

U.S. Census Bureau

**Submission to the United Nations Statistics Division Website on
2010 World Population and Housing Censuses**

November 2005

**Traditional enumeration with yearly updates of
characteristics**

Traditional enumeration with yearly updates of characteristics

Description

This design is a variation on the traditional census design and focuses on counting the population and collecting only the basic demographic data in the census year. A large household survey collects and tabulates detailed demographic, social, economic, and housing data every year throughout the decade, replacing a census-year long form to collect this detailed data from a sample of the population.

The survey samples a percentage of addresses each year to approximate a long form sampling rate over a certain period of the census cycle, such as five years. To improve the reliability of the estimates for small governmental units, a larger proportion of addresses are sampled. In the United States, where this approach has been implemented, annual sampling rates at various geographic levels range from about 1.7 percent to about 10 percent. Over a five-year period, the sampling rates range from about 8.5 percent to about 50 percent.

The sample is cumulated over time to produce the lowest levels of geographic detail similar to the long form sample in the traditional census. Five years of data are required for areas with a population of less than 20,000. Three-year estimates are produced for areas with populations of 20,000 or greater. Single year estimates are produced for areas of 65,000 or greater.

Addresses are contacted by mail. Nonrespondents are contacted by telephone and/or personal visit followup.

The survey data must be weighted to produce reliable and useable estimates. Survey data are weighted to reflect the sample design, to adjust for the effects of nonresponse, and to correct for survey undercoverage or overcoverage. This final weighting adjustment helps to ensure that estimates of the characteristics are comparable to the standard, which is the periodic census. Once the final weights are applied, the statistics are generated, including population estimates, proportions, means, medians, and ratios.

Essential Features

Since it continues to utilize a complete count of the population in the census year (year zero), the U.S. design meets the essential features of individual enumeration, universality, and defined periodicity. Its census-year count, as of a particular reference date, also meets the simultaneity feature. Its long form or sample data, now collected over a period of years, is designed to provide annual data at small geographic areas. This annual data will be benchmarked to the census year in 2010, providing the equivalent of census-year long form data, and meeting the simultaneity feature of data collected with a well-defined reference period.

Necessary Conditions

Among a number of necessary conditions, this approach requires the agreement of census stakeholders and government policy makers to introduce such a major variation in design. Users of traditional census data products must be willing to transition from once-a-decade

products to a new set of annually updated multi-year products. This approach requires substantial, annual funding, rather than funding clustered in a one- or two-year period once a decade.

Operationally, this approach requires an address frame for sample selection. It is critical that this frame be maintained throughout the decade. Keeping the frame up-to-date from year-to-year, especially in rural areas, is critical.

Conducting a traditional enumeration with yearly updates of characteristics requires an ongoing high level of professional staff throughout the decade to support the implementation of the survey. In addition, it requires staff to oversee a program of early and comprehensive planning, development and testing designed to continually seek efficiencies in the management and conduct of the short form only component of the census.

Advantages and Disadvantages

The primary impetus for this approach is twofold - to provide more frequent and relevant data on the population than is available when a census is conducted only once a decade and to reduce the operational risks associated with the census. Such a program is costly and technically difficult to mount, and requires a multi-year program of comprehensive planning, development, and testing. Particularly in countries with legal requirements for complete counts of the population at intervals, the complete count component of the census design is crucial.

In a traditional census design, even when detailed census data are released as soon as possible after the census year, data users are required to work with results that are, on the average, seven years old. The production of timely data to support decision-making at all levels of government is a major motivation for this approach. These timely and, therefore, more relevant data can greatly enhance the value of the information to government officials, policymakers, and businesses that are currently obtained from a once-in-a-decade long form.

Removing the responsibility for the collection of detailed data from a sample of the population as part of the census will allow the short-form-only census to focus more directly on meeting the most basic census objectives.

Implications for the Various Phases of Census-Taking

This design transfers to the ongoing survey the responsibility to provide estimates of detailed demographic, socioeconomic and housing data throughout the decade. This transfer eliminates the data collection, data processing and tabulation responsibilities for these data from the census. By removing the need for a long form during the census year (which requires collecting information on many more questions from a sample of households), census planners may be able to focus more on coverage improvement in the census year itself. Innovation, including the use of some technologies, may become possible when the census task is limited to short-form data collection. Eliminating the need for the census to capture, process, and tabulate detailed data will reduce the processing workload and allow the census to develop processing methods specific to the short-form requirements. Tabulation and release of census data will also be dramatically reduced.

Many components of the census now must be coordinated across the census (during the years surrounding the census) and the survey (throughout the decade). This includes outreach, promotion, and partnership programs designed to increase public cooperation and awareness. It also includes maintaining a master file of addresses that must be updated regularly, rather than established for a once-in-a-decade endeavor.

The fact that the survey is ongoing throughout the decade provides an opportunity to develop a strong foundation to support data collection during the year of the census. Information obtained from the survey itself (for example, language spoken) can be of great use in planning for data collection in the census year. The survey-taking experience can be used to better allocate resources during the census.

Implications for Content

Just like the census long form, the ongoing survey can provide data on a wide variety of subjects including: families, children, and the elderly; income and poverty; educational attainment and school enrollment; work and unemployment; disability; immigration and language ability; housing; and many more. In the most obvious approach, the content for the survey is defined to be the content of the census long form. Requirements for adding or revising content must be clearly defined. A survey that relies on multiple years of sample data to support the production of estimates cannot easily accommodate content changes.

For more information

<http://192.91.247.58/stats/documents/2004/11/censussem/wp.1.e.pdf>

<http://www.census.gov/acs/www/>