tables early in the 20th century, in punchcard form at least from the mid-1920s, and on computer tape since the 1960s. (Users sometimes ordered microform or paper printouts of the tapes until the

availability of computers became widespread.) Public use tapes, which allow users to handle the Census Bureau's data to suit their own requirements, take several forms: Summary tapes parallel the published reports, but often with greater statistical or geographic detail; microdata tapes are samples of the basic records, with individual identification removed; and geographic reference tapes (see "Computerized Geography" below) make it possible to match data elements and geographic codes to their respective areas electronically. In addition to these standard products, special tabulations are prepared to users' specifications on a reimbursable basis, again with individual identification masked.

In the late 1970s and early 1980s, some data were published on microfiche that did not appear in paper reports. Beginning in the mid-1980s, some statistics were made available on diskettes for use in microcomputers and users began to obtain statistics "online" through the CENDATA system. In the later 1980s, the Census Bureau began testing CD-ROM (compact disk/read-only memory) laser disks as a medium for releasing data.

For Census 2000, FOSDIC was replaced with optical character recognition technology, allowing the Census Bureau to design a respondent-friendly (instead of machine-friendly) questionnaire in which write-in responses also could be captured electronically. The CENDATA of the 1990s evolved into online data available through the Internet on the American FactFinder program available from the Census Bureau's Web site: <http://www.census.gov>.

## Geographic Areas and Products

### Maps and Charts

Over the last century, the Census Bureau's census and survey operations have become heavily dependent on maps, both for collecting data and, along with charts, for presenting statistics.

Maps (many in color) and charts were first used to illustrate the demographic, economic, and other characteristics of various geographic areas covered in the 1870 census and have appeared in even

greater number and variety for most censuses and surveys in later years. Outline maps are printed in reports or separately, allowing data users to identify the exact areas for which statistics are presented in their printed reports, tapes, or other products.

Since 1900, thousands of maps have been collected from state and local agencies, and/or prepared by the Census Bureau's mapmakers, for taking censuses and assigning geographic codes to the results. In the 1980s, the agency began working with the U.S. Geological Survey to develop an electronic data base, called the TIGER (topologically integrated geographic encoding and referencing) system, which combined these various mapmaking, coding, and related functions into a single coordinated, computerized operation.

### **Growth of Statistical Areas**

Reflecting both the capacity to handle a large volume of data, made possible by advances in data-processing techniques, and users' growing needs for small-area data, the trend, beginning in the early 20th century, has been to produce more and more data for units such as metropolitan statistical areas, census tracts, blocks, and ZIP-Code areas.

In 1910, the Census Bureau began publishing population census data for "metropolitan districts"—basically major cities and their adjacent suburban areas. The Federal Government designated "standard metropolitan areas" (SMAs) for the 1950 census as consistent statistical definitions of the Nation's major urban communities. In 1959, the term was altered to "standard metropolitan statistical area" (SMSA).

In concept, each metropolitan area is a closely integrated economic and social unit with a large population nucleus, and generally consists of one or more entire counties that meet specified standards with regard to population, commuting patterns, and metropolitan character. Each area has one or more central cities (in New England, towns and cities, rather than counties, are the basic geographic units for defining these statistical areas.) These areas were quickly adopted for Federal statistics, and their use spread to the private sector for such purposes as assessing markets and placing advertising. Some Federal agencies also

have chosen to adopt the official metropolitan area definitions for nonstatistical program purposes.

With large-scale metropolitan growth in the 1960s and 1970s, many formerly separate metropolitan areas merged (for example, Dallas and Fort Worth, TX), and the expanding size of certain of the largest metropolitan complexes created what were in many respects separate metropolitan entities within the larger whole (for example, the Long Island portion of the New York area). Noticing these developments, in 1983 the Office of Management and Budget adopted the term "metropolitan statistical area" (MSA) for most areas, while recognizing certain of the largest areas as "consolidated metropolitan statistical areas" (CMSAs), within which "primary metropolitan statistical areas" (PMSAs) also were officially recognized. As of September 1999, the United States had 19 CMSAs containing 76 PMSAs, as well as 259 MSAs. (These counts do not include Puerto Rico, with one CMSA containing two PMSAs, and four MSAs.)

In 1910, the first census tracts were outlined for New York City to show groups of city blocks where the residents had similar characteristics. (A census tract averages about 4,000 people.) Tract statistics from the 1980 Census of Population and Housing were published for all SMSAs as well as some areas outside them. For Census 2000, tract statistics were available not only for all SMSAs but also for most of the remainder of the country for similar areas called Block Numbering Areas (BNAs).

In the 1940 census, the Census Bureau published population and housing data by block for cities with 50,000 or more inhabitants, and for other governmental units that contracted for such work. This program has increased every decade since then (almost 7 million blocks in 1990 with around 8 to 9 million blocks expected for Census 2000) and presents the data on microfiche and computer tape.

The 1950 census saw the advent of the urbanized area. Its purpose was to make census data tabulation possible for populations around one or more central cities. An urbanized area must have at least 50,000 people, with a population density of at least 1,000 per square mile in the areas adjacent to the core area.

In the economic censuses, data—particularly for retail activity—have been published for small areas generally defined by using census tracts and blocks to approximate central business districts, major retail centers, or ZIP-Code areas. (Most economic statistics are tabulated for incorporated places, counties, metropolitan areas, states, and the like.)

### **Computerized Geography**

The advent of the mailout/mailback data-collection technique changed the role of the census taker, who traditionally had recorded all of the geographic information applicable to each household, establishment, etc. Consequently, address coding guides on computer tape were developed to assign geographic codes for mailing and/or tabulation in various censuses, beginning with the 1962 Census of Governments. For Census 2000, the master address file was used to automatically code the questionnaires mailed to both metropolitan and nonmetropolitan households to the appropriate census tracts and block numbering areas, blocks, and other geographic areas, and made available for clerks to use in assigning geographic codes to the places where people reported that they worked.

Techniques were developed in the mid-1960s to create computerized geographic base files that had wider applications than simply assigning codes to addresses. The files are useful tools for local government and private organizations interested in such activities as computer mapping and network analysis. As noted in the previous section, the TIGER system represents a further technological advance in this area.

### **International Activities**

The Census Bureau's International Programs Center (IPC) conducts demographic and socioeconomic studies and strengthens statistical development around the world through technical assistance and training. For more than 50 years, IPC has assisted in the collection, processing, and analysis of statistics all over the world, and promoted the dissemination and use of this information globally.

IPC has worked in more than 100 countries on designing, planning, and conducting statistical activities that

contribute to economic and social development. Since 1947, IPC has trained more than 11,000 participants from statistical organizations in other countries.

In addition, IPC has developed statistical software packages to assist in the planning, processing, and analysis of data from censuses and surveys. At the present time, this software is in use in more than 200 computer processing centers throughout the world.

IPC also provides highly-specialized international research and analysis. Combining exceptional access to foreign data with the expertise of our staff, IPC analyzes a wide range of demographic, socioeconomic, and health issues, including—

- Population projections and trends for all countries of the world and selected subnational areas.
- Trends in key demographic indicators, including fertility, mortality, age structure, and migration.
- Economic and social status of populations in transition to market economics.
- Role and status of women.

IPC maintains an extensive collection of foreign statistical publications, many of which are obtained through official exchanges between the U.S. Census Bureau and statistical offices worldwide. The IPC library is open to the public.

## Guides to the Census Bureau's Principal Programs

The products of the Census Bureau's principal programs and their uses are described in separate brochures in the Factfinder series:

1. Statistics on Race and Ethnicity
2. Availability of Census Records About Individuals
3. Agriculture Statistics (Discontinued)
4. History and Organization
5. Reference Sources
6. Housing Statistics
7. Population Statistics
8. Census Geography—Concepts and Products
9. Construction Statistics
10. Retail Trade Statistics
11. Wholesale Trade Statistics
12. Statistics on Service Industries
13. Transportation, Communications, and Utilities Statistics

14. Foreign Trade Statistics
15. Statistics on Manufactures
16. Statistics on Mineral Industries (Discontinued)
17. Statistics on Governments (Discontinued)
18. Census Bureau Programs and Products
19. Enterprise Statistics (Discontinued)
20. Energy and Related Statistics (Discontinued)
21. International Programs (Discontinued)
22. Data for Communities

The various publications, maps, microfiche, computer tapes, diskettes, CD-ROMs, and items online are described in the Census Bureau's annual *Census Catalog and Guide* and specialized guides to publications, and are advertised in the monthly newsletter, *Census and You* (subscription) and free product announcements and publication order forms.

## Where Data Are Available

Published census statistics are available to anyone who needs them. Public and academic libraries across the country have or have access to the printed reports, and an increasing number have them on microfiche or computer tape. Copies are kept for reference at the U.S. Department of Commerce's 47 district offices and the Census Bureau's 12 regional offices (see p. 2), all of which provide assistance in finding information.

Copies of the Census Bureau's and other agencies' publications can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, or through its bookstores located in other parts of the Nation.

The statistics are summarized in several of the Census Bureau's convenient compendia, which include data from a wide variety of sources: *The Statistical Abstract of the United States* [year] (annual, since 1878) and its more recent periodic supplements *County and City Data Book* [year] (since 1957), and *State and Metropolitan Area Data Book* [year], since 1979.

In addition to those appearing in Census Bureau publications, census and survey statistics can be found in almanacs, journals, textbooks, newspapers, and other secondary sources.

Census Bureau data may be purchased, at the cost of reproduction. Users also

may order special tabulations at cost. These standard and special tabulations are subjected to the same screening to prevent disclosure of individual data as are the standard Census Bureau publications.

Public-use tapes, diskettes, CD-ROMs, and some microfiche are available from the Marketing Services Office, Customer Services Center, U.S. Census Bureau, Washington, DC 20233. There also are state data centers in every state, the District of Columbia, Puerto Rico, and the Virgin Islands of the United States, as well as other registered public and private organizations located throughout the country, which are able to provide tape copies and related services.

## Factfinder for the Nation

Many decades of collecting data have brought a wealth of experience to the U.S. Census Bureau, and for several reasons it is especially qualified to be the Nation's major factfinder.

It has established a reputation for trustworthiness, and people generally are willing to give it accurate information, knowing it will be kept confidential.

The Census Bureau collects data throughout the country, from year to year, and from one generation to the next; consequently, its statistics for different areas or time periods are useful for comparative study.

The agency has developed an extensive program for consulting with users of its statistics, primarily through public meetings, advisory committees, and conferences and workshops, in which suggestions are sought and the latest methods of handling census materials are studied to assure that the data are widely useful. It consults regularly with statistical agencies in other countries to take mutual advantage of the latest techniques being developed in the United States and abroad.

The staff constantly looks for new and better ways to serve the Nation's statistical needs and welcomes suggestions. Write or call—

Director  
U.S. Census Bureau  
Washington, DC 20233