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UCT demographers highlight serious concerns with 2022 South African census data

Professor Tom Moultrie and Emeritus Professor Rob Dorrington, demographers from the University of Cape Town's (UCT) <u>Centre for Actuarial Research</u> (CARe), have identified significant issues with the 2022 South African census. Their expertise, particularly in analysing post-apartheid South African census data, lends weight to their conclusion that the results of this census, with the highest undercount ever measured and <u>reported by the United Nations Population Division</u>, may not be fit for purpose.

Despite adjustments made for the undercount, the census results, released in October 2023, present numerous anomalies, making them more estimations than exact counts. These anomalies challenge not only the accuracy of the census data but also their utility for critical functions such as resource allocation, investment planning, and public policy decision-making, potentially leading to the misallocation of resources and ineffective policies.

Key findings and implications

Moultrie and Dorrington have described several operational and logistical challenges in their technical report, published by the <u>South African Medical Research Council</u>. These challenges include the impact of COVID-19 and the delays in completing the census fieldwork, significantly impacting the accuracy of the census data.

"We conclude that these difficulties render the census data collected unfit for purpose. We recommend that the results be used with extreme caution in planning and resource allocation until thorough investigations are made possible by Statistics South Africa," said Moultrie.

Identified weaknesses

<u>Rigorous statistical procedures</u> exist to produce final population estimates, correcting the undercount using a Post-Enumeration Survey (PES). This is a small-scale survey conducted soon after the census date that seeks to identify who was and was not counted in the census.

Based on the PES conducted in the second half of 2022, Statistics South Africa estimated that the <u>census undercounted the population by 31%</u>. The extent of the undercount was revealed when the census results were released on 10 October 2023. However, Statistics South Africa did not highlight the undercount, nor did it command widespread popular or public attention.

Among their findings are that:

- The national population, after adjusting for the undercount, may be overestimated by about one million people, or nearly 2%.
- Significant overestimates exist in the Indian/Asian and white population groups, with undercounts exceeding 60%.
- A marked undercount of children aged five remains, even after adjustments.
- Inconsistencies are found in national and provincial population estimates by age, sex, and population group.
- Discrepancies exist in population estimates at district and municipal levels compared to other data sources, including mid-year population estimates and voter rolls from local government elections.
- Anomalies in adjustments for the undercount imply a false sense of certainty in the final population estimates.

Operational challenges

Several factors contributed to the unprecedented undercount:

- Conducting the census during the COVID-19 pandemic complicated planning and operations.
- Delays in recruiting and training field staff, initially aimed at online data collection, necessitated a large-scale fieldwork operation at short notice.
- Extended data collection periods, particularly in the Western Cape, where enumeration concluded nearly four months after the census date.
- Problems with the Post-Enumeration Survey, including delays, insufficient scope, and statistical anomalies, compromised the accuracy of adjustments for the undercount.

"Taken together, these findings call into question the reliability of the 2022 South African census data as a source for planning and resource allocation, particularly the Equitable Share Formulae. These are used by the national treasury to determine the apportionment of budgets to provinces, districts, and municipalities," Moultrie added.

Recommendations

The technical report urges extreme caution when using the 2022 census data until Statistics South Africa can conduct thorough investigations. "Pending those investigations, Statistics South Africa is also strongly advised not to base its annual series of projected mid-year population estimates on the results of the 2022 census.

"Given the improbability of another census before 2031, there is an urgent need for an alternative set of population estimates by age, sex, and population group. These alternative estimates are crucial for more accurately describing the South African population and forming a reliable basis for resource allocation and planning," Moultrie concluded.

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