

11 Beyond 2011

Background

- 11.1 ONS has periodically reviewed its methods for collecting population data and the effectiveness of potential alternatives. It did so particularly in the wake of the 1991 and 2001 Censuses as part of its planning for the next census. These reviews have been well documented⁶⁵.
- 11.2 The post-2001 review for example, carried out in 2003 in the light of criticisms from some local authority users about the accuracy of the previous census's population count in a number of areas, considered a number of alternative ways of collecting the information that were being adopted internationally. In particular, it examined the use of administrative data sources that, in a number of Scandinavian and other northern continental countries, are now being linked together with population registers. Attention was given to the consideration of a rolling census approach (that has since been introduced in France), and the adoption of an annual population survey (as now used in the USA). The potential for linking existing administrative records in the UK for the purpose of the census was also examined.
- 11.3 In planning for the 2011 Census, the key message to come out of that review was that the traditional census was still regarded by the majority of users as the most authoritative source of information for a wide range of uses, providing consistent and comparable information for small areas and sub-populations, and allowing multivariate analyses that were not practicable using any other source. The review also noted that using administrative data would not be feasible until a reliable population register was established, and then only after considerable public debate and changes to legislation.
- 11.4 The ONS post-2011⁶⁶ review needed to address the requirements of users for more frequent population data, and concerns in the media and the public about perceptions of greater intrusiveness and the increasing cost to taxpayers. This review also re-assessed the alternative ways of collecting census-type information that had been examined in 2003 to see if any were now viable. Together with NRS and NISRA, ONS set up a Beyond 2011 programme to examine these issues, and test new models for gathering population and socio-demographic statistics. Improvements in technology and in government data sources offered the opportunity either to modernise the census or to develop an alternative approach based on re-using the administrative data that the public has already provided to government.

Review and user consultation

- 11.5 ONS initially planned two phases for this latest review. First a four-year 'proof of concept' phase, to test the feasibility of alternative approaches to producing statistics that would meet the existing and new needs of government, European policy makers and the wider user community. This phase of the review covered:
- the identification and prioritisation of all options
 - a review of international practices
 - the identification of alternative data sources, including surveys, that could be used to meet the statistical requirements not only for the census but also wider topics
 - the development of survey approaches to meet such needs

- the testing and evaluation of: (a) models based on low level aggregate administrative data; and (b) administrative data models based on linking data at person level
 - the evaluation of alternative census models such as a long-form/short-form census (as used in the USA) and the rolling census (as used in France); and
 - a review of the need for a traditional 2021 Census to provide a benchmark for the other options
- 11.6 The second phase of the Beyond 2011 programme would then follow, a longer-term project to implement the agreed option
- 11.7 The effective stakeholder engagement and consultation exercise enabled the programme to:
- develop a clear understanding of users requirements and priorities
 - understand the relative importance of accuracy, frequency and geography, as well as the overall value of population and small area socio-demographic statistics, and
 - take account of any special concerns
- 11.8 Stakeholder engagement and communication plans were designed to ensure that users, stakeholders and all those with an interest in the programme clearly understood the work being done, its research findings, evaluation results, decision making processes and procedures. All the options considered were carefully researched and tested, and then assessed transparently using an agreed set of criteria to ensure that they could meet users requirements, provide population and socio-demographic statistics of the required quality, and were acceptable to the public.

First consultation

- 11.9 Consultation with users was a key component of the Beyond 2011 programme, helping to inform the assessment and evaluation of options as well as the final recommendation. The initial public consultation, between October 2011 and January 2012, included a series of workshops and an online questionnaire seeking information from users about their information requirements and priorities, and their views on the relative importance of accuracy, frequency and geography in the production of population and socio-demographic statistics.
- 11.10 All sectors of users were represented in the responses to the consultation; most were from local authorities (44 per cent), from genealogists and family historians. Although aware of the particular genealogical interest in the census, the consultation was primarily designed to capture the views of 'statistical' users, and focused on two broad areas:
- the current and future requirements for population and socio-demographic statistics on different topics, and
 - the trade-off between accuracy, geography and the frequency at which the statistics are produced

11.11 A short list of six options was then reviewed (four different approaches with variants):

1. *Full census*: to be carried out decennially as at present, but modernising the methodological approach by, for example, putting more emphasis on data collection via the internet (similar to the approach in Canada)
2. *Rolling census*: an annual enumeration of up to 10 per cent of the population, carried out in different areas each time so that, over 10 years, the whole country is covered (similar to the approach in France)
3. *Short-form census with annual sample (4 per cent) national survey*; in which a short form is delivered to every household every 10 years, supplemented by an annual survey using a long-form to collect the full range of census characteristics (similar to the approach in the USA)
4. *Annual data linkage with decennial sample (10 per cent) national survey*; where administrative data is linked to produce population estimates, supplemented by a decennial large-sample long-form survey to derive the necessary population characteristics
5. *Annual data linkage with annual sample (4 per cent) national survey*; similar to the previous option but with a smaller, annual, survey, which could produce more frequent statistics
6. *Annual data linkage with decennial sample (40 per cent) national survey*; similar to the fourth option above but with a much larger sample survey that would allow small area statistics to be produced

11.12 Of the options reviewed, two clear front runners emerged at that time: the full online census and the administrative data linkage with 4 per cent annual survey. There were clear pros and cons to these two approaches in terms of quality, frequency and the nature of outputs, and they carried with them different risks. An online census would produce the wealth of small area data and detailed cross-tabulations that have traditionally come from the census, but only every 10 years. On the other hand, an administrative data solution would deliver statistics much more frequently (annually for many key topics). This had the potential to be more responsive to user needs, but would not provide the level of detail provided by the traditional census option for the smallest areas or smallest population groups.

Second consultation

11.13 The second public consultation ran from 23 September to 13 December 2013. This presented the pros and cons of the two options in a detailed consultation document, and invited views via an online questionnaire on which approach would best fit user needs. The results would enable the National Statistician to make a recommendation for the collection of future population statistics.

11.14 The three-month public consultation resulted in more than 700 responses from government, local authorities, public bodies, commercial organisations, charities, academics and genealogists. Two thirds were from individual citizens and users, while a third were from organisations representing users. The report of the public consultation was published in March 2014⁶⁷; its key messages were that:

- Population statistics were highly valued by a range of national and local users across England and Wales
- There was continuing demand from government, local authorities, public bodies, business, the voluntary sector and individual citizens for the detailed information about small areas and small populations offered by the decennial census, whether online or paper-based; such statistics were

regarded as essential to local decision making, policy making and diversity monitoring in fulfilment of legally binding public duties

- Most users recognised the value of making greater use of administrative data to produce more frequent population statistics. There was a strong concern that the proposed use of an annual survey of 4 per cent of households (to support the use of existing administrative data) would not meet these needs, nor deliver the required small area and small population statistics offered by the decennial census
- While the methods using administrative data and surveys showed considerable potential, and the more frequent statistics they could provide between censuses would be welcome, there was concern that these were not yet mature enough or of sufficient statistical quality to replace the decennial census
- Many respondents noted that other countries have taken decades to develop replacement systems, and some stated that it would be 'reckless' to move too fast in that direction
- Many respondents proposed a hybrid approach, making the best of both approaches, with an online census in 2021 enhanced by administrative data and household surveys
- Many individual users acknowledged that their primary interest was in the census as a historical source and urged continuation of the historic series

11.15 The consultation did not divide respondents into opposing camps, although there was a small but vocal minority of individuals who did not want to see any move away from the traditional paper-based decennial census. The great majority of respondents valued the decennial census and particularly the small area and small population data at its heart. However, they also saw the potential benefits of using administrative data to increase frequency and potential range of population statistics. Support for one approach clearly did not preclude support for the other.

Methodological review

11.16 At the same time, ONS also commissioned an independent review of the methodologies of the two options⁶⁸. Led by Chris Skinner, Professor of Statistics at the London School of Economics, the review sought, in particular to:

- assess the methodological research and evidence reported by ONS as the basis of its evaluation of the alternative options
- identify the main risks with the two front-running options, and to identify areas where further work is required to mitigate these risks, and
- enable a sound assessment of methodology issues relevant to the decision on how to proceed

The review team gave more attention to the administrative data option, because it represented a more radical change in methodology than the online census option.

11.17 The review commended ONS for the thoroughness of the Beyond 2011 Programme and commented that:

'ONS has a strong understanding of the methodological challenges and risks it faces'.

The review noted that the online census would represent a natural evolution of the traditional decennial census and would mirror lines of development in some other

countries, for example Canada where 54 per cent completed the census online in 2011. It also emphasised that the administrative data option would represent:

'the most substantial change in the production of statistics for over one and a half centuries'.

11.18 The review team read and analysed the many reports and publications produced by the ONS Beyond 2011 Programme. It also engaged with key users in order to ensure that no needs were overlooked, and that relevant experts on specific issues had been consulted.

11.19 The review team noted the success of the administrative data option in census taking in other countries but attached a higher risk to it in the UK at present. In particular it noted the problems surrounding population estimation in a country without a population register and the consequent risk of over-estimating the population. In practice this could mean that the administrative data option would not produce reliable estimates of some population counts. But in order to progress the administrative data option for the future provision of population statistics, the review proposed further research by ONS and the statistical community.

11.20 Furthermore, the review team noted that:

'...a key requirement is that there is suitable data sharing legislation between the statistical office and the authorities with control over the administrative systems so that these data will meet the statistical needs over time'.

ONS recognised that this legislation, desirable as it is for statistics and their users, requires better understanding and support from an informed general public, and appropriate safeguards to protect personal privacy. It should be noted that the review was also clear that the administrative data option would require the proposed annual survey of 4 per cent of the population to be compulsory, in order to guard against non-response distorting the statistics.

11.21 Professor Skinner and his colleagues came to the conclusion that the online census option was relatively low risk and

'...would represent a natural evolution of the traditional census, drawing on technological innovations and developments in best practice for census taking around the world'.

The review team stressed the importance of maintaining the compulsory nature of the census and following up any households where there was no online return. They had no hesitation in saying that an online census represented:

'.... a methodologically sound basis for replacing Census 2011'

but were not prepared to say the same for the administrative data option at the current stage of development in England and Wales.

National Statistician's recommendation

11.22 Following discussions with the Registrars General for Scotland and Northern Ireland, and with the Chief Statistician for Wales, the National Statistician recommended⁶⁹ on 27 March 2014 that the UK Statistics Authority should make the best use of all sources, using data from an online census in 2021 *and* administrative data and surveys. This would include:

- an online census of all households and communal establishments in England and Wales in 2021, as a modern successor to the traditional, paper-based decennial census, taking special care to support those who are unable to complete the census online, and
- increased use of administrative data and surveys in order to enhance statistics from the 2021 Census and improve statistics between censuses.

11.23 The recommendation added that this approach would provide the population statistics which the nation requires for the next decade and offer a springboard to the greater use of administrative data and annual surveys. This approach may offer a future government and Parliament the possibility of moving further away from the traditional decennial census to annual population statistics provided by the use of administrative data and annual surveys.

11.24 It was noted that further research would be required to determine the optimal blend of methods and data sources. It was made clear that the future development of the administrative data approach would depend on public consent, as expressed through Parliament, and it was recognised that data sharing legislation would be required to maximise the benefits of use of administrative data for statistical purposes.

The next stage

11.25 The National Statistician's recommendation was commended to the Government in a letter from Sir Andrew Dilnot, Chair of the UK Statistics Authority, to the Rt Hon Francis Maude MP, Minister for the Cabinet Office on 27 March 2014⁷⁰.

11.26 On 18 July 2014 the Minister for the Cabinet Office wrote to Sir Andrew Dilnot endorsing the National Statisticians recommendation for a predominantly online census in 2021 supplemented by further use of administrative and survey data. The requirement for secondary legislation under the provisions of the Census Act 1920 for such a census to take place still remains, but any decision to go forward on the basis of the recommendation must await a detailed estimate of the costs, to be prepared later in the year.