

Consultation on changes to the BCS sample design: response from Home Office Statistics

Background

This document summarises the responses received to the Home Office consultation on proposed changes to the British Crime Survey (BCS) sample design and presents the Home Office's reply to the consultation. The open consultation ran for 12 weeks in accordance with the UK Statistics Authority's Code of Practice for Official Statistics and was launched alongside the publication of the 'Crime in England and Wales: Quarterly update to June 2011' on 20 October 2011. The consultation period ended on the 12 January 2012.

In addition, the proposed changes were presented to an audience of over 30 users at the annual Crime Survey User Group meeting held at the Royal Statistical Society (RSS) in London on December 11 2011. Participants were given the opportunity to discuss and comment on the proposed changes. In all, five formal responses to the consultation have been received; three from Police forces, one from a police Authority and one from Academia.

It was proposed that The Home Office would reduce the overall cost of the BCS by reducing the achieved sample size from 46,000 households to 35,000 from 2012/13 onwards. The main drivers for the proposal were the abolition of central targets and the outcome of the Government's 2010 Comprehensive Spending Review which required a 23% cut in the Home Office programme over the period 2011/12 to 2014/15.

In light of the proposed changes, consultees were invited to comment on the following questions:

- 1) **What are your views on the proposed changes to the BCS sample design?**
- 2) **What impact if any, will this change have on your use of the BCS?**
- 3) **Do you have any alternative proposals to cut costs?**

Outcome of consultation

Some respondents provided detailed answers to the specific questions asked in the consultation while others provided general comments about the use of the survey for their own work and the implications of reducing the sample. This document summarises the responses received to the three questions asked in the formal consultation. It should be noted that there was no significant objection to the proposed changes from the participants at the Annual Crime Survey User Group meeting.

Question 1 What are your views on the proposed changes to the BCS sample design?

Whilst all respondents were sympathetic to the need to reduce costs, a reduction in the sample size was not considered a favourable option. All respondents cited the reduced quality in the data as their main reason for objecting to the proposal. Two Police forces and the Police Authority expressed further concern in the BCS's future ability to provide robust

estimates at the Police Force Area (PFA) level and effective local performance indicators, if the proposals were implemented. The academic respondent added that analysis of small sub-sections of the population that appear at greater risk of victimisation would be hindered.

Whilst the Home Office agrees that any reduction in sample size is regrettable and that there will be some loss in precision and thus the ability to detect statistically significant changes from year to year. However, the proposed design seeks to mitigate that by retaining a minimum sample size in each PFA of 650 achieved interviews per year and the resulting loss of precision is modest. For example, the average margin of error for each PFA was estimated to be 0.7 percentage points higher if the proposed sample size reduction took place for the illustrative estimate used in the consultation document¹. For England and Wales as a whole this was found to be 0.1 percentage points higher.

The Home Office is also sympathetic to the response from the academic user, but considers any alternative option such reducing the length of the questionnaire as less viable. In large scale interviewer led surveys, such as the BCS, marginal costs of additional interview length are not as great as compared, say with telephone surveys. A large part of the interviewer costs relates to making initial contact with respondents and obtaining a successful outcome rather than conducting the interview itself. Consequently any reduction in the length of the interview, by reducing the number of questions asked, would have to be significant and would have a more detrimental impact on users. For example, to obtain equivalent savings might mean dropping the self-completion modules on self-reported drug use, sexual identity or sexual and domestic violence or ceasing collection of data from children aged 10-15. From discussions with users it is clear to us that such a step would severely limit the scale and type of cross-topic analysis which many BCS users rely upon.

2) What impact if any, will this change have on your use of the BCS?

Of the three Police forces that responded to the consultation one reported that a reduction in the sample size would have no effect on their use of the BCS whilst another reported that they would cease to use the BCS to derive performance indicators relying instead on locally produced indicators. The final Police force and the Police Authority agreed that they would continue to use the BCS but would find it 'less appealing' as a monitoring tool

Whilst the Home Office agrees that there will be some loss in the ability to detect statistically significant changes, the BCS will, despite any reduction in sample size, continue to have a relatively large sample size and be able to produce some key estimates at force area level, using a consistent methodology, with only marginally less precision than is currently the case.

The Home Office are also planning to introduce a number of new innovations to improve the efficiency of the sample design which would help mitigate any effect of any proposed reduction in sample size. These include the employment of a new bespoke sampling geography, and further changes to the sample design, which would enable the production of an entirely unclustered rolling three year national dataset among their benefits. A dataset consisting of three years data would enable the BCS to provide better estimates for small sub sections of the population, despite a reduced annual sample. This includes minority groups

¹ Proposed changes to BCS sample design, Annex A
<http://www.homeoffice.gov.uk/publications/science-research-statistics/research-statistics/home-office-science/consult-bcs-sample-design?view=Binary>

which was of concern to the academic respondent. It would also enable the BCS to provide estimates with greater precision at lower geographical levels.

3) Do you have any alternative proposals to cut costs?

The Academic respondent and two of the Police forces offered no alternative proposal to cut costs, whilst one of the forces and the Police Authority suggested a reduction in the length of the interview. The one remaining force agreed that a reduction in the sample size was best way forward, although the sample base should be adjusted so the confidence levels are capped at 5 per cent for all PFAs.

As previously stated the Home Office does not consider reducing the length of the questionnaire as a viable option since the number of questions that would have to be dropped would be substantial in order to reduce costs sufficiently, and would severely affect the ability to conduct any significant cross-topic analysis using BCS data.

The requirement for a minimum sample of 1,000 interviews in each PFA was introduced in 2004 and was driven by the introduction of the Police Performance Assessment Framework (PPAF), which used the BCS to monitor specific performance targets set by the government. The abolition of these targets in 2010 means that specific estimates are no longer required at a pre-specified level of detail. The Home Office in considering a minimum sample size of 650 adults per PFA regards it to be sufficiently big enough to provide a number of key estimates at PFA estimates with a reasonable level of precision. Adjusting the sample base so confidence intervals are capped at 5 per cent over a range of PFA estimates would return the Home Office to a similar situation where the sample is based on providing specific estimates to a required level of accuracy and there would be little or no reduction in costs.

Next Steps

We would like to thank all respondents for taking time to respond to the consultation and we welcome all the responses received. Based on the need to reduce costs, and taking into account the small number of objections to the proposals in the consultation, we are taking the following actions:

- Reduce the BCS sample size from 2012/13 onwards, to an annual achieved sample of 35,000 households per year
- Retain the same interviewer length
- Continue to sample one child aged 10-15 years within participating households
- Achieve a minimum sample of 650 adults per year interviewed in each PFA
- Continue to make survey improvements including:
 - The employment of a new bespoke sampling geography
 - Changes to the sample design to provide general improvements to the cluster design and an unclustered rolling three year national dataset.