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RURAL LIFE CENSUS DATA CENTER NEWSLETTER



The U.S. Census Bureau and American Community Survey: Advantages, Uses, and Limitations

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The U.S. Census Bureau is supported and funded by the U.S. government and is a widely used source for demographic data. Social, housing, and economic data can easily be obtained from the bureau's website (www.census.gov). There is broad range of information presented (for example, data on age, sex, household structure, and/or income levels can be shown for any U.S. location [Edmonston and Schultze 1995]). The bureau provides data to the block level (Weeks 2005). According to the U.S. Census Bureau, the block is the smallest geographical unit in which census data can be collected. Blocks usually correspond with city blocks but in rural areas may include several square miles (www.census.gov).

Census data can aid research over a range of topics. The data can help one understand sex and age structure changes for a county, can help one recognize housing differences between two or more racial/ethnic groups, can help one observe the difference in income between different types of families, and so on (Edmonston and Schultze 1995). Researchers who need population characteristics for grant purposes find census data to be useful. Because U.S. Census Bureau data is readily available via the Internet, the use of this data by the general public is common.

Census data appeals to a wide audience. Political leaders use census data to make informed policy choices, and businesses use census data when planning the placement of industries (Weeks 2005). Because so many individuals rely on the U.S. Census Bureau, it is important to understand the uses and limitations of its data.

USES OF CENSUS DATA

Census data helps leaders understand important community traits and trends. Understanding these traits and trends can help leaders and planners make decisions that benefit all members of their community (Weeks

2005). For example, after studying census data, a business that caters to young adults may wish to locate in Clay County rather than Walworth County because Clay County has a higher percentage of young adults.

Census data can help us understand social change. School systems rely on demographics for future enrollment trends. Decisions about such things as consolidating two school districts, hiring new faculty, and purchasing resources (i.e., computers and books) can be made based on U.S. Census data (Weeks 2005).

Population trends can be observed and analyzed from U.S. Census data. Identifying patterns and rates of change allows projections about future population size, characteristics, and distribution. Data can help assess whether there is a need for increased housing in a community. Census data can also provide insight about the kinds of goods and services that are required to meet a community's demands and needs (Edmonston and Schultze 1995).

Census data may point to weaknesses that need to be addressed in a community and can serve as a guide for community leaders in developing possible solutions. Census data can also point to community strengths. For example, poverty trends show that Shannon County's poverty rate has been declining since 1980 (U.S. Census 2007); community leaders can cite this trend as evidence that improvements have been made on Pine Ridge Reservation.

Census data serves as a good comparison base. Income levels can be compared for different sex, age, race/ethnic, and occupational groups. Also, state, tribal, regional, and urban/rural comparisons can be made.

Census data can also be used as a validity check for other research purposes. Researchers often compare respondents' demographic information with U.S. Census data to ensure that they sampled a fair representation of

their community. These comparisons help ensure accuracy within the research process.

ADVANTAGES OF USING CENSUS DATA

One advantage of using U.S. Census data is its ease of access. It's quick and easy to obtain data that covers a range of topics from income to age to education to home ownership. Census data is usually preferred over other data when money and time are limited (Newman 2003).

A second advantage of using census data is the knowledge that there will be future censuses, as is required by the U.S. Constitution, and this allows for comparisons during research projects.

Also, the U.S. Census Bureau has a high response rate. Because the U.S. government requires all individuals to complete a census form, there is a response rate that is not possible with any other data collection technique.

LIMITATIONS OF CENSUS DATA

As with all data-gathering practices, U.S. Census data has limitations. First, the data may be outdated. Many have experienced the frustration of discovering that the most current data were collected eight years in the past. Because economic and social conditions impact populations, "old" data may not indicate how current events (such as an economic recession) have affected current populations. It can be difficult convincing others that old data are viable.

Sometimes the U.S. Census Bureau's wording of questions can be a limitation (Newman 2003). The bureau changes the wording of certain questions for several reasons; among these are changes to reflect added questions and changes due to legislative requirements. For example, due to the increasing number of interracial unions the Office of Management and Budget allowed respondents to select two or more racial categories on their census form (www.census.gov). This change, while meant to allow for more inclusiveness, made it difficult to accurately calculate racial/ethnic trends.

Next, the U.S. Census does not provide individual-level data. This limits the questions and thus the information that can be obtained from the census. For example, while U.S. Census data can be used to understand how two places differ from another, it does not permit one to observe whether household size affects poverty. Some make the mistake of incorrectly interpreting census data and drawing false conclusions.

Finally, the U.S. Census Bureau includes sampling errors. Sampling errors occur because data are gathered from a portion of the population rather than the full population. Also, some households will receive more than one census form if they have changed residences during the census count. Other households will not be included in the census count due to having a missing street address.

AMERICAN COMMUNITY SURVEY

Because the U.S. Census Bureau recognizes the need for updated data, demographers have introduced a new data gathering source called the "American Community Survey" (ACS). In 2006, the ACS began releasing the first set of single-year estimates for the year 2005 for areas with a population threshold of 65,000 and more. In 2008, the ACS will release the first set of multiyear estimates to include geographies with populations of 20,000 or more. The multiyear estimates are scheduled for release in Dec. 2008 and will be based on data collected from 2005-07. South Dakota will then have data available for the state; for the cities of Sioux Falls, Rapid City, Aberdeen, and Watertown; and for the counties of Minnehaha, Pennington, Lincoln, Brown, Brookings, Codington, Meade, Lawrence, and Yankton.

Fortunately, by 2010 the ACS plans to sample all locations within the United States. The ACS has replaced the census' long form, providing a new way to collect economic and social data. The ACS is less expensive to conduct because it is based on a smaller sample (Missouri State Data Center 2005; U.S. Census Bureau 2005).

The ACS will allow users to have current data for any place (Missouri State Data Center 2005). Also, new questions are being added to account for new occupational categories and to collect information on such things as insurance coverage and Internet access (U.S. Census 2005).

Although the ACS will provide important data for researchers, the U.S. Census Bureau advises data users to interpret data with caution (U.S. Census 2005). ACS data are based on a sampled population rather than the entire population's count (Missouri State Data Center 2005). This means that the data will almost always have a larger level of error compared with the census' long form. Therefore, data should be viewed as an estimate rather than an actual count.

Also, population totals refer to populations living in households. The 2005 ACS did not include group-quarters data. Beginning with the release of 2006 data, people living in institutions, dorms, nursing homes, and other types of group quarters were counted in the total population. It is more accurate to refer to the yearly census population "counts" than to the ACS population "estimates."

CONCLUSION

The U.S. Census Bureau will continue to provide important data for planners, businesses, community leaders, and academics. Many use census data to document trends and population characteristics. The advantages of census data include the data's accessibility and national representation. Census-data limitations include outdated data, the phrasing of questions, and the possibility of data misinterpretation.

The “American Community Survey” is a new U.S. Census Bureau tool that eventually will collect demographic data for all places. The ACS will provide current data, but it should only be used after understanding its limitations. These limitations include a smaller sample size and the availability of participation.

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