University of Virginia
Weldon Cooper Center for Public Service
Demographics Research Group

MEMORANDUM

To: The Honorable Ralph Northam
Governor of the Commonwealth of Virginia

From: Meredith Strohm Gunter, Director, Strategy and Public Engagement
Weldon Cooper Center for Public Service, University of Virginia

Date: January 23, 2020

Re: 2020 Census Data Distortion

While the importance of the 2020 Census is fully recognized, most census data users have not yet heard about "differential privacy," a new mathematical procedure devised by the Census Bureau that will be applied to the 2020 Census data before it is released to enhance data privacy protection. Our analysis indicates that data accuracy at the sub-state (region, county, city, town) level will be sacrificed as a result of this new approach to data release. This inaccuracy may lead to misallocation of funds, poor capacity for planning, substandard service provision, and a competitive disadvantage in economic and workforce development.

For example, working with data provided by the Bureau to demonstrate the effects of their new procedure, we found the total number of girls ages 15-19 in the City of Emporia were decreased from the actual 185 to only 30. Applying this number to the teen pregnancy rate for Emporia increased the rate from 10 percent to 66 percent. This is not only ludicrous, but, if consistent across localities and subject areas, deeply damaging to the ability of state and local governments and non-profits to accurately address the needs of Virginians.

According to the Census Bureau's current plan for the 2020 Census, an accurate headcount will only be available at the state level (in order to serve the fundamental purpose of congressional re-apportionment). The headcounts for counties, cities, and towns, as well as population characteristics, such as age, gender, race/ethnicity will be injected with data noise so that no individual information can be reconstructed.

As a result, none of the sub-state numbers would be actual counts, but rather a noise-injected proxy. The demonstration data (using the 2010 Census) provided a preview of the consequential changes. Shifts are almost always from large groups to small groups, and this pattern is not random. Since the state total must be held constant, population among localities is a zero-sum game, and the algorithms being tested shift population from urban to rural areas, and from large race groups to small race groups. A rural, declining, old, predominant white community, for example, may appear instead growing, younger, and more diverse. Distortion in age groups is the reason for the Emporia distortion mentioned above.

The data distortion has multiple concerning effects:

1. Redistricting data will be inaccurate, both in terms of the actual size of the voting age population in each census block and their racial characteristics. Majority-minority districts could lose their status due to noise injection, and the reverse could also come to pass.

2. Funding equity across localities will be severely impaired. While federal dollars to each state will be equitable because the state population will reflect the actual census count, money going to each community and program will not, as their population totals will be distorted. The targeted population of each funding program could artificially become smaller or larger, undermining program effectiveness and resources.

3. Many federal, state, and local statistics will produce inconsistent, unreasonable results, as they rely on the census count as a benchmark. Health, education, and criminal justice, for example, heavily rely on age-, gender-, race-specific census data to derive statistically sound rates that may be compared over time. The noise injection will make such rates incomprehensible and comparisons across geography and time meaningless.

4. Government services will be significantly impacted. Housing, transportation, emergency management, to name just a few, need accurate census data for planning, budgeting, and program delivery.

Data user communities across the country have voiced grave concerns about the Census Bureau's differential privacy procedure. It is detrimental to data accuracy, and to the status of the census data as the gold standard. The planned data distortion will last for the entire decade and carries implications that will be felt far and wide.

As a thought leader in the country, your steadfast support for a complete count of Virginia residents in the census has been inspiring. Full participation by Virginians will deliver high quality data to the Census Bureau. Now we need to make certain that data is reported out accurately.

We would be happy to assist an effort by your administration to bring greater awareness of this issue to governors and other state and local leaders through the National Governors' Association, the National League of Cities, and the National Association of Counties. We could also work with your administration to urge state and local leaders across Virginia to evaluate the proposed plans by the Bureau and to express their opinions through the email address and process identified on the enclosed.

Thank you for your leadership for our Commonwealth, and your attention to this issue.

Resources relevant to the Census Bureau's proposed differential privacy initiative

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RESOURCES

AP story: https://federalnewsnetwork.com/big-data/2019/12/researchers-warn-census-about-accuracy-concerns-with-method-2/

Census Bureau comment page: https://www.census.gov/programs-surveys/decennial-census/2020-census/planning-management/2020-census-data-products/2010-demonstration-data-products.html

Census Bureau email address for comments:
dcmd.2010.demonstration.data.products@census.gov