**5th Meeting of the Methodological Assurance Review Panel**

**Agenda & Minutes**

**23 & 24 March 2020,** **Teleconference**

**Office for National Statistics Methodological Assurance Review Panel Meeting**

**Agenda**

**23 & 24 March 2020**

**Teleconference**

**Chair: Sir Bernard Silverman**

**Day 1**

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| **Time** | **Item** | **Presenter** |
| 1  13:00 – 13:30  (30 minutes) | Introductions & actions review | Rachel Skentelbery |
| 2  13:30 – 14:30  (60 minutes) | Census rehearsal update | Jon Wroth-Smith |
| 3  14:30 – 15:45  (75 minutes) | Hard to reach and under enumeration strategy (EAP131) | Jon Wroth-Smith |
| 4  15:45 – 17:00  (75 minutes) | Operational process | Jason Zawadzki |

**Day 2**

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| **Time** | **Item** | **Presenter** |
| 13:00 – 13:10  (10 minutes) | Day 2 Introductions | Rachel Skentelbery |
| 5  13:10 – 14:35  (85 minutes) | Estimating population size without a census  (EAP129 & EAP130) | Rosalind Archer |
| 6  14:35 – 16:00  (85 minutes) | CCS 2021 sample allocation strategy (EAP127) | Danielle Burke |

**Attendee List**

**External** **Panel** **Members**Sir Bernard Silverman (Chair)  
Prof Natalie Shlomo (External Panel Member)Prof David Martin (External Panel Member)  
Dr Nik Lomax (External Panel Member)  
Dr Oliver Duke-Williams (External Panel Member)

**Office for National Statistics**Rachel Skentelbery (Vice-Chair, Chief Methodologist)  
Sir Ian Diamond (ONS Panel Member, National Statistician, Present for Item 4 only)  
Cal Ghee (ONS Panel Member)  
Owen Abbott (ONS Panel Member)   
Sarah Henry (ONS Panel Member)  
Jon Wroth-Smith (ONS Panel Member)   
Jason Zawadzki (Presenter)  
Rosalind Archer (Presenter)  
Robert North (Presenter)  
Aidan Metcalfe (Presenter)  
Danielle Burke (Presenter)  
Viktor Račinskij (Presenter)  
Christopher Lydiat (Secretariat)  
Gareth Powell (Secretariat)

**Actions**

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| **Agenda item[[1]](#footnote-1)** | **Action** | **Owner** |
| [5,1] | A61 – Future papers should use appropriate references | Christopher Lydiat |
| [5,5] | A62 – ONS to present a future iteration of the population size estimation using administrative data project | Rosalind Archer |
| [5,6] | A63 – Run more simulations to further verify results of the CCS sample allocation research. | Danielle Burke |

**Minutes**

1. Introductions & actions review

1.1 – The disruption caused by the COVID-19 pandemic was discussed, with the panel agreeing to shorter, more frequent meetings. It was also agreed to take future actions and items by correspondence where appropriate.

1.2 – A14: The panel reiterated the requirement to show scientific merit of future proposals. A61 – The secretariat should ensure future papers use appropriate references.

1.3 – It was noted that meetings should reflect that the panel puts forward consensus views, rather than those of individual members, and that this should be reflected within the minutes.

1.4 – EAP126 demographic analysis was reviewed by the panel via correspondence with the intention of returning at a later stage. The panel highlighted development of evidence for possible options and focus on the most relevant options as steers for future development.

1.5 – EAP128 Informative sampling in coverage estimation of Census 2021 also was reviewed by the panel via correspondence. The panel praised the approach outlined in the paper and made a few suggestions around clustering and survey design.

1.6 – No further comments were made on EAP123, closing actions A10, A11 and A23.

1.7 – Discussion of references allowed action A14 to be closed.

1.8 – Item 6 on the agenda accounted for the request in A42, closing it.

1.9 – IDs were added to all items, closing A51.

1.10 – A review of household weights was highlighted to the panel, with ONS satisfied with the level of consistency in the benchmarks, closing A55.

1.11 – Item 3 on the agenda accounted for the request for information on ‘property guardians’ in A59, closing it.

1.12 – Further discussions held with panel members around Statistical Disclosure Control, closing A60.

1.13 – Item 2 on the agenda accounted for the request for an update on census rehearsal raised in A61, closing it.

2. Census rehearsal update – Jon Wroth-Smith

Background

In 2019, the ONS carried out a census rehearsal in four local areas. The rehearsal mimicked the real census and census coverage survey to test operational systems. The panel were taken through the rehearsal review and discussed findings. These included return rate, hard to count populations, address base issues, follow up effectiveness, forecasting and field prioritisation.

Discussion & Suggestions

2.1 – The relatively low response rates were discussed, with the panel informed that the rates were expected to be low due to the lack of legal obligation and were higher than the census rehearsal in 2009.

2.2 – The panel mentioned the possible impact young persons and people working from home have on response rates if the COVID-19 virus is still having an impact in 2021.

2.3 – The potential for text messaging as follow up was raised by the panel, though ONS were concerned that the messages may be counterproductive, as well as potentially problematic with respect to data protection. The issue is currently being considered by ONS.

2.4 – The use of paradata for follow up reminders was also discussed, with the panel pleased to see its use.

2.5 – Issues of field compliance in following prioritised cases and suggested routine was also discussed with new case management techniques highlighted.

2.6 – The flexibility in the design was also complimented by the panel.

No actions given

3. Hard to reach and under enumeration strategy – Jon Wroth-Smith

Background

A presentation of work done on Hard to Reach groups, including an open forum day, where individuals from a diverse range of ONS teams participated in the day. Matters discussed were broken down into; completeness of address frames, collection intelligence, and quality assurance.

Discussion & Suggestions

3.1 – The concept of open forum days was complimented by the panel.

3.2 – Potential disruption to current sources of administrative data was highlighted, along with mitigations.

3.3 – The issues involved in asking people questions about neighbours were raised, and that questions should be well defined to ensure individual privacy is preserved.

3.4 – Royal Mail data sources were highlighted by the panel as of potential value to the ONS, as they hold data on names associated with addresses and if mail is being successfully delivered.

3.5 – Issues around quality of web scraping was highlighted by the panel, with working with website owner suggested to improve accuracy.

No actions given.

4. Operational process – Jason Zawadzki

Background

A presentation on the logical design of the operational process for the 2021 Census was given. This discussed the operational teams and services and when these are needed. Separately, enumeration of Communal Establishments and how to best change outreach to achieve the highest rate of inclusion of all communities was discussed. In addition, how to create an effective field force was mentioned, with aspects from recruitment to training and workload management. Finally, service management and assurance approaches were presented, with incidence and cost management among areas highlighted along with contingency.

Discussion & Suggestions

4.1 – The need for flexibility was stressed by ONS and this view was shared by the panel.

4.2 – The use of community-led media among other potential sources of outreach was highlighted by the panel as a method to achieve the best response rates.

4.3 – The panel asked about testing of work tools and were pleased to hear that these had been field tested and a diverse range of ONS teams have been involved in their development.

4.4 – Ways of gathering and retaining qualitative information from fieldworkers was also discussed, with codes for certain common issues included in addition to some free text fields.

4.5 – The panel noted the necessarily high level nature of the work presented, but expressed an appreciation for the detail which lay underneath.

No actions given

5. Estimating population size without a census – Rosalind Archer, Robert North & Aidan Metcalfe

Background

The panel were taken through early work to simulate and estimate true population size from administrative data. This included a presentation of the design, including sources of data, method to produce over-coverage and under-coverage, a simulated survey and use of Bayesian estimators. In addition to this, initial results were presented, alongside limitations and supporting research, the session also discussed the proposed direction of development for the project.

Discussion & Suggestions

5.1 – Bayesian methods were discussed by the panel, with the suitability questioned and established methods proposed as alternatives, including logistic regression. ONS stated the project was still in its initial phases and was an opportunity to test and learn about this methodology. It is intended to include additional traditional methods in future iterations.

5.2 – The nature of the work was considered by the panel, with dynamic microsimulation considered as an extension of the project, which could be achieved by increasing the number of time points. ONS will include in the forward plans for this work.

5.3 – The design’s current omission of communal establishments was highlighted, with the panel desiring their inclusion in future. Emphasis on communal establishments interactions with households was also highlighted.

5.4 – Design changes utilizing other ONS projects and data sources were suggested to improve the realism of the administrative data used.

5.5 – Different methods to account for linkage error were discussed by the panel, including the possible use of error matrices.

5.6 – The sources of over-coverage were also discussed, with differences between over-coverage in census data and administrative data highlighted. The panel recommended ONS continue to investigate this.

5.7 – The panel mentioned the Longitudinal studies and resources from Scotland and Northern Ireland as additional sources of information about coverage in administrative data.

Actions

A62 – ONS to present a future iteration of the population size estimation using administrative data project ONS to present a future iteration of the project.

6. 2021 CCS sample allocation strategy – Danielle Burke

Background

The 2011 Census method was explained, as was the intended changes for the 2021 Census method. The reasons for changes between the two were explained by changes between the 2011 and 2021 Censuses, primarily the online nature of the 2021 Census and the change in estimation methods. A series of graphs showing results of a simulation study were used to inform the conclusion that ONS preferred a hybrid optimal-proportional allocation approach.

Discussion & Suggestions

6.1 – The relatively low number of simulation replicates was queried. ONS reported that this was due to technical limitations. The panel asked for extra simulations to be run to confirm the findings.

6.2 – Power allocation was proposed as another alternative method by the panel. ONS agreed to test this, though only small differences are expected.

6.3 – The hybrid optimal-proportional allocation approach was recommended by ONS as the preferred approach for the 2021Census, this position was endorsed by the panel.

6.4 – It was discussed whether non-response would have an impact on results, with it noted that non-response had a far lower influence on the variance of the population estimates than the selection of the sample.

6.5 – The nature of the model-based estimators was discussed alongside alternative estimators.

Actions

A63 – Run more simulations to further verify results of the CCS sample allocation research.

1. [M,N] – M denotes the panel number, N denotes its position on the agenda. [↑](#footnote-ref-1)