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**ECONOMIC COMMISSION FOR EUROPE**

**CONFERENCE OF EUROPEAN STATISTICIANS**

**Group of Experts on Population and Housing Censuses**

Twelfth Meeting

Geneva, 28-30 October 2009

Item 5 of the provisional agenda

**CENSUS OUTPUT TO MEET USERS NEEDS**

**Meeting the needs of Census users in the United Kingdom's private sector**

Note by the United Kingdom<sup>1</sup>

**I. INTRODUCTION**

1. Commercial companies in the United Kingdom are major users of Census information for targeting customers and making business decisions. Like other user communities, there are some Census specialists, but many more occasional users. Relationships between the Census Offices and their private sector customers are good, and plans for 2011 are progressing well, but much remains to be done. Potential improvements are also identified.

**II. THE SUPPLY OF CENSUS INFORMATION IN THE UNITED KINGDOM**

2. The Censuses in the four countries of the United Kingdom are carried out by three separate Census Offices: the Office for National Statistics (England & Wales), the General Register Office (Scotland), and the Northern Ireland Statistics and Research Agency. Whilst considerable efforts are made to adopt similar approaches, there are some differences in the statistics produced for each country.

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<sup>1</sup> Prepared by Demographic Decisions Ltd.

3. Publication of detailed tables of statistics for small areas began with the 1971 Census, and these have become established as the major popular form of output for the subsequent censuses held in 1981, 1991 and 2001. The Census Offices also supply bespoke tabulations to specialist users, and in 1991 and 2001 created samples of anonymised records, which are particularly used by academic researchers. Good progress is now being made in planning for the next Census on 27 March 2011.

4. Since the publication of the 2001 Census, the Statistics and Registration Service Act 2007<sup>2</sup> has provided for the creation of a new body, the Statistics Board, with a statutory responsibility to promote and safeguard the production and publication of official statistics “that serve the public good”. The Code of Practice, containing the standards against which National Statistics are being assessed, was published in January 2009<sup>3</sup>. Its Principle 1 is Meeting User Needs: “*The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.*” Note that this is not just the needs of government!

### III. CENSUS USER COMMUNITIES

5. Since the 1970’s it has been conventional to identify four major Census user communities:

- (a) Central government departments;
- (b) Local authorities;
- (c) Academic researchers;
- (d) Commercial companies.

6. Encouraged by the advent of the internet, a fifth community – the general public – is of increasing importance. Many of these users have common interests (for example, statistics being freely and easily available), but there are some differences (local authorities, for example, put less importance on consistency across the United Kingdom).

7. It is also useful to consider users in terms of their numbers, and the extent of their specialism and expertise. Figure below illustrates the idea of how interest in the census has grown since 1981. Also, it is vital to recognise that, whilst there is an increasing number of census specialists, there are much greater numbers analysts (who don’t regard themselves as census experts), and many more occasional and new users.

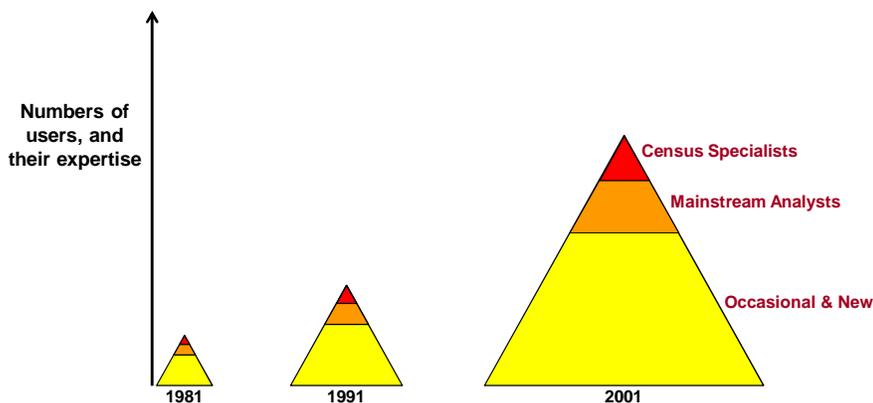
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<sup>2</sup> [http://www.opsi.gov.uk/ACTS/acts2007/ukpga\\_20070018\\_en\\_1](http://www.opsi.gov.uk/ACTS/acts2007/ukpga_20070018_en_1)

<sup>3</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

Figure. Census users – the growing pyramid

## Census users – the growing pyramid



8. Furthermore, it is also important to recognise the importance in the United Kingdom of the census value-added resellers, such as Experian and CACI. These are service companies which make it easy for clients to buy selected datasets, geodemographic classifications, and more complex analyses. They are particularly used by commercial companies, but some central and local government organisations also find their services valuable.

#### IV. WHY IS THE CENSUS SO IMPORTANT TO COMMERCIAL COMPANIES?

9. Use of Census data has exploded in the last three decades. Government has always used the information for allocating resources to local areas, but the major growth has been amongst commercial companies marketing to consumers<sup>4</sup>. These are exemplified by the Demographics User Group (DUG)<sup>5</sup>, whose members include such well-known companies as Abbey, Barclays, and the Children's Mutual (financial services); Boots, Co-operative, John Lewis, Marks & Spencer, Sainsbury's, and Tesco (retailers); Whitbread (leisure); and E.ON (energy). These and many thousands of similar companies turn to the census to help provide answers to such vital questions as:

- a) Where are the best places for our new outlets?
- b) Which branches should we close?

<sup>4</sup> A guide to the 2001 Census: essential information for gaining business advantage. (Edited by Keith Dugmore and Corrine Moy). Sponsored by the MRS and the ONS. The Stationery Office. 2004.

<sup>5</sup> <http://www.demographicsusergroup.co.uk/>

- c) What products and services should we be offering in each of our existing stores?
- d) Where should we advertise?
- e) Who are our best customers, and our best prospects?
- f) Which areas and people should we survey?

10. These issues are typical for the commercial world, but there are also close parallels amongst public services which are seeking to make decisions about locating their hospitals or libraries, tailoring services to local communities, or targeting particular sections of the local population.

#### **A. The importance of making the right decisions**

11. The Census underpins many decisions involving investments of billions of pounds every year. Very few large companies still rely solely on “gut feel” when reviewing their branch network or which prospects to target. An increasing number regard the sourcing of good data as so important that they devote significant time and effort in pursuing better information. Making the right investment decisions is vital to business success. The sums of money involved are considerable. For example, the refurbishment of just one pub or restaurant often costs many hundreds of thousands of pounds, whilst the development of a single new superstore can exceed £20 million. Multiplying this up for a national chain of thousands of restaurants or hundreds of stores soon brings us into the realm of large companies each making decisions about the investment of hundreds of millions of pounds a year. Further down the scale, a new start-up company might sink or swim depending on whether its first outlet is in the best location. The penalties of making bad decisions are severe.

#### **B. Targeting local markets**

12. The targeting of local areas takes several forms. One of the most obvious is the evaluation of alternative sites for new enterprises. The big supermarkets put much effort into assessing the potential for new out of town stores in the 1980’s by analysing populations within 15 or 20 minutes’ drive of possible locations. Entrepreneurs seeking good locations for new golf courses used the same technique. More recently, many retailers have focussed on the opportunities offered by smaller outlets in urban areas – Tesco Metro and Express, Sainsbury’s Local, and Marks and Spencer’s Simply Food provide ready examples. As well as openings, companies also have to consider whether they need to close existing uneconomic outlets – this has been particularly apparent in the case of the Post Office, and also the financial services sector.

13. Another element of targeting areas is the importance of tailoring services to particular local populations. It is very likely that customers in Chelsea will have different needs to those in Liverpool. Again, some trade is very much driven by the numbers and types of people who work, rather than live, in an area: office workers popping out to Boots for cosmetics at lunchtime provide a good example. This leads into a further aspect of local targeting: trade in local areas can be encouraged by local marketing campaigns. Door to door leafleting is a well-established approach, and there is increasing scope for more accurate targeting. Local advertising, using both newspapers and billboards may also be brought into play, again driven by analysis of the local market.

14. In each of these cases, Census information is used to measure the size of the local population, and to classify it in various ways, typically by age and measures of affluence, a geodemographic classification, but also perhaps by additional variables such as ethnicity or religion. A frequent further step is the integration of market research or customer information to produce financial estimates of the local demand for particular products and services.

### **C. Targeting households and individuals**

15. As well as assessing and targeting areas, the Census is also used to help to classify and target individual households and people. The way in which it is often used in this context is to produce geodemographic classifications of Census Output Areas – the smallest neighbourhood level; it is essential to appreciate that no Census information about identifiable individuals is ever released.

16. Geodemographic classifications such as Acorn and Mosaic are made available in the form of directories, which comprise a list of each postcode in the country, together with its neighbourhood classification. It is therefore possible to add a geodemographic code to each customer or prospect address, and then analyse customer behaviour according to the type of neighbourhood in which they live. Some customer segments will be far more likely than others to buy certain products and services, or indeed, reject others: media such as direct mail can be targeted accordingly. An increasing number of companies are also using the Census Offices' own Output Area Classification (OAC), which is freely available<sup>6</sup>.

### **D. Designing market research surveys**

17. Much use is made of the Census for targeting small geographical areas, but it also underpins most mainstream market research conducted in the United Kingdom. The Census provides the bedrock of information about the dispersion of populations and households, which is essential for planning, controlling and executing all types of consumer research. Some populations – such as ethnic minorities or very affluent people – are almost absent from many areas of the country, and targeting can ensure that survey resources are used to maximum effect. Market researchers use the Census to ensure that they achieve representative samples of particular populations. These may be used to plan interviews of predetermined quotas of people in particular age and sex categories. In other instances, the Census is used with the Postcode Address File to draw up sample frames of addresses. In both cases a scientific approach achieves more accurate results at a lower cost. Turning to the analysis of surveys, the Census can also add considerable value by adding the appropriate geodemographic code to each respondent's record. This approach was pioneered using the Target Group Index survey, and has since been extended to many others. Analysing surveys by geodemographics often creates new insights in understanding markets, and opens the way to calculating market potential for small areas.

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<sup>6</sup> See the OAC User Group website <http://areaclassification.org.uk/>

## **V. HOW DO COMMERCIAL COMPANIES EXPRESS THEIR NEEDS TO THE CENSUS OFFICES?**

### **A. Commercial users' representation**

18. A small number of commercial companies do express their views directly to the Census Offices, but this involves a heavy commitment of their time. Most, therefore, rely on groups to summarise and express their needs. The most active are the Census and Geodemographics Group (supported by the Market Research Society), the Association of Census Distributors (representing VARs), and the Demographics User Group (representing end-user companies).

### **B. The Census Offices' mechanisms**

#### **1. Census Advisory Groups**

19. These aim to represent the interests of each of the main user communities: central government departments; local authorities; the health service; the business sector and professional interests; the academic community; and organisations with interests in special needs and minority populations. Each group typically has 15-20 members, with Office for National Statistics (ONS) arranging meetings at intervals of approximately six months to coincide with particular developments or key events in census planning.

#### **2. Formal public consultations**

20. The Census Offices' consultations seek to attract as wide a response as possible. Major consultations have been carried out on Topics, Geography, and Statistical Disclosure. They are often supported by public meetings and roadshows.

#### **3. Office for National Statistics' additional working groups**

21. The ONS has also set up several other groups which draw on the experience of external expert users. Eight of these are focussed on particular topics (for example, the Population Definitions Working Group), informally consulting with, and learning from, specialist census users. In other cases, however, the emphasis is less on user consultation, and further along the spectrum towards giving ONS advice on how it might carry out the census operation. Most recently, the Outputs Working Group, which was very important for the 2001 Census, has been re-established.

#### **4. Web-based initiatives**

22. The Census Offices have also experimented with the Web to communicate with their users, particularly those not already reached by other channels. In some cases this has worked well, enabling discussion papers to be circulated easily and responses sought. However, online polls are at risk of being unrepresentative, and a blog has drawn very few responses (perhaps because even the most enthusiastic Census users would rather summarise views for a formal consultation, rather than get drawn into a daily debate).

## VI. MEETING COMMERCIAL USERS' NEEDS FOR 2011: THE STORY SO FAR

### Table

#### Meeting commercial users' needs – progress

| DUG members' priorities / views   | Census Offices' Actions  |
|---|--|
| <p><b>Topics / Questions</b></p> <p>Questions on a wide range of topics, continuing previous Censuses</p> <p>New Questions:</p> <ul style="list-style-type: none"> <li>• Second residence (&amp; alternative population definitions)</li> <li>• Language</li> <li>• Income – TOP priority, &amp; asked in many other countries</li> </ul>   | <p>Formal public consultation, which received a good response, plus subsequent pressure from central government departments. Most topics have been retained.</p> <p>Included<br/>Included<br/>Only in Scotland is taking this step forward</p> |
| <p><b>Coverage – near 100%</b></p> <p>Target effort to achieve coverage of &gt;90% in all areas, with estimates of the full 100%</p>  | <p>Technical development of a definitive address register, targeting difficult areas, and methods of estimating non-response</p>   |
| <p><b>Outputs – Geographical areas to be used</b></p> <p>Retain 2001 Output Areas:</p> <ul style="list-style-type: none"> <li>• Small (120 households)</li> <li>• Linked to postcodes</li> <li>• Stable 2001-2011</li> </ul>  | <p>Formal public consultation, with the welcome decision to retain existing OAs wherever possible</p>  |
| <p><b>Outputs – Protecting confidentiality elegantly</b></p> <p>Learn from the mistakes of 2001, deciding on a method that produces consistent statistics within and between tables</p>   | <p>Considerable research, + public discussion.<br/>The COs are soon to choose from a shortlist of 3 methods</p>  |
| <p><b>Outputs – Statistical products to be produced</b></p> <p>Many detailed tables, + univariate counts at OA level are fundamental. They should also include:</p> <ul style="list-style-type: none"> <li>• ONS's OA geodemographic classification</li> <li>• Statistics for Workplace populations</li> </ul> <p>(Bespoke tables and SARs are of interest, but lower priority)</p>   | <p>Consultation starts summer 2009</p>   |
| <p><b>Outputs – Consistency across United Kingdom's 4 countries</b></p> <p>Commercial companies seek to compare areas across the whole United Kingdom</p> <p>For many variables there is universal interest. Others may be local (e.g. ethnic or religious classifications in London c.f. Northern Ireland), but there is demand for comparable super-sets</p>  | <p>The heads of the 3 Census Offices have issued a joint statement of their intention to cooperate<br/>Plans for implementation are awaited</p>  |
| <p><b>Outputs – Accompanying products</b></p> <p>As well as statistics, it is essential to have:</p> <ul style="list-style-type: none"> <li>• Digital boundaries for Output Areas</li> <li>• Digital map background</li> <li>• Postcode / Output Area directory</li> </ul>  | <p>The Census Offices are aware of users' needs, but will have to negotiate agreements with other government agencies, which have no commitment to the "public good"</p>   |
| <p><b>Delivery – Licensing, and free at the point of use</b></p> <p>Repeat the success of 2001, with central funding and simple Click / Use licensing, encouraging maximum use.</p>   | <p>News is awaited</p>   |
| <p><b>Delivery – timing</b></p> <p>Quicker? Users have differing views on this – "we need it as soon as possible" versus "we've waited 10 years, so let's get it right"</p> <p>Timetable. Agreed by all users that a timetable should be published &amp; delivered: delays cause big problems of staff resources.</p>   | <p>Timescales are similar to 2001</p> <p>The Census Offices appreciate the importance of a guaranteed timetable</p>  |
| <p><b>Delivery – easy access</b></p> <p>Good delivery by the Census Offices (= good access for Users) is vital:</p> <ul style="list-style-type: none"> <li>• Simple design / packaging of files</li> <li>• Popular formats (Excel, csv, etc)</li> <li>• Compatible across the United Kingdom where possible</li> <li>• Downloadable from the web in most cases</li> <li>• Ideally from one website or portal</li> <li>• Email alerts to let users know of new releases</li> </ul> | <p>Not yet discussed in detail</p>   |

## **VII. THREE RECOMMENDATIONS WHICH WOULD BENEFIT ALL USERS (& HENCE THE CENSUS OFFICES)**

### **A. Extend understanding of users' needs.**

23. The Census Offices have a generally good record in trying to consult users (rather than seeking to “manage stakeholders”!), but the author has argued in a report<sup>7</sup> for the Statistics Commission that there is scope for improvement: the need to build networks in order to reach occasional users and those in sectors hitherto little involved; the importance of targeting messages (less information can often mean more); and the need to explain thinking and decisions. The report concluded by questioning whether sufficient resources are currently being allocated to consultation in order to get a thorough understanding of customers' needs.

### **B. Seek a better balance between risk and utility.**

24. The Census Offices rightly put a strong emphasis on the importance of statistical confidentiality. However, most users consider that the weighing of risk and statistical (NB) utility that was chosen by ONS in 2001 was flawed, and hope that, in the light of the Code of Practice, the balance should be shifted a little in favour of practical (NB) utility for 2011.

### **C. Don't give up in the last hundred metres.**

25. £568 million is to be invested in the 2011 United Kingdom Census. In 2001 only 3 per cent of the total Census budget was spent on outputs. In the context of “statistics for the public good”, the 2011 Census will provide an immensely rich resource, and every effort should be made to maximise the returns on the investment, given that the marginal costs of disseminating outputs are so small. To invest so much collecting and processing the data, but to then stint on creating and disseminating outputs which maximise its utility, would be a very difficult decision to defend, even in times of economic difficulty.

## **VIII. CONCLUSION**

26. The Census helps to provide answers to many key business questions. Whether it is by targeting local areas, households or survey interviews, it provides essential information to enable companies to focus on those areas which offer the greatest return. The Census provides an essential foundation for many business decisions.

27. Postscript: the United Kingdom as part of Europe. Many companies in the United Kingdom seek similar statistics for other European Union countries. 2001 Census small area statistics were assembled for Eurostat's own use, but cannot be supplied more widely. It is to be hoped that this problem will be solved for 2011 by the proposed European Union Census hub.

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<sup>7</sup> <http://www.statscom.org.uk/uploads/files/reports/Report%2036%20Census%202011.pdf>