

Beyond 2011

The future for population statistics?

Outline

- The Beyond 2011 Programme
 - Context
 - Why change?
- International Experiences
- Beyond 2011
 - Overview of the solutions
 - Progress
 - Alternative data sources
- Consultation
- Future plans

What is the census?

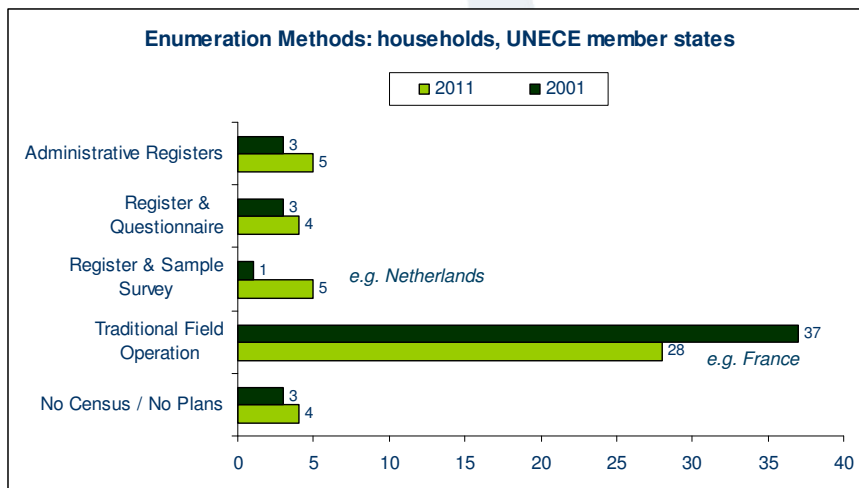
- A count (estimate) of the whole population
- Once a decade since 1801 (except 1941)
- Provides key statistics on population size and characteristics
 - Nationally, and for small geographic areas
 - Consistent and comparable
- The basis for national decision making
 - Service planning
 - Resource allocation
 - Policy making and monitoring
 - Social research
- EU regulations

The Beyond 2011 Programme

- Why look beyond 2011?
 - Rapidly changing society
 - Evolving user requirements
 - New opportunities – data sharing
 - Traditional census – costly and infrequent
- UK Statistics Authority to Minister for Cabinet Office

“As a Board we have been concerned about the increasing costs and difficulties of traditional Census-taking. We have therefore already instructed the ONS to work urgently on the alternatives, with the intention that the 2011 Census will be the last of its kind.”

International context



Census models – Census-based

- In Canada, all private households receive a short form and a 20% sub-sample receives a long form
- In Brazil, 10% receive a long form in areas with > 15,000 inhabitants and 20% receive a long form in areas with < 15,000 inhabitants. The remaining 80%-90% receive a short form



Census models - Admin Data-based

- Central Population Registers were established in all Nordic countries in the mid to late 1960s and unique personal identification numbers were established.

Administrative data as a source for the production of statistics was introduced in the early 1970s. Registers were first used in subject matter statistics, beginning with population statistics and income statistics.

Subsequently, new register-based statistics were developed in all countries.



Census models - Admin Data-based

- In the Netherlands a 'Virtual Census' approach has been adopted since 1971. Combines information from registers and available survey data. Basis for virtual census is the central Population Register. Datasets are obtained from survey sources and used to deduce individual data as at the relevant point in time. There are limitations to the outputs produced, in particular reduction in quality and accuracy of outputs based purely on survey data



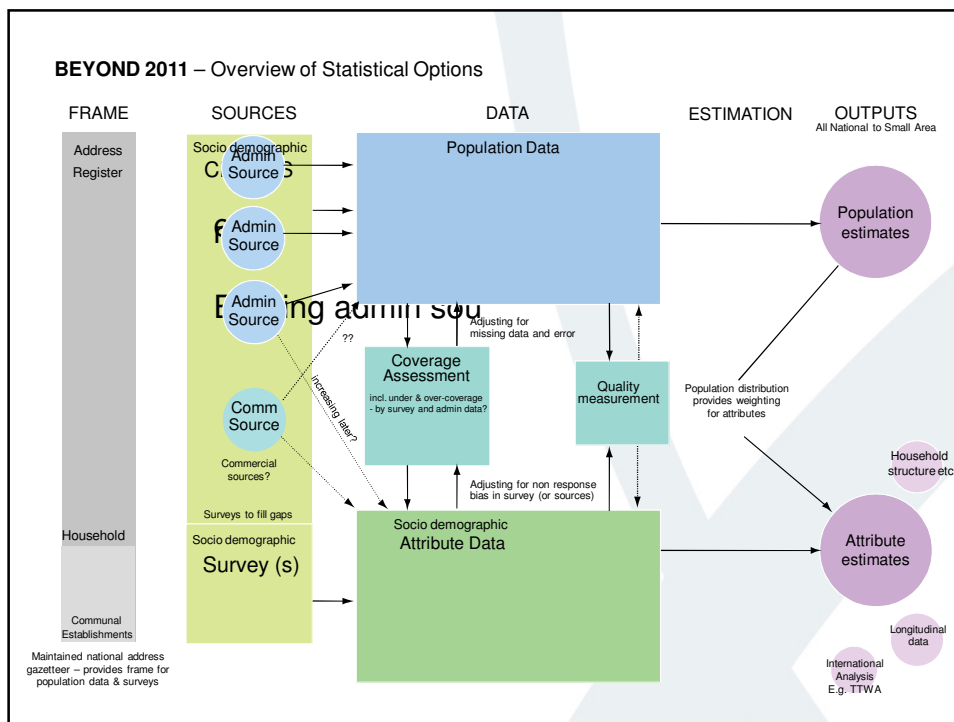
Census models – survey-based

- France has a rolling census. Some 20% p.a. of households in small towns and villages (population less than 10,000) and some 8% p.a. of those in large towns and villages are covered. The intention is to cover the whole population over time. The exercise is compulsory.
- The USA is continuing with a ten yearly short form census, but has introduced the American Community Survey as a replacement for the long form census. The survey is compulsory and the typical sample is 2.5% per state (higher in some states). The data collection approach is post out/post back first, then telephone interview, then face to face interview.



Statistical Development

- Statistical development in 3 work streams
 - Census-type designs
 - Individual-level administrative data
 - Low level aggregate data
- Use of social surveys considered across all options
- Short list of models early 2012 to be compared with 2011 Census outputs



Censuses

- **Advantages**
 - Lots of data
 - Small area levels
 - Good accuracy
 - Known issues
- **Disadvantages**
 - Point in time
 - Costly (500m)**
 - Not reactive
 - Burdensome
 - Not very efficient

Administrative data

- **Advantages**
 - Cheap to get
 - Little extra burden
 - Ongoing
 - Down to small area level
- **Disadvantages**
 - Matching / linking issues
 - Not necessarily the right topic
 - No control
 - Unknown issues (statistical and practical)
 - Legal issues for access

Surveys

- **Advantages**
 - Known issues
 - Relatively cheap
 - Efficient
 - Can be continuous
 - Complex topics
 - Reactive
- **Disadvantages**
 - Not down to small areas (easily)
 - Lots of estimation
 - Some burden

Census-type designs and survey work

- Detailed review of the Rolling Census
- Use of survey for production of both population and socio-demographic outputs
- Use of surveys to provide socio-demographic outputs
 - Existing surveys
 - Developing survey work programme

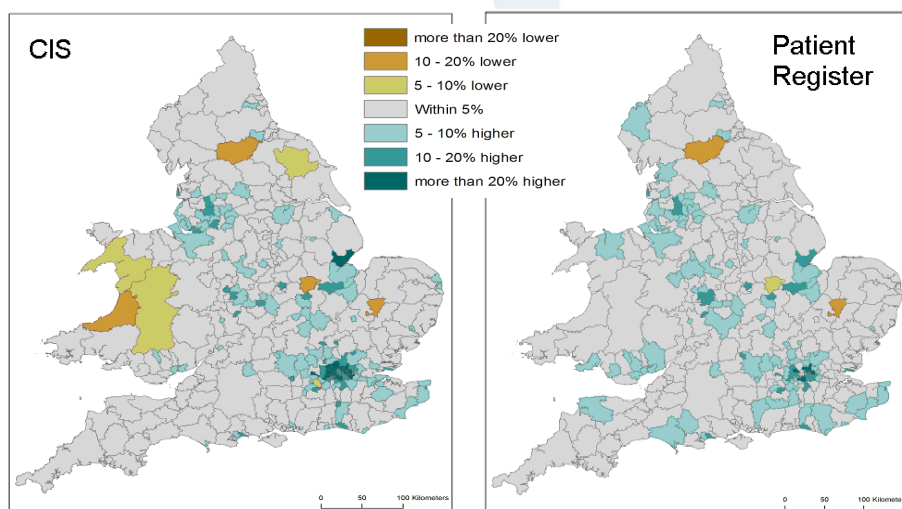
Individual-level administrative

- Combining administrative data at an individual level
- Address register will be a key component
- Issues around record linking and different approaches for combining data sources
- Coverage assessment and adjustment
- Issue related to privacy/security

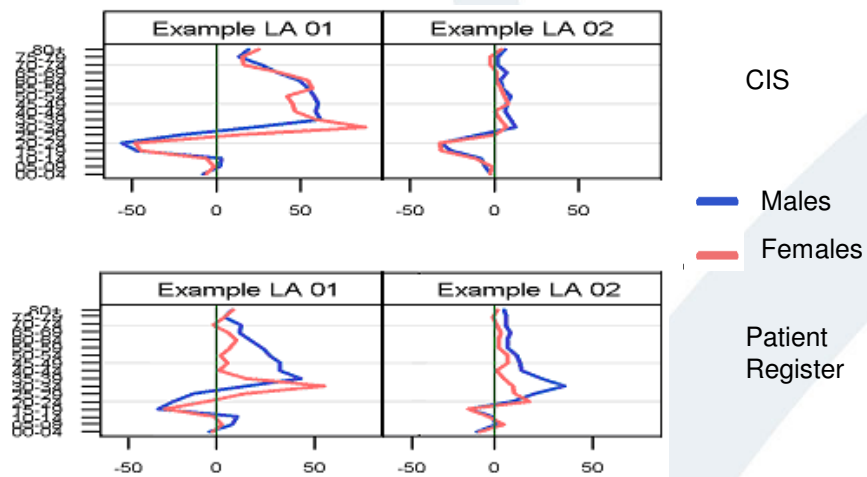
Low level aggregate data

- Current work focused on 5 admin sources:
 - DWP / HMRC Customer Information System
 - NHS Patient Register
 - School Census
 - HESA Student Data
 - Migrant Worker Scan
- Comparative analysis
- Model development

Percentage difference of total population of broad coverage sources from mid-year estimates



Percentage difference by age group in university towns and cities



Low level aggregate models

1. Basic model
2. Basic model plus weighting
3. Basic model plus coverage survey
4. Statistical model based approaches
5. Hybrid approach

Alternative data sources

- Recognised need to investigate alternative data sources:
 - Commercial sector
 - Internet
- Used to understand, assess and potentially improve the quality of outputs
- Review use of alternative data for official statistics nationally and internationally

Working with the commercial sector

- Workshop held on 24th Jan
- Established 'Virtual Expert Group'
- Potential to extract data for Census day established
- Case studies on priority issues
- Progress made here with Experian

Beyond 2011 – judging the options

- Quality
 - Relevance
 - Accuracy
 - Timeliness
 - Accessibility and clarity
 - Comparability
 - Coherence
- Cost
- Acceptability
- Risk

User Consultation

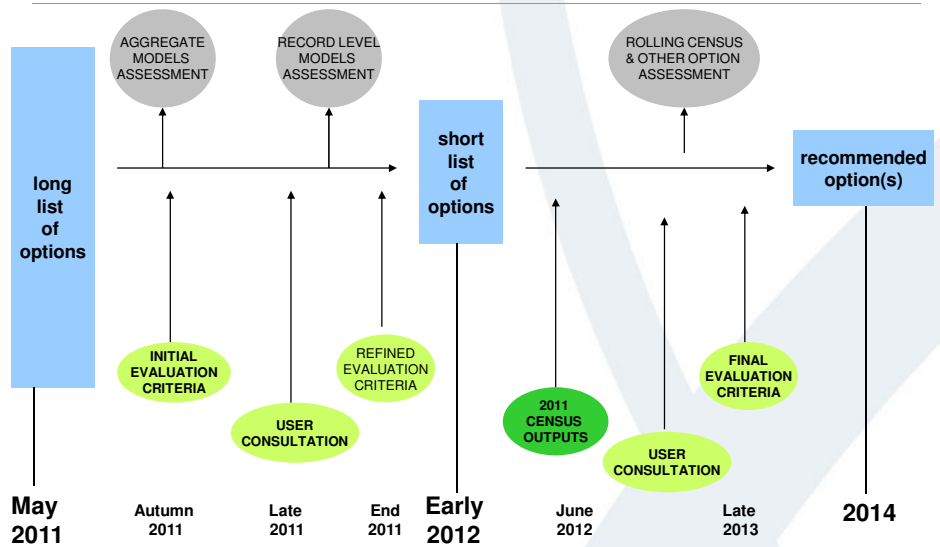
- 03 October – 24 December 2011
- Consultation document and questionnaire
- Workshops
 - London 21 October (RSS)
 - London 14 November
 - Leeds 3 November
 - Cardiff 8 November

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Wider Engagement Strategy

- Co-operation with devolved administrations
- Public acceptability - public consultation 2013
- Legal issues
- Political issues

Beyond 2011 – timetable



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