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2010 CENSUS

**Population Measures Are
Important for Federal
Funding Allocations**

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Highlights of [GAO-08-230T](#), a testimony before the Subcommittee on Information Policy, Census, and National Archives, Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

The decennial census is a constitutionally-mandated activity that produces critical data used to apportion congressional seats, redraw congressional districts, and allocate billions of dollars in federal assistance. This testimony discusses (1) the various measures of population used to allocate federal grant funds (2) how the accuracy of the population count and measurement of accuracy have evolved and the U.S. Census Bureau's (Bureau) plan for coverage measurement in 2010; and (3) the potential impact that differences in population estimates can have on the allocation of grant funds. This testimony is based primarily on GAO's issued work in which it evaluated the sensitivity of grant formulas to population estimates.

What GAO Recommends

At this time, GAO is not making any new recommendations.

2010 CENSUS

Population Measures Are Important for Federal Funding Allocations

What GAO Found

In fiscal year 2000, GAO found that 85 percent of federal government obligations in grants to state and local governments were distributed on the basis of formulas that use data such as state population and personal income. The decennial census is the foundation for measuring the nation's population. It provides a count of the population every 10 years, and is the starting point for estimates of population made in years between the censuses.

Obtaining an accurate population count through the decennial census has been a concern since the first census in 1790. Concern that the decennial census undercounted the population has continued since then. To measure accuracy, the Bureau since 1940 has used demographic analysis, in which it compares census counts with information on births, deaths, and other information. With the exception of 1990, the Bureau's demographic analysis shows that the extent to which the census undercounted the population has declined. More recently, the Bureau has used statistical techniques in which it compares the census count with the results of an independent sample survey of the population. For 2010, the Bureau plans to use similar statistical techniques to measure the accuracy and coverage of the census. Evaluating the accuracy of the census is essential given the importance of the data, the need to know the nature of any errors, and the cost of the census overall.

GAO's prior work has illustrated that the accuracy of state and local population estimates may have some effect on the allocation of grant funds. Specifically, to show the sensitivity of grant programs to alternative population estimates, GAO simulated how two grant program formulas would allocate federal funds to states if population estimates were substituted for census counts. This simulation was done for illustrative purposes only. While only actual census numbers should be used for official purposes, this simulation showed some shifting of grant funds among the states when estimates were used. For example, recalculating allocations of Social Services Block Grant funds using estimates of population for 2000, rather than the census count, would result in shifting \$4.2 million—or 0.25 percent—of \$1.7 billion in fiscal year 2004 funds. Specifically, 27 states and the District of Columbia would have gained \$4.2 million and 23 states would have lost a total of \$4.2 million.

Mr. Chairman, Mr. Turner, and Members of the Subcommittee:

Thank you for the opportunity to be here today to discuss the role that the nation's population count plays in the allocation of federal funds to states and localities. My remarks today describe (1) the various measures of population used to allocate federal grant funds (2) how the accuracy of the census count and measurement of accuracy have evolved, and (3) the potential impact that differences in the census count and population estimates can have on the allocation of grant funds.

As you know, the decennial census is a critical national effort mandated by the Constitution. Census data are used to apportion congressional seats, redraw congressional districts, and allocate billions of dollars in federal assistance to state and local governments. The census count also serves as a foundation for annual estimates of the nation's population. Along with the decennial census count, these annual estimates directly and indirectly affect the distribution of federal assistance to state and local governments. The U.S. Census Bureau (Bureau) puts forth tremendous effort to conduct an accurate count of the nation's population. However, some degree of error in the form of persons missed or counted more than once is inevitable. Further, because of limitations in methods for annually estimating the population during the years between censuses, the difference between an annual estimate of the population on census day and the census count itself can emerge. Because many federal grant programs rely directly or indirectly on population measures, inaccuracies in census counts and methodological problems with population estimates can affect the allocation of funds.

My remarks are based primarily on reports we have previously issued. To describe the various measures of population used to allocate federal grant funds, we examined the logistics and data from postcensal population estimates, the American Community Survey (ACS) and the Current Population Survey. To obtain insight on how the accuracy of the population count and the measurement of accuracy have evolved, we reviewed information from the Census Bureau's Decennial Statistical Studies Division, as well as previous GAO reports.¹ To describe the

¹GAO, *Federal Assistance: Illustrative Simulations of Using Statistical Population Estimates for Reallocating Certain Federal Funding*, [GAO-06-567](#) (Washington, D.C.: June 22, 2006); GAO, *2000 Census: Coverage Measurement Programs' Results, Costs, and Lessons Learned*, [GAO-03-287](#) (Washington, D.C.: January 29, 2003) and GAO, *Formula Grants: Effects of Adjusted Population Counts on Federal Funding to States*, [GAO/HEHS-99-69](#) (Washington, D.C.: Feb. 26, 1999).

potential impact that differences in population estimates can have on the allocation of grant funds, we relied on work we reported to this subcommittee last year, as well as prior work.² We conducted our work in accordance with generally accepted government auditing standards.

Population Measures Are Used in Grant Formulas

Decennial census data play a key role in the allocation of many grant programs. In fiscal year 2004, the federal government administered 1,172 grant programs, with \$460.2 billion in combined obligations.³ Most of these obligations were concentrated in a small number of grants. For example, Medicaid was the largest formula grant program, with federal obligations of \$183.2 billion, or nearly 40 percent of all grant obligations, in fiscal year 2004. Many of the formulas used to allocate grant funds rely upon measures of population, often in combination with other factors. In addition to the census count, the Bureau has programs that estimate more current data on population and population characteristics that are derived from the decennial census of population. Grant formula allocations also use the estimated data from the Bureau's postcensal population estimates, the Current Population Survey, and the American Community Survey.

Because the decennial census provides population counts once every ten years, the Bureau also estimates the population for the years between censuses. These estimates are referred to as postcensal population estimates. They start with the most recently available decennial census data and for each year adjust population counts for births, deaths, and migration. Because these population estimates are more current than the decennial population counts, the distribution formulas for federal grants often use these data. For example, the allocation formula for the Social Services Block Grants uses the most recent postcensal population estimates to distribute funds.

While the decennial census and postcensal estimates provide annual data, the Current Population Survey provides monthly data. This survey's sampling design relies on information developed for the decennial census

²GAO-06-567; GAO, *Formula Grants: 2000 Redistributes Federal Funding Among States*, GAO-03-178 (Washington, D.C.: February 24, 2003) and GAO, *Formula Programs: Adjusted Census Data Would Redistribute Small Percentage of Funds to States*, GAO/GGD-92-12 (Washington, D.C.: November 7, 1991).

³In fiscal year 2000, we found that 85 percent of federal government obligations in grants to state and local governments was distributed on the basis of formulas that are based on data such as state population and personal income.

and its data are revised annually to be consistent with the postcensal estimates. The survey is primarily designed to generate detailed information about the American labor force, such as the number of people unemployed. Data from this survey are also used to allocate funds for programs, for instance programs under the Workforce Investment Act.

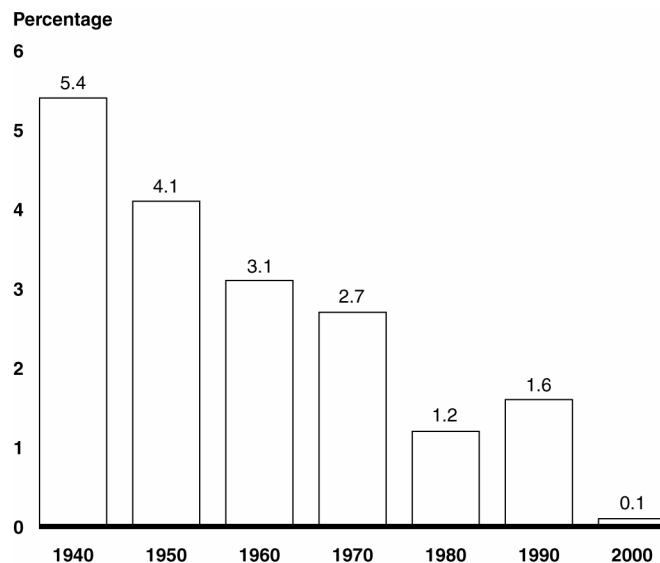
Another survey, the American Community Survey (ACS), provides detailed socioeconomic characteristics for the nation's communities. The ACS relies on information developed for the decennial census and its annual data are controlled to be identical to postcensal population estimates. Currently, the ACS provides information on communities with populations over 65,000. Data from the ACS are also used to allocate federal funds, such as determining fair market rent levels used in the Section 8 housing voucher program. Because the ACS is to replace 2010 census long form socioeconomic data, it is expected that ACS data will be used more extensively in other federal assistance programs in the future. Beginning in 2010, 5-year estimates will be available for areas to the smallest block groups, census tracts, small towns, and rural areas. Beyond their use by the federal government, the population counts and estimates are also used extensively by state and local governments, businesses, nonprofits, and research institutions.

Population-based data drawn from the decennial census, postcensal population estimates, and the ACS play critical roles in the conduct of community development programs undertaken by the federal, state, and local governments. Such data are central to the conduct of the federal government's Community Development Block Grant program (CDBG), the federal government's 13th largest formula grant program with \$3 billion in obligations in fiscal year 2004. Since 1974, this program has provided \$120 billion to help communities address a host of urban problems ranging from poverty and deteriorating housing to population loss and social isolation. Given the breadth of the program's objectives and the diversity of the nation's communities, CDBG employs four formulas to allocate funds among 50 states, the District of Columbia, and 1,080 local governments. These formulas depend on census data, including total population, individuals in poverty, lagging population growth, households in overcrowded homes, as well as the number of pre-1940 homes.

Accuracy of Population Count Is Important

An accurate census relies on finding and counting people—only once—in the right place and getting complete, correct information on them. Seeking to obtain an accurate count has been a concern since the first census in 1790. Concern about undercounting the population continued through the decades. In the 1940s, demographers began to obtain a more thorough understanding of the scope and nature of the undercount. For example, the selective service registration of October 1940 showed 2.8 percent more men than the census count. According to the Bureau, operations and programs designed to improve coverage have resulted in the total undercount declining in all but one decade since the 1940s. These measures of coverage are based on demographic analysis, which compares the census count to birth and death certificates and other administrative data (see fig. 1).

Figure 1: Decennial Census Population Net Undercount Rates from Demographic Analysis in Percentages: 1940 to 2000



Source: U.S. Census Bureau – 2006 Census Test – Evaluation #2: Coverage Improvement, Decennial Statistical Studies Division, Sept. 24, 2007.

Modern coverage measurement began with the 1980 Census, when the Bureau compared decennial figures to the results of an independent sample survey of the population. In using statistical methods such as these, the Bureau began to generate detailed measures of the differences among undercounts of particular ethnic, racial and other groups. In 1990, the Bureau relied on a Post-Enumeration Survey to verify the data it

collected through the 1990 Census. For this effort, the Bureau interviewed a sample of households several months after the 1990 Census, and compared the results to census questionnaires to determine if each sampled person was correctly counted, missed, or double counted in the Census. The Bureau estimated that the net undercount, which it defined as those missed minus those double counted, came to about 4 million people.⁴ To estimate the accuracy of the 2000 Census, the Bureau conducted the Accuracy and Coverage Evaluation (A.C.E.), which was an independent sample survey designed to estimate the number of people that were over- and undercounted in the census, a problem the Bureau refers to as coverage error. This evaluation found that in the 2000 Census there was a net overcount. For 2010 the Bureau plans a census coverage measurement program that will, among other things, produce estimates of components of census net and gross coverage error (the latter includes misses and erroneous enumerations) in order to assess accuracy.

Population Estimates May Affect Allocation of Federal Funds

The accuracy of state and local population estimates may have an effect, though modest, on the allocation of grant funds among the states. In our June 2006 report, we analyzed how sensitive two federal formula grants are to alternative population estimates, such as those derived by statistical methods.⁵ In the June 2006 report, we recalculated certain federal assistance to the states using the A.C.E. population estimates from the 2000 Census, as well as the population estimates derived from the Post-Enumeration Survey, which was administered to evaluate the accuracy of the 1990 Census. This simulation was done for illustrative purposes only—to demonstrate the sensitivity of government programs to alternative population estimates. While only the actual census numbers should be used for official purposes, our simulation shows the extent to which alternative population counts would affect the distribution of selected federal grant funds and can help inform congressional decision making on the design of future censuses.

We selected the Social Services Block Grant (SSBG) as part of this simulation because the formula for this block grant program, which is based solely on population, and the resulting funding allocations are particularly sensitive to alternative population estimates. At a given level of appropriation, any changes in the state's population relative to other

⁴[GAO/HEHS-99-69](#).

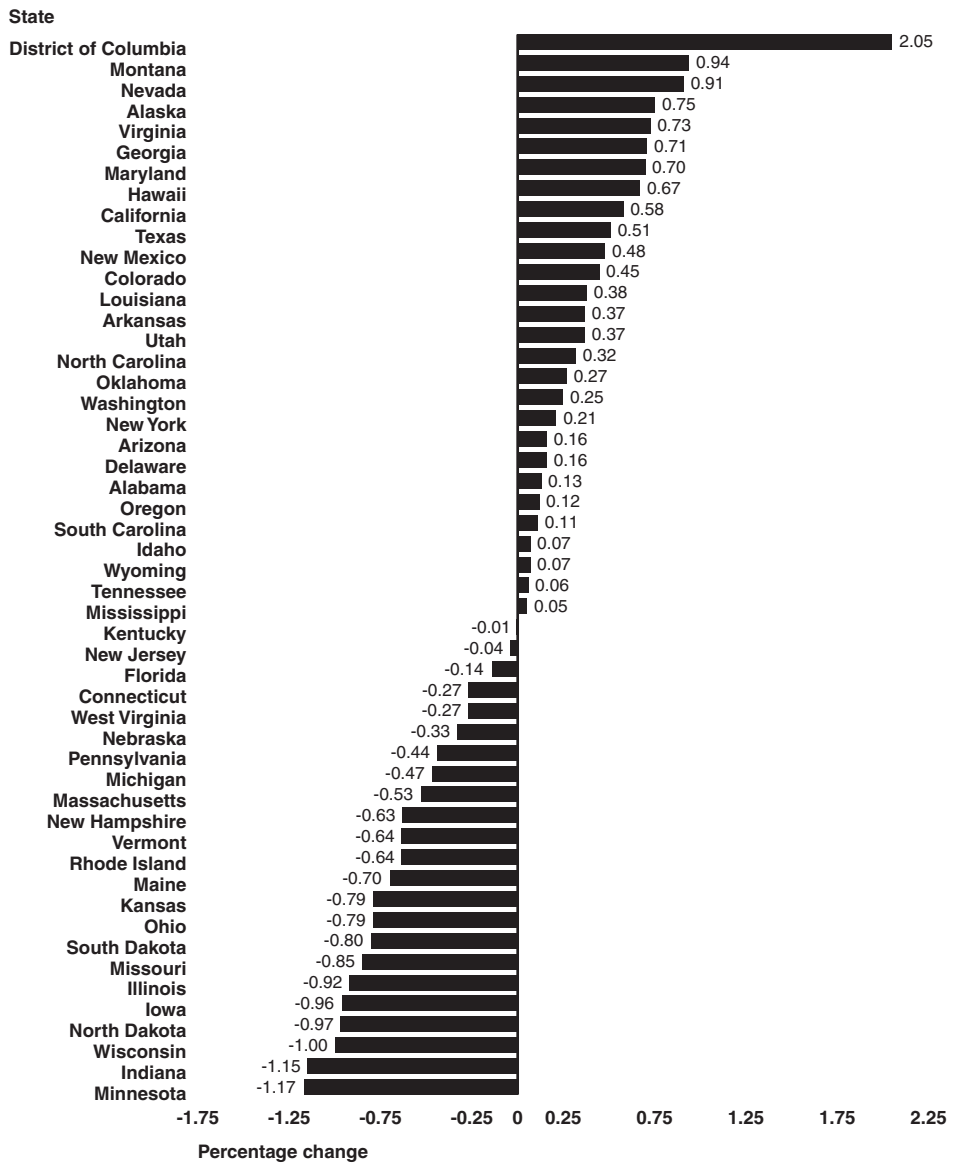
⁵[GAO-06-567](#).

states' changes would have a proportional impact on the allocation of funds to the state. In fiscal year 2004, the federal government allocated \$1.7 billion to states in block grant funds under the program. Recalculating these allocations using statistical population estimates from the 2000 A.C.E., only \$4.2 million—or 0.25 percent—of \$1.7 billion in block grant funds would have shifted. The total \$1.7 billion SSBG allocation would not have changed because SSBG receives a fixed annual appropriation. In other words, those states receiving additional funds would have reduced the funds of other states.

In short, 27 states and the District of Columbia would have gained \$4.2 million and 23 states would have lost a total of \$4.2 million. Based on our simulation of the funding formula for this block grant program, the largest percentage changes were for Washington, D.C., which would have gained 2.05 percent (or \$67,000) in grant funding and Minnesota which would have lost 1.17 percent (or \$344,000). For the programs we examined, less than half of a percent of total funding would be redistributed by using the revised population counts. Figure 2 shows how much (as a percentage) and where SSBG funding in 2004 would have shifted as a result of using statistical population estimates for recalculating formula grant funding by state. We previously reported that using 1990 adjusted data as the basis for allocations had little relative effect on the distribution of annual funding to states.⁶ More recently, we reported that statistical population estimates from the 2000 Census would have shifted a smaller percentage of funding compared to those from the 1990 Census because the difference between the actual and estimated population counts was smaller in 2000. For example, using statistical estimates of the population following the 1990 Census, a total of 0.37 percent of SSBG funds would have shifted among the states in fiscal year 1998.

⁶GAO, *Formula Programs: Adjusted Census Data Would Redistribute Small Percentage of Funds to States*, [GAO/GGD-92-12](#) (Washington, D.C.: Nov. 7, 1991).

Figure 2: Estimated Social Services Block Grant Percentage Change in Grant Funding Using Statistical Population Estimates for States



Source: GAO analysis of data from the Department of Commerce and the Department of Health and Human Services.

In addition to any impact that inaccuracies in the census count may have on allocation of federal funds, between decennials differences between the actual population and population estimates could affect fund

allocation. To calculate grant amounts, formula grants generally rely on annual population estimates for each state developed by the Bureau. State populations are estimated by adding to the prior year's population estimate the number of births and immigrants and subtracting the number of deaths and emigrants. These estimates are subject to error, mainly because migration between states and between the United States and other countries is difficult to measure. By the end of the decade, when the census count is taken, a significant gap may have arisen between the population estimate and the census count. We found that by the time of the 2000 census count, the annual estimates of population differed from the 2000 count by about 2.5 percent. This "error of closure" was substantially larger than that for the 1990 census—0.6 percent. We found that correcting population estimates to reflect the 2000 census count redistributes among states about \$380 million in federal grant funding for Medicaid, Foster Care, Adoption Assistance, and SSBG. Most of the shift in funding occurred in fiscal year 2003 when federal matching rates for three of the programs were based on population estimates derived from the 2000 census. For the SSBG program, the shift occurred in 2002 when it began using the 2000 census count.

Complete and accurate data from the decennial census are central to our democratic system of government. These same data serve as a foundation for the allocation of billions of dollars in federal funds to states and local governments. Because of the importance of the once-a-decade count, it is essential to ensure that it is accurate. Though the overall undercount has generally declined since it has been measured, evaluating the accuracy of the census continues to be essential given the importance of the data, the need to know the nature of any errors, and the cost of the census overall. We continue to monitor the Bureau's progress in this important effort.

Mr. Chairman, this concludes my remarks. I will be glad to answer any questions that you, Mr. Turner, or other subcommittee members may have.

Contacts and Acknowledgments

For further information regarding this statement, please contact Mathew Scire, Director, Strategic Issues, on (202) 512-6806 or at sciremj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. Individuals making key contributions to this statement included Steven Lozano, Assistant Director; Betty Clark; Robert Dinkelmeyer; Greg Dybalski; Ron Fecso; Sonya Phillips; Michael Springer; and Cheri Truett.

Related GAO Products

Federal Assistance: Illustrative Simulations of Using Statistical Population Estimates for Reallocating Certain Federal Funding. [GAO-06-567](#). Washington, D.C.: June 22, 2006.

Data Quality: Improvements to Count Correction Efforts Could Produce More Accurate Census Data. [GAO-05-463](#). Washington, D.C.: June 20, 2005.

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2010 Census: Cost and Design Issues Need to Be Addressed Soon. [GAO-04-37](#). Washington, D.C.: January 15, 2004.

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Formula Grants: Effects of Adjusted Population Counts on Federal Funding to States. [GAO/HEHS-99-69](#). Washington, D.C.: February 26, 1999.

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