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Ending the national census would make us blind to our society

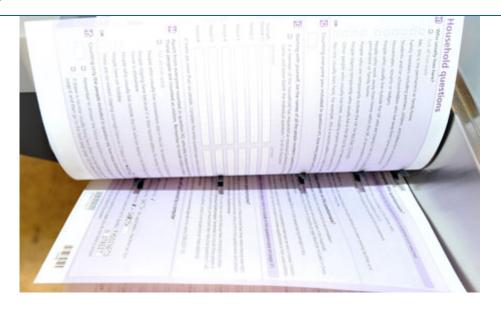
Without a statistical survey of 100% of the population, a huge number of important studies will not be reliably updated



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'The most important task of the decennial census is in updating annual population estimates for small areas to remove systematic bias so that a huge number of studies and also funding calculations can be enacted.' Photograph: Martin Rickett/PA

The 2011 census revealed a treasure trove of facts we did not know about Britain. An informed commentator might have assumed that, in England and Wales, the Office for National Statistics (ONS) had been overestimating the population because historically it has been better at counting immigrants than emigrants. The 2011 census told us that the opposite had in fact occurred. The ONS had been underestimating the population and there were far more people living in the UK than it thought, at least for a large part of the year.

Because it was a census, not a survey, and because the 2011 count was so carefully taken and checked – with a massive follow-up capture-recapture survey – we could be sure of its results. Neither a sample survey nor administrative records would have been as reliable. However on 1 September, the Financial Times reported that the new consultation from the ONS on the future of the census will only consider these possibilities. Over 200 years of counting is to come to an end in 2021.

The 2011 census showed us that the population of the UK was rising, still slowly, but faster than the ONS had thought, and faster than almost anywhere else in Europe. Without knowing that fact we could not speculate in a sensible way as to why that might be happening. The census reveals that in the global economic crisis more people were arriving than were leaving the UK. The 1931 census allowed us to see that this happened last in a recession two years after the 1929 economic crash.

In contrast, both the 1991 and 2001 censuses had been useful for telling us that there were fewer people than we thought in the UK during the 1980s and the 1990s. Complete surveys, in other words a census, targeting 100% of the population, have to be undertaken if statistics are to be produced which are reliable enough to correct for bias in annual population estimates. Census data is used to make adjustments to thousands of statistical time series, especially those concerning small geographical areas.

Mortality rates for the 1980s and 1990s in many areas turned out to be higher than had been thought to be the case, following the 1991 and 2001 census enumerations, given how they allowed administrative records to be corrected. Recent evidence has revealed that mortality rates rose for men in parts of Glasgow, but not in other poorer parts of the country. This key work could only be undertaken due to the accuracy of the censuses.

Mortality rates rising for particular groups living in particular villages, towns and cities inform directors of public health, government, and the people that something about their society is going wrong, very wrong. The last time mortality rates rose for any groups in Britain, outside wartime, was during the 1930s depression (Davey Smith and Marmot, 1991). We only know this because good and complete censuses were held in 1921 and 1931, an emergency population register was taken in 1939, and censuses were held again from 1951 all the way through to 2011. These allow us to work out how death rates by group are changing, how they are falling and – very rarely – if mortality rates are rising.

It is only because the census is our most accurate count of the population that we can tell, using it, whether mortality rates, university admission rates, employment rates or almost any other rates are rising or falling for particular groups in particular parts of the country over time. In calculating rates the numerators tend to be more reliably measured: deaths registered, students enrolled, or paying jobs in these three cases. Errors tend to be greater in the denominators, the population estimates. The census counts, corrected for estimates of under-enumeration, are the best denominators we have. An ID card system that relied on people being compelled to register their place of residence would be more accurate, but also far more intrusive.

The most important task of the decennial census is in updating annual population estimates for small areas to remove systematic bias so that a huge number of studies and also funding calculations can be enacted. However, the census is of much greater use than that. The census does not just count people, but how they are related, their families and the households they live in. The census also counts cars and tells us how many people use cycles and how many go by train to get to work. It tells us how many families with children have no car. DVLA cannot do that. It is also as much a count of dwellings, of

"flats and houses", commuting vehicles, caravans and beds in halls of residents – as it is an enumeration of people. The 1991 census told us that a borough's worth of housing had been added to London which was not included in the government's records.

Above all else the census tells us how all these objects and people are connected. It even tells us that there are more bedrooms in a city like London than there are people to sleep in them (and therefore that all could be well housed). It tells us about how well we share and when we fail to distribute.

Because the censuses go so far back in time they allow us to look back to the last time Britain became rapidly more unequal – say in house rooms in dwellings that are shared between people – which was in the period up to the census of 1921. Analysis of census data by Professor Rebecca Tunstall of the University of York has shown how in England and Wales housing allocation became more unequal between 1911 and 1921, but then progressively more equal through to 1981, after which inequalities in housing provision rose.

Without the next census huge numbers of studies on housing and health, studies on education and university access, studies on whether we are getting greener and cycling more, studies on how many people in each place are not registered to vote, studies on how many children care for a parent who is disabled, studies on whether we are becoming more or less ethnically segregated, and much more, will not be updated in future.

New studies on issues that are rising to the fore will not be undertaken. We will not be able to tell whether we are pulling together or dividing further as a society. We will not be able to plan for the future. We will not know what it is that we are not all in together.

A longer version of this article can be found at: Dorling, D. (2013) The 2011 Census: What surprises are emerging and how they show that cancellation is stupid, Radical Statistics