

ONS response to supplementary report from the Independent Review of Coverage Assessment, Adjustment and Quality Assurance

1 Introduction

The independent review of the coverage assessment and adjustment and quality assurance methodology was published on 21 February 2011. Subsequently ONS published a response to the review team's report on 16 March 2011. ONS then commissioned the review team to review the additional material ONS published in response to the recommendations to assess whether the material addressed their recommendations. This paper sets out the ONS response to the review team's supplementary report.

2 ONS Response to supplementary considerations by the Independent Review team

The review team set out 23 recommendations in their original review of the methodology. In reviewing the ONS response to those recommendations, the review team have confirmed that 11 of the ONS responses fulfil the recommendation.

This section sets out the 12 remaining recommendations where the review team made supplementary comments and provides an ONS response.

References made in this response document to published papers (e.g. ONS32) can be found in the table of references published on the ONS website¹.

Recommendation 4.1

Provide a more timely breakdown than was achieved in 2001, at the same level of detail as in 2001, of response rates for the CCS. This will enable users to assess the robustness of the DSE adjustment.

ONS response:

Agree. This information will be provided as supporting information when the census population estimates are published in July 2012. An outline of the material to be published with the census population estimates will be published in July 2011.

Supplementary comment:

ONS have provided us with some information about the first release of Census estimates although they do not intend to publish this in detail until July 2011 (ONS32). We encourage them to include CCS response rates as part of the first release and to clarify the distinction between information that

¹ [Reference papers for Independent Review](#)

will be provided to LAs as part of the first release from that to be provided at the second (and, if necessary, subsequent) releases. We feel that it will help the estimates to be accepted in an informed manner if as much as is practical is included in the first release, and if the standard numerical content for each LA is made available in spreadsheets with all LAs included as well as in individual LA packs.

ONS supplementary response:

In July 2011, ONS will publish more detailed information on the material to be published with the first release of estimates in July 2012. This outline will distinguish between what material will be published with the estimates in July 2012 and what, and when, further explanatory material will be published.

The suggestions made by the review team in terms of content and presentation are helpful and ONS will consider the practical implications of presenting the material as suggested.

In addition ONS confirms that the material to be published with the first release of the estimates in July 2012 will include CCS response rates by LA.

Recommendation 4.2

Consider capturing data about household non-contact and refusal rates by CCS interviewer and analysing the data to provide additional intelligence for use in QA and ratio estimation.

ONS response:

Agree. Information about non-contact and refusal rates will be collected for every household that does not respond to the CCS (Census Coverage Survey) through the completion of CCS 'dummy forms'. Further consideration is being given to capturing information from the CCS interviewer record books about calling patterns and contact outcomes. However, this information would need to be keyed manually using additional, unplanned resource, so any exercise to capture this information would be prioritised in the areas where CCS response was lowest.

Supplementary comment:

We are pleased that ONS intend to capture this information and recommend that it is included in the first release in July 2012.

ONS supplementary response:

Further to the response at 4.1, ONS confirms that the publication of CCS response rates with the release of the first results in July 2012 will also include CCS refusal rates.

Recommendation 5.1

Set out in detail, ideally with some examples, the way in which DSE is applied to data from the Census and the CCS to produce estimates both for each age-sex group and also for each ethnic group, making it clear when the

assumption of independence between the Census and CCS has been relaxed, explaining which levels of aggregation have been used and how different forms of post-stratification (for example, tenure and ethnic group) have been used to strengthen the results. The methods used for small CEs should be included.

ONS response:

Agree. We recognise the user need for this information to support their understanding and confidence of their census population estimates. We will publish a large amount of detailed information, including the points specifically made in the recommendation, about the coverage assessment and adjustment and quality assurance process. This will be done in two tranches, one with the first release and one with more detail shortly after, to ensure that preparation for the second tranche of information does not delay the publication of the census population estimates. ONS will publish the content and timetable for each tranche in July 2011.

Supplementary comment:

We note that ONS intend to provide the information we suggested and stress the importance of including some examples.

ONS supplementary response:

ONS will include examples of the DSE to improve user understanding of the results and the underlying methods.

Recommendation 5.3

Clarify whether the IHS is capable of being used for bias adjustment for persons in counted households.

ONS response:

Agree. Information from the IHS and other ONS Social Surveys will be used as part of the within household bias adjustment during the coverage adjustment methodology. An outline of the methodology for this component will be published in May 2011.

Supplementary comment:

We think the planned investigations set out in ONS23 – linking Census responses to survey responses from the same households around the same time – will provide a useful independent source of within household dependence. We do not recommend relying on aggregate data on household size. The quality of the matching and the characteristics of the matched samples will, however, be important issues.

ONS supplementary response:

The methods for using the IHS and other surveys in the within household bias adjustment were published in May.² ONS agree that aggregate household size data should not be used in the within household bias adjustment.

² [Adjusting for within household dependence](#)

Recommendation 5.4

Given their use in subsequent outputs, give serious consideration to extending the quinary age groups to 90+, if necessary collapsing geography rather than age groups to secure sufficiently robust Census-CCS estimates amongst these higher age groups.

ONS response:

ONS will publish in May 2011 the age groups that will be used within the estimation process. The collapsing of geography and age groups during the application of the coverage adjustment methods depends on the numbers found within each of these strata during the estimation phase. As the numbers within a hard to count group, within an estimation area, within the CCS sample aged 90+ are likely to be very small it would take considerable geographic aggregation to reach acceptable levels of numbers to produce reliable estimates. Therefore ONS does not think it is prudent to commit to this now as this relies heavily on the size of the numbers found within the individual DSEs.

Supplementary comment:

We accept ONS' point about reliable estimates for small groups and agree with the rationale for selected age- sex estimation groups (ONS27) subject to:

- (i) Using 9 rather than 0 as the terminal digit for the upper bound where 0 is currently proposed.
- (ii) Add an explanation to the paper about how the aggregation of age groups will be handled, where necessary, including confirmation that ONS will consider spatial aggregation to ensure robust estimates of the eldest age groups.

ONS supplementary response:

ONS agree with the supplementary suggestions. The paper published in May 2011³ reflects the changes and clarification of methods suggested by the Review Team.

Recommendation 6.1

Clarify precisely how ONS will integrate the separate overcount propensities identified from its Census self-match and Census-CCS matching exercises as inputs to the DSE process.

ONS response:

Agree. This work is currently being finalised and will be published in May 2011.

Supplementary comment:

ONS24 provides the requested clarification. We are satisfied with the approach outlined. However, to provide additional confidence, ONS should consider simulating a more extreme scenario where a higher overcount rate coincides with an atypically low response rate.

³ [Age Sex Groups for use in Estimation](#)

ONS supplementary response:

Methods are currently being finalised ready for the operational aspect of the processing and our time and effort is now focussed on processing and methodological refinements that have significant impact. Therefore ONS will consider undertaking further simulation exercises in the light of the current time and resource constraints should this scenario occur in practice.

Recommendation 6.3

Publish estimates of the components of overcount associated with each EA and, where possible, LA, including both removal of duplicate returns from within same postcode and the net overcount adjustment arising from Census-CCS matching.

ONS response:

Agree. This information will be provided as supporting information when the census population estimates are published in July 2012. An outline of the material to be published with the census population estimates will be published in July 2011.

Supplementary comment:

Again, we recommend that this information is included in the first release.

ONS supplementary response:

ONS will make some information on overcount available with the first release of census population estimates in July 2012. As indicated in the supplementary response to recommendation 4.1, more detail will be published in July 2011 which will make clear the content of the first and second release of explanatory material.

Recommendation 9.1

Finalise and publish details of the planned large CE imputation process in sufficient time to receive user feedback before it is implemented and describe in the final documentation how imputation deals with small CEs.

ONS response:

Agree. The methods for imputing into small and large CEs will be included within the methods on coverage imputation to be published in May 2011.

Supplementary comment:

ONS25 provides the requested details. We are satisfied with the approach outlined, although we invite ONS to consider further the ordering of donor files prior to the start of the imputation process.

ONS supplementary response:

ONS plans further research as suggested.

Recommendation 9.3

As in 2001, publish imputation rates for each LA, age, sex, ethnicity and intention to stay category, so that expert users can take account of these when undertaking their own analyses of Census data.

ONS response:

Agree. An outline of the material to be published with the census population estimates will be published in July 2011.

Supplementary comment:

Again, we recommend that ONS clarify whether this information is included in the first or subsequent releases.

ONS supplementary response:

As indicated in the supplementary response to recommendation 4.1, ONS will make clear the content of the second release of explanatory material in July 2011.

Recommendation 10.1

In the light of our comments, identify those QA checks that are so strong that they are able to be used to improve the Census where necessary.

ONS response:

Agree. This will be included in the detailed QA methodology to be published in May 2011.

Supplementary comment:

We see some advantage in placing the comparators to be used in QA and set out in ONS30 into three ordered categories: 'improvement' (the comparator source is strong enough to be used in an improvement to the Census estimates); 'explanatory' (the comparator source is strong enough to require an explanation for the discrepancy, even if no improvement is made); 'weak' (the comparator source is not, by itself, strong enough to question the Census). We would expect the majority of the comparators to fall into the 'explanatory' category. We would like to see an explanation of how our proposed categorisation, if adopted, is linked to the 'red/amber/green' categorisation in ONS30 that will trigger supplementary QA. As part of this categorisation process, we recommend that more thought be given to the precise weight allocated to each age-sex group. We also recommend that ONS31 is used to fully enumerate and categorise the proposed QA checks.

ONS supplementary response:

The suggestions outlined by the review team will improve the presentation of the guidance for moving from the core check process to the supplementary check process. Therefore ONS will incorporate these suggested improvements in the paper, 'Core to Supplementary Guidance' to be published in July 2011.

Recommendation 10.2

Provide a unified overview and detailed documentation of proposed QA methodology as soon as possible to allow users to understand its coherence.

ONS response:

Agree. ONS will publish a unified overview of the QA methodology in May 2011. Additional detail will then be provided in July 2011.

Supplementary comment:

ONS30 covers the QA issues we raised in overview form. However, for users to assess the adequacy of the QA methodology, the summary must indicate where more detailed information is available for each section. We are also pleased to learn about the research into age-sex ratios (ONS33) to be published later this year that should strengthen the QA process. We concur with the mechanism proposed (in ONS34) for distributing regional and national adjustments, should they be necessary, to LAs, based on the numbers of people or households estimated to have been already missed by both the Census and the CCS.

ONS supplementary response:

ONS will publish in July 2011 a detailed index of papers referenced to the relevant sections of the QA methodology (ONS 30)⁴ to improve the presentation and understanding of the methodology.

Recommendation 10.5

Use the strength of each QA check to prioritise QA work, giving low priority to work-intensive checks that are unlikely to be used in improving Census estimates. This priority should apply both in the current preparation for QA before summer 2011, and during the subsequent QA itself. In particular, the proposed procedures and datasets for post-QA improvement should each be fully specified and fully prepared prior to their use in QA. This does not preclude judgement and methodological refinements during the QA.

ONS response:

Agree. ONS has already acted upon this advice in refining the methodology for QA. Prioritisation on specific checks will ensure that resources are efficiently used allowing enough resource and time for a robust quality assurance of all LAs but also to ensure sufficient resource for those LAs that require more detailed supplementary analysis. The QA methodology paper to be published in May 2011 outlines the core checks for each LA. This list has been prioritised to reflect the recommendations of the review team. The procedures and preparations for the post-QA improvement options are currently being developed and are on track for implementation when the QA begins in July 2011.

Supplementary comment:

As noted above, it will be important to be precise about the value of the comparator sources to be used at each stage of QA.

⁴ [2011 Census – Methodology for Quality Assuring the Census Population Estimates](#)

ONS supplementary response:

More detail about how the comparator sources will be implemented during the QA process will be published in the paper, 'Core to Supplementary Guidance' to be published in July 2011.