
John Pullinger CB CStat | National Statistician

Sir Bernard Silverman

By email only

2 February 2018

Dear Bernard,

MODERNISING THE CENSUS – METHODOLOGICAL ASSURANCE - CHAIR

I would like to invite you to chair a new review panel to provide me with assurance on the statistical methodology for the 2021 census. As you will be aware, a programme of work has been put in place within ONS investigating three high level deliverables:

- A predominantly online census of all households and communal establishments in England and Wales;
- Development of alternative administrative data census estimates, to be compared to the 2021 Census ; and
- User focused, improved and expanded population statistics through increased use of administrative data and surveys

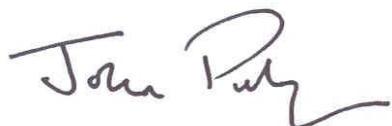
The purpose of the review panel will be to:

- Provide external, independent assurance and guidance on the statistical methodology underpinning 2021 census estimates and those based on administrative sources;
- Identify significant gaps and risks in methods and make suggestions for mitigation; and
- Review final admin data methods as part of the final recommendation in 2023 and contribute to their continuous improvement.

The panel will run until 2023. The Review panel draft terms of reference are attached at **Annex A**.

I look forward to working with you over the coming months to appoint panel members, and launch the panel formally. I am copying this letter to Sarah Henry, ONS Director of Methods, Data and Research.

Yours sincerely,



John Pullinger

Annex A Methodological Assurance Review panel– Terms of reference

1. Background

In March 2014, the National Statistician made a recommendation that the census in 2021 should be predominantly online, making increased use of administrative data and surveys to enhance the statistics from the 2021 Census. This recommendation was endorsed by the Government's formal response, which also set out its ambition that "censuses after 2021 will be conducted using other sources of data and providing more timely statistical information. However, any final decision on moving to the use only of administrative data beyond 2021 will be dependent on the dual running sufficiently validating the perceived feasibility of that approach."

Following the National Statistician's recommendation and the Government's response, ONS established a programme in January 2015 to take forward three high level deliverables:

- A predominantly online census of all households and communal establishments in England and Wales
- Development of alternative administrative data census estimates, to be compared to the 2021 Census
- User focused, improved and expanded population statistics through increased use of administrative data and surveys

This document sets out the scope for an external expert panel to undertake a review of methods and research associated with the programme's deliverables. The review will provide assurance to the National Statistician that:

- The statistics resulting from the 2021 Census will meet the code of practice for official statistics and therefore can be badged as National Statistics
- The online census is methodologically robust
- The evidence to show whether or not an Administrative Data Census approach to census-taking is valid and enables the Government to make a decision after 2021 about the future of the census

These reviews are planned to take place between 2018 and 2023. Note, previous reviews were undertaken for the 2011 Census and Beyond 2011 programme.

2. Purpose of the Review Panel

The purpose of the review panel is to:

- Provide external, independent assurance and guidance on the statistical methodology underpinning 2021 census estimates and those based on administrative sources
- Identify significant gaps and risks in methods and make suggestions for mitigation
- Review admin data methods and contribute to their continuous improvement.

The estimated time required from the review panel members is 6 days of meeting every year plus preparation time (up to 20 days a year). An induction is planned for March/April 2018.

The review will be split into workstreams, each led by a review panel member. The duration of each workstream will align to ONS activity on planning and running the census.

The Chair, Sir Bernard Silverman is appointed by the National Statistician. The Chair and other panel members should:

- Be available to attend a face to face review lasting up to 3 days every six months and have preparation time in advance to read papers, compile questions and contribute virtually in between meetings.
- Ideally be available, as outlined above, for the duration of the workstreams they will be engaged in.
- Be independent of the Office for National Statistics throughout the review.

The ONS SRO is Sarah Henry, Director of Methods. Data. Research. The panel will advise and assure the National Statistician and the Census SRO, Iain Bell.

3. Membership

No single person will have the expertise or experience required to conduct the review alone.

The panel will be led by the Chair and a core panel of experts. The panel membership could change over time in accordance with the work programme and its component workstreams.

- Each workstream will be chaired by a panel member and will include expert advisors. These could become part of the workstream working group or provide specific advice as required. The working model for each workstream will be agreed by the SRO and the Chair.
- A call for nominations, targeted at institutions, will be opened for experts from the academic, public sector and/or commercial sector to cover a wide variety of methodological expertise.
- The role of panel members and advisors is to contribute to the assurance process.
- Nominations will be made, and if needed terminated, by the Chair and the ONS SRO. The ONS SRO will have to final say.

4. Costs

All panel members will be reimbursed for their travel and subsistence expenses. Panel members will also be reimbursed for their time where they work on a freelance basis up to £500 per day.

5. Role Description

The panel member skills and expertise should complement each other to ensure coverage of all the topics within scope.

The core panel plus additional experts will need the following experience and expertise:

- Census methodology, edit and imputation, estimation and disclosure control
- Survey design in the context of population and socio-demographic estimation
- Use/analysis of administrative data
- Statistical modelling
- Record linkage
- Combining administrative and survey data/small-area multivariate estimation
- Demography and specifically population estimation
- Experience in the use of population and small area socio-demographic statistics
- Experience in Data Science techniques, including Big Data
- Experience in questionnaire design, data collection and registers

6. Review Scope

Over the full period the review should consider the methodological aspects of the end to end design for the 2021 Census from data collection to outputs as well as all steps involved in the Admin Data Census and its evaluation including impacts on the Population Statistics System.

The focus of the reviews undertaken each year will change dependent on the Programme phase. The work programme will be agreed between the Chair and the ONS SRO, with the ONS SRO having the final say.

The intention of the first review to be held in Spring/Summer 2018 is to cover the following areas and set out the focus for future reviews:

- Overview of 2021 Census focusing on areas of significant methodological change from 2011 including outcomes of the analysis from the 2017 test as well as making the best use of admin data (and how we avoid circularity when we benchmark the census to Admin Data Census)
- Progress towards an Admin Data Census
- Statistical disclosure control strategy – methods for 2021 Census

7. Not In Scope

It will be out of scope to review:

- Detailed operational issues related to the Census and Administrative Data Census
- Work undertaken within the stakeholder engagement project of CTP other than research on public acceptability

- Work undertaken on the Census programmes in Scotland and Northern Ireland but review findings will be shared with colleagues in NRS and NISRA

8. Organisation / Transparency / Confidentiality

CRAG – The review panel will be closely aligned to ONS' Census Research Advisory Group which will be the primary source of papers summarising proposed methods. In addition, ONS will be developing an Admin Data Methods work programme. A significant part of this programme will also link into CRAG and the panel.

Each review will be organised internally by the ONS Methodology Division, this will include:

- Organising an ‘induction’ briefing session for panel members to introduce the programme and provide an overview of the breadth of work the review will cover
- Setting the agenda for each review meeting
- Ensuring appropriate papers are provided by areas responsible for each item on the review agenda
- Gaining sign off of papers at Census Research Advisory Group (CRAG) in advance of each review
- Sending papers to the review panel ahead of the review
- Taking minutes of the panel discussions
- Briefing Census leadership on issues raised
- Monitoring progress on agreed actions from the recommendations made by the review panel
- All communications, by all involved, must be coordinated with ONS

The review panel will compile a report on an annual basis to reflect their findings, which will then be published. The report will include the action taken throughout the year to improve the census methodology.