

## Special Population Study

The outline of the IMPS project reflects the way ONS thinking on our approach to improving migration and population statistics has developed over the last year. The main impact in this change in approach is that ONS has decided not to take forward the 2007 Special Population Study (SPS) as originally planned and therefore it has not been included in the IMPS Project. ONS will be concentrating their resources on the four other areas highlighted, in particular the first three:

- Taking forward recommendations from the National Statistics Quality Review (NSQR) on International Migration Statistics
- Improvements to the demographic analysis capability
- Studies of local and national sources, including local case studies
- Developing the vision for an Integrated Population Statistics System (IPSS)

The main purpose of the 2007 'Special Population Study' exercise was to reduce the risk that, when results become available from the 2011 Census, ONS are once again faced with unexpectedly large differences between the MYEs and the new census based population estimates. In 2001 those differences occurred partly because of problems with the Census and partly because of problems with the population estimates. During 2003 and 2004 the [Local Authority \(LA\) studies](#) work focussed on the potential problems with the Census, and concluded that there had been significant under-estimation in 15 areas. Having completed the Census-related work, ONS are now turning their attention to problems with inter-censal population estimates.

Since completing the LA studies last September, ONS have thought again about exactly what they are trying to achieve and what are the best statistical methods for achieving it. This reflection has led ONS to believe that there are a number of serious disadvantages to pursuing further investigations of the population estimates via a large scale fieldwork-based benchmark.

- A fieldwork-based benchmark would focus mainly on the problems and risks relating to a Census (where data is collected through fieldwork with households) rather than on the risks related to estimating the change in population between censuses (where data is collected through administrative sources and one survey, the IPS, of people at points of entry and exit to the UK).
- Without the resources and legal backing of a Census proper, fieldwork is unlikely to do a particularly good job of estimating the population, even if restricted to a small number of LAs. Additionally, fieldwork-based methods generally tend to under-estimate the population which was the key issue for the work on the 2001 Census. Over-estimation is the key issue for the inter-censal estimates, both because the national population was over-estimated prior to the 2001 Census and because most of the known shortcomings of the population estimates methodology are in the direction of over-estimation. Although that is the case for most local authorities, there might also be problems of under-estimation for particular local authorities.
- A benchmark in itself provides no information about why the population estimates are not sufficiently accurate; it simply provides an alternative measure. There is a need to analyse why the inter-censal estimates are not sufficiently accurate in order to improve them. Even if a full mid-term Census was carried out, it could only recalibrate the MYEs; it could not diagnose the flaws in the compilation of the MYEs. A benchmark would at best provide a one-off adjustment. The flaws would continue in the following years. The aim is to find improved or additional sources, methods and processes that can be built in to the process to improve all future annual estimates.

In light of these concerns ONS have developed the IMPS project, using the knowledge and experience gained carrying out the LA studies to investigate potential risks within the census and apply this to the inter-censal estimates. The approach used when investigating potential problems with the Census was based on identifying all the aspects of the census (ranging from enumeration in the

field to adjustments made by the One Number Census) where there was a significant risk that something went wrong. These areas of risk were then studied further by identifying quantitative measures that might be indicators of the risks and selecting the geographical areas with the most indicators of risk for detailed study. This approach not only diagnosed the potential problems but also provided the basis for adjustment when significant problems had occurred. As part of the IMPS project ONS are applying a similar approach to investigating the inter-censal estimates.

ONS have begun to identify the risks in each of the components of change in the population estimates : international migration; internal migration; births; deaths; adjustments for special populations such as armed forces and prisoners. ONS have already applied this knowledge in producing a cluster analysis grouping of LAs based on those with similar types of risk within the MYEs process. The intention is that these clusters will be used as the basis for selecting LAs to be researched through case studies.

Work is also ongoing assessing risk by looking at comparisons that can be made of both the level and the trend in those estimates with the level and trend of other sources such as council tax, electoral register, patient registers and benefit records. These comparisons will be used both in an initial quality assurance of the estimates themselves but have the potential to help us assess where estimates might be going adrift during the inter-censal period.

After much consideration ONS no longer think that a methodology centered on a field-based benchmark is the best way to progress. The IMPS project represents a substantial investment towards improving population statistics. The IMPS research plan allows ONS to target resources to the most important risks and problems, and to where improvements are most likely to be found. Crucially the IMPS project should help us identify where there are flaws in the compilation of the mid-year estimates and assist in identifying how these might be addressed to ensure that the gap between the 2011 MYEs and the MYEs estimates based on the 2011 Census is less than was the case in 2001, and that the gap that does exist is better understood.