

# POPULATION AND MIGRATION STATISTICS COMMITTEE (SCOTLAND)

## Improving Migration and Population Statistics Project

*This paper is primarily provided for information. Members of the Group are invited to :*

- *comment on the overall thrust of the project*
- *suggest specific areas of research that they consider would be useful*
- *alert the team to any similar or relevant research they are aware is underway (including research being carried out by LAs and academics)*

The Office for National Statistics have recently established the 'Improving Migration and Population Statistics' Project (IMPS). This paper briefly informs readers about the background and content of the project. More information about this work will be available on the National Statistics website from early September.

The aims of this project are to:

- Improve migration and population statistics produced by the Office for National Statistics (ONS)
- Avoid for the 2011 Census the problems that occurred with the 2001 Census when there was a large difference (1.2 million) between the Census and the rolled-forward population estimates mid year estimates (MYEs)
- Gain a better understanding of the causes of any difference that does occur

### 1. Background

Producing population and migration statistics is increasingly challenging. The population structure is changing rapidly as a result of changes in society which include increased mobility and different living arrangements. These changes have coincided with a drive for 'evidence based policy' which demands improvements in accuracy, timeliness and for statistics at smaller levels of geography. The Office for National Statistics (ONS) recognises that the ability to successfully measure the population is key to its reputation.

Through the IMPS project, ONS will be making a substantial investment to improve migration and population statistics. This is in addition to the continuous ongoing work carried out as part of the annual mid-year estimates production round. The IMPS project is primarily research based, allowing ONS to further investigate other possible ways to improve the population statistics and establish where it is possible to introduce changes to sources and methods that will improve the quality of statistics.

An overriding aim of IMPS is to avoid the large difference which occurred in 2001 between the inter-censal estimates and the Census. Those differences occurred in part due to problems with the Census and in part because of problems with the population estimates. The work carried out during 2003 and 2004 focused on the potential problems with the Census. The results of these 2004 Local Authority studies can be found at:

[http://www.statistics.gov.uk/downloads/theme\\_population/LAStudy\\_FullReport.pdf](http://www.statistics.gov.uk/downloads/theme_population/LAStudy_FullReport.pdf)

ONS is now focusing on potential problems with the inter-censal population estimates. Some recommendations for improvements to population statistics were outlined in the Fullerton review, 'A demographic statistics service for the 21st century' which can be found at:

[http://www.statistics.gov.uk/about/Methodology\\_by\\_theme/downloads/Demographic\\_Statistics\\_Service.pdf](http://www.statistics.gov.uk/about/Methodology_by_theme/downloads/Demographic_Statistics_Service.pdf).

In addition, limitations which need addressing were identified by Census 2001 itself, and subsequent analysis including the Local Authority studies already mentioned.

The IMPS Project pulls together various streams of work some of which had already started, or were in the planning stages, as well as some new work. The programme of developing and modernising population statistics currently includes:

- Taking forward recommendations from the National Statistics Quality Review (NSQR) of International Migration Statistics
- Improvements to the demographic analysis capability
- Studies of local and national sources (E & W) that are not currently used in mid year estimates (MYEs) process, including local case studies
- Developing the vision for an Integrated Population Statistics System (IPSS)

## 2. Components of the IMPS Project

### ***2.1 Taking forward recommendations from the National Statistics Quality Review of International Migration Statistics***

Migration, particularly international migration, is the most difficult component of population change to estimate. ONS recognised this issue before Census 2001 results were released by initiating the National Statistics Quality Review on International Migration Statistics.

The Quality Review made recommendations for improving both (i) the estimation of total migration flows to and from the UK, and (ii) the allocation of international migration to local areas.

The research work following up the recommendations of this review is currently being taken forward by both ONS and the Home Office. An implementation plan was published in January 2004 and can be found at :

<http://www.statistics.gov.uk/about/data/methodology/quality/reviews/population.asp>

A brief update of the progress of this work can be found :

<http://www.statistics.gov.uk/about/data/methodology/quality/reviews/population.asp>

### ***2.2 Improvements to the demographic analysis capability***

Although ONS already has considerable demographic expertise, this work aims to enhance and better utilise this resource in the IMPS project.

Specific aims include exploring the requirements for population base definitions in addition to 'usual residence,' and using demographic analysis to better understand more complex living arrangements. Both of these areas are key inputs to the 2011 Census.

To assist ONS, a group known as the Population Definitions Working Group (PDWG) was established in September 2004 to provide clear definitional advice to ONS on population issues, including preparation for the 2011 Census. The Group is comprised of representatives from central and local government, academia, the private sector and topic experts from within ONS. Key issues being considered include the precise definition of usual resident, the inclusion of visitors and how to capture hard to define groups such as students, second/multiple homes, migrants and asylum seekers, children, armed forces, those working abroad and retired people. A final paper, setting out the recommended definitions, will be published in Spring 2006.

### ***2.3 Studies of local and national sources***

These studies aim to investigate LAs within England and Wales to:

- examine where there is an appreciable risk of the mid year estimates (MYEs) underestimating or overestimating the population as a whole and/or for particular population age/sex groups, Local Authorities (LAs) or types of LA.

- investigate the potential usefulness of particular data sources at a national level, across all LAs and for particular types of LA.
- work in partnership with local authorities, using a small number of case studies of LAs to investigate whether national and local knowledge and sources not used at present could be used to assist the compilation of inter-censal population estimates.

There are three main ways in which additional data sources might be used:

- as part of the quality assurance and validation process for the MYEs.
- as a component of the calculation of the MYEs but only in areas where the source is of sufficiently high quality that its accuracy can be assured
- to use the source routinely as a component of the MYEs

Three streams of work are currently underway. The first is research work into the use of key administrative data sources to compare with the mid-year population estimates. Administrative data sources are often quoted in relation to population estimation both in terms of stocks and change. Currently the main administrative data sources cited are council tax data, patient register lists and the electoral roll. The IMPS project provides an opportunity for ONS to further investigate the relationship between administrative data sources and the mid-year population estimates.

The second stream considers the relationship between new housing and change in population to investigate if there is a relationship between house build and population change at the LA level and to establish if an increase in new housing in an area is a reliable indicator of a growing population (more people living alone would lead to a demand on housing but not necessarily an increase in overall population). Initial results from this work were presented at the BSPS conference.

The third area of work is selecting LAs for the case studies. In selecting LAs there is a need for an objective and evidence based method. A framework has been created which provides an analysis of where there might be risks to the population estimates, as well as potential data sources that could indicate these risks. These indicators show LAs where specific risks might occur.

After discussions with external stakeholders and the Demographic Methods Centre (part of Methodology Directorate within ONS) cluster analysis was chosen to group LAs into clusters with similar types of risk in the MYEs. The advantage of this method is that it looks across the whole spectrum of risks to the MYEs and also takes into account the specific characteristics of areas. By selecting LAs from different clusters it will be possible to study LAs with a range of different characteristics. ONS have selected 4 LAs from 4 clusters for the first round of studies. ONS have contacted these LAs to ask them to participate in the studies and are currently awaiting responses.

#### **2.4 Developing a vision for the Integrated Population Statistics System (IPSS)**

The vision for an Integrated Population Statistics System was set out in an ONS consultation document in October 2003. Improvements in managing information in government, particularly administrative systems, mean that, with the right legal protection, we could in principle use information already held by government to put together much of what we traditionally obtain via the census. Although this will not be possible for 2011, the IPSS proposals presented a way forward in this direction. The proposals set out ONS's thinking on the statistical issues but not on the wider changes that would also be required to the arrangements for accessing and protecting information.

The IPSS vision is to combine census, survey, and administrative data, linked at individual person level, to create a single, comprehensive population statistics database, which is updated over time. This database would underpin all ONS population and social statistics, resulting in significantly improved and more consistent statistics for the government community, the Health Service, academia and the private sector. Recent consultation acknowledged that there were both benefits and risks in following a path towards this vision.

The key elements of the proposal are :

- a high quality address register, covering all properties in England and Wales
- a full 2011 census operation
- creation of a linked statistical database, combining administrative and survey data by linking at the individual person and household level;

### **Update on work in progress**

The IPSS is a long-term undertaking and it is inevitable that priority in funding and resource tends to be given to more immediate aspects, such as planning for the 2011 Census and improving population statistics between now and 2011. However some work has begun on each key statistical element; progress brief progress on each of these will be available on the National Statistics website in September.

With regard to the wider changes that would also be required in the arrangements for accessing and protecting information, a Government Statistical Service (GSS) Task Force has been looking at issues around data sharing and their report, the GSS Task Force Report on Data Sharing, is due to be published shortly.

### **3. Communication with key stakeholders**

For the Improving Migration and Population Statistics Project (IMPS) to be successful it is crucial to engage other government departments and other key stakeholders, particularly Local Authorities (LAs), as soon as possible.

Other government departments will continue to be updated through the various advisory groups including the CLIP Population Sub-Group, the group formerly known as SPS/LA Advisory Group and the NS Theme working (all of which have representation from Scotland) as well as through ONS' key accounts network.

The IMPS research plan will also be published on the National Statistics website in the near future. Updates to the work programme will be provided through the IMPS newsletter, which will also be published on the National Statistics site.

### **Contact details**

If you have any questions about this project or you would like more information, email the IMPS project team: [IMPS@ons.gsi.gov.uk](mailto:IMPS@ons.gsi.gov.uk)

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