

CENSUS ADVISORY GROUP

ONLINE DATA CAPTURE

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1 Introduction

In 2011, for the first time in the UK, respondents will have the option of completing the census questionnaire online. There are benefits to this approach accompanied with a responsibility for the Census Offices to ensure that the service is secure, resilient and practical. This paper sets out what will be offered and how it will be developed.

Advisory Group members are invited to note the approach and provide views on the strategy.

2 Why Online Data Capture

Government policy and public expectation is that interaction between the public and government should be possible through the Internet. Consequently the Business Case for the Census proposed online completion, and this was duly accepted. There are benefits to be achieved from online completion which include:

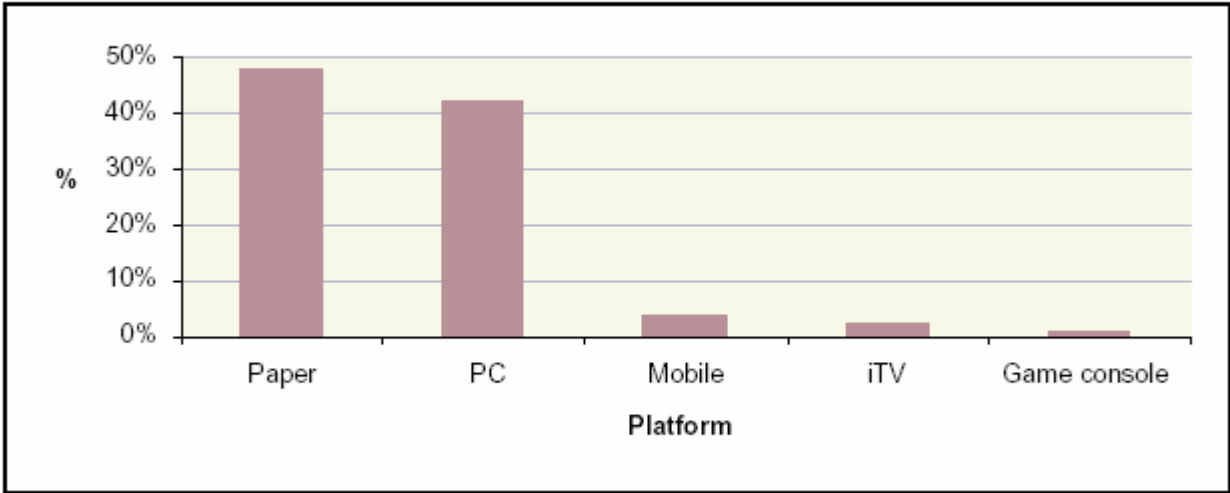
- Improved response rates, both overall and especially in the hard to reach groups such as young adults - students for example - who may be more inclined to complete online;
- Accessibility: certain population groups find it easier to complete an online questionnaire compared with paper; for example the visually impaired can be presented with large font text. Equally, for some groups, keyboard completion can be a better solution compared with writing in responses by hand;
- International research has concluded that internet responses show improved quality and a more complete return;
- Data becomes available more rapidly;
- Cost savings can be achieved through reduced post-back charges, and reduced paper scanning and data capture, although there are also development costs.

3 Context

Collecting census information over the internet is not new. Canada, Australia and New Zealand all offered it in their 2006 censuses and USA had an unpublicised service for 2000. Response rates have varied, the highest being in Canada in 2006 where, with strong promotion, an 18.5% internet response rate was achieved. A much higher figure is being targeted there for 2011.

In the UK, overall online penetration in 2011 is estimated to reach 77% of UK households. Estimating how many of these households are likely to complete online is fundamental to the design of the service. To get some evidence on this ONS commissioned a study to establish the likely take-up. A survey was conducted which established preferences which are depicted in the chart below.

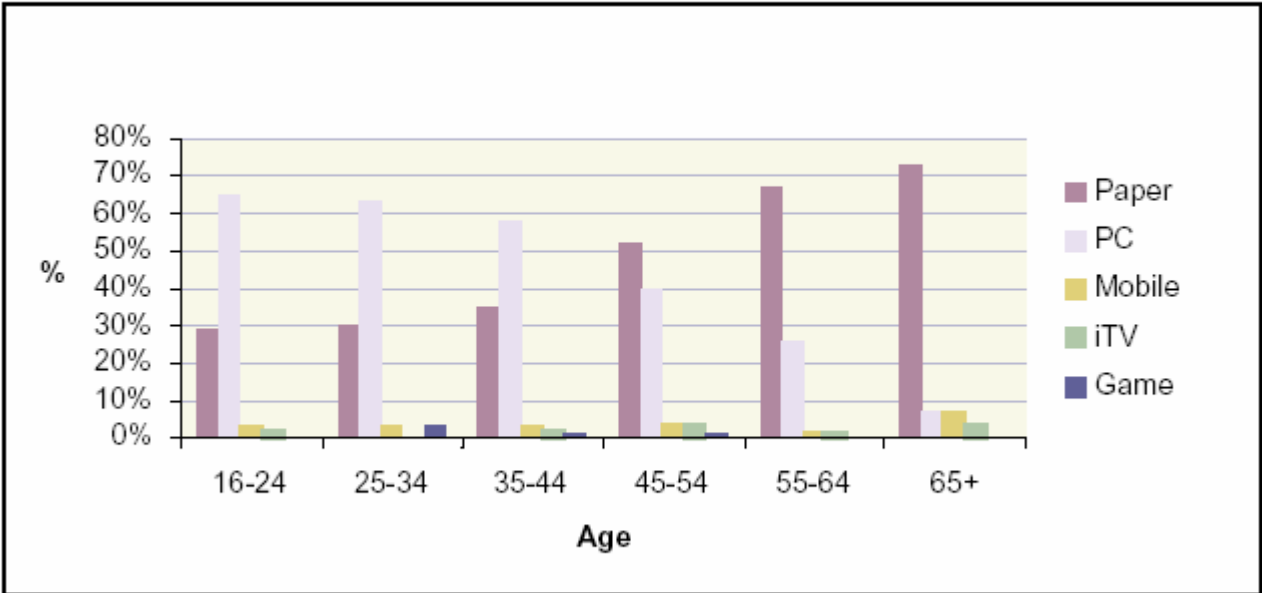
Figure 1: Preferred methods of completing the Census



Source: BMRB Omnibus Survey, March 2007

When this is broken down by age group an interesting but not unexpected pattern emerges:

Figure 2: Preferred methods of completing the Census by age



Source: BMRB Omnibus Survey, March 2007

The study also considered associated risks. One key risk is that some kind of internet security scare or service failure would arise just around the time of the census. At a stroke, this could change the preference of millions of respondents back to paper completion. Although such an event is very unlikely, the impact could be very high. The mitigation is to provide a paper questionnaire to all households so that the choice of response medium is in the control of the respondent at all times. The alternative - internet respondents pre-registering and being sent an internet access code instead of a questionnaire - would lead to major difficulties if the risk were to materialise. This is because the sudden preparation and dispatch of perhaps 10 million questionnaires within a matter of a few days would not be practicable.

The fact that every household will receive a questionnaire influences the propensity for a respondent to complete on paper. Hence ONS' estimate of internet volume is lower than the survey results (42%) suggest. For planning purposes the assumption is that 20% - 30% of households will respond via the internet .

4 What will be offered

In England, Wales and Northern Ireland internet completion will be offered for both Household and Individual questionnaires. Access to the system will be via an internet access code printed on the questionnaire. This will be of sufficient length to ensure that there will be no practical possibility of a respondent inadvertently or deliberately accessing someone else's data. The questions will be identical to the paper version with a minimum of validation so as to avoid 'mode bias', ie differences in response characteristics between paper and internet.

It will be permissible to break off part way through completion and return later, although for confidentiality reasons data will not be stored on the individual's PC/laptop but on a central server. Context-sensitive help will be provided. On completion, once the householder is happy with their responses they will click a 'submit' button - the equivalent of signing a paper questionnaire and putting it in the post.

The service will be available from a week or two prior to census day when the questionnaires are delivered and remain live whilst the field follow-up activities take place.

5 Development

Development of the online Data Capture service is being undertaken as part of the main processing contract which was competitively tendered and won by Lockheed Martin UK in August 2008.

The online Data Capture service is currently in its design phase. ONS is working collaboratively with the supplier, through a process of iteration to define the detailed requirement. The product will be subject to user testing which will be conducted at various stages throughout the development. User research, which is undertaken at the beginning of the design phase is used to understand the respondents' perception of the service. It will include paper prototypes of the key designs. Testing of the development then progresses to 'wireframes' which are scheduled for January 2009

and the results of these feed into the final design. A website wireframe is a visual tool used in web design to show the fundamental elements of the user interface. User testing concludes in May 2009 when the final design, including all branding and colour, also undergoes full accessibility testing.

The online Data Capture service is supported by an online self-help facility which will include Frequently Asked Questions, translation packs containing translations of the questions into 20+ languages, and other supporting material.

Experience from the October 2009 Census may lead to some post rehearsal changes.

The Census service will be available for around 9 weeks, but the peak demand is expected to occur during the evening of census day, and it is the size of that peak which has the biggest influence on the design of the supporting technical infrastructure. ONS will take opportunities to smooth out that peak through communication and media handling, but not to the extent that overall response rates are likely to suffer. The infrastructure is built around clusters of servers. To provide scalability, more clusters can be added if it is concluded nearer the time that the estimates of demand are too low.

6 Conclusion

In this day and age the public expects internet access to services. And for censuses there is a growing international track record of providing this successfully. Design and development for our national census is underway following best practice worldwide and ONS is on track to deploy for the census rehearsal in October 2009.

October 2008