



Administrative Data Census

An update on progress

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What do we mean by an Admin Data Census?

- **Aiming to replicate as many census outputs as possible using admin data (and surveys) by 2021 to compare with 2021 Census**
 - **Recommendation in 2023**
- Three key types of Census outputs:
 - Size of population
 - Number and structure of households
 - Characteristics of housing and the population
- **Lot of potential with admin data but alone it won't provide the complete solution**
- **Need access to range of admin data and combine with surveys.** Likely to need two new surveys:
 - Annual 1% coverage survey to help measure size of population and households
 - Annual characteristics survey – size to be confirmed

How will we know if we're ready to move to an ADC?

Research outputs

- expanding the accuracy and/or breadth and/or detail each year
- not Official Statistics

Assessment every Spring

- using five high level criteria covers where we are now and where we expect to be by 2023

To make the comparison to 2021 Census as fair and robust as possible, we will need to produce the best possible Administrative Data Census outputs in 2021

- ADC population estimates by 2020
- Live population characteristics survey and methods in 2021
- Systems, services and technologies in place

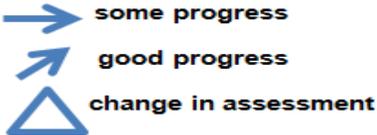
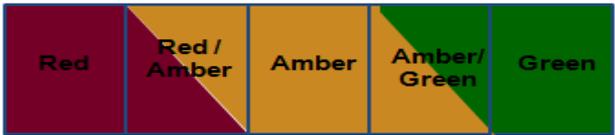
What have we done

- Digital Economy Act 2017 – pathway to accessing priority data sources
- Improved accuracy population estimates (improved methods & data sources)
- New outputs on number of occupied addresses (households) and income outputs
- Identified admin sources and described methods to produce characteristics outputs

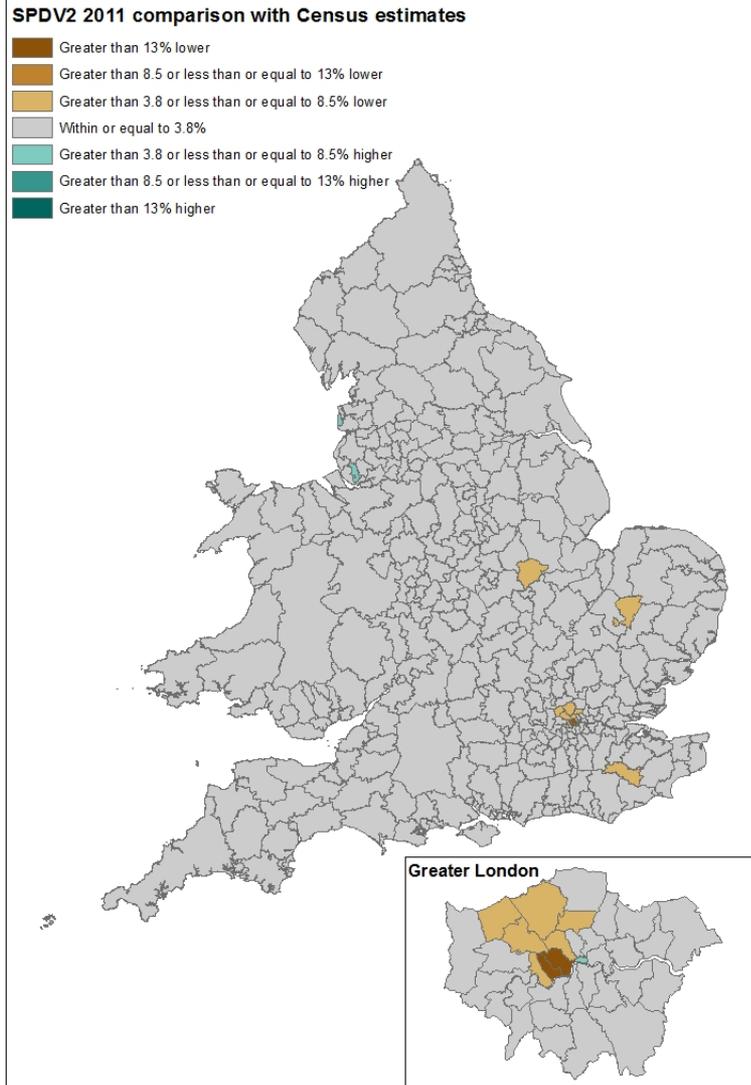
This years assessment

Evaluation Criteria		2016 Assessment	Progress made since 2016	2017 Assessment	Expected progress by 2018	Expected assessment by 2023
Access to data						
Ability to link						
Ability to meet information needs of users	Population estimates					
	Household and families estimates					
	Population and household characteristics					
	Housing characteristics					
Acceptability to stakeholders						
Value for money						

Key to chart
RAG status

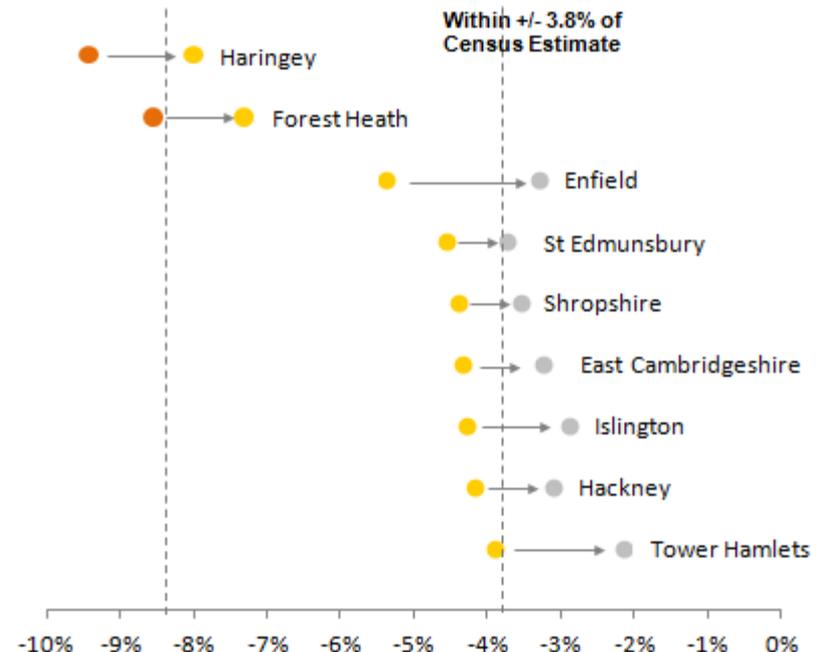


Progress so far – size of the population

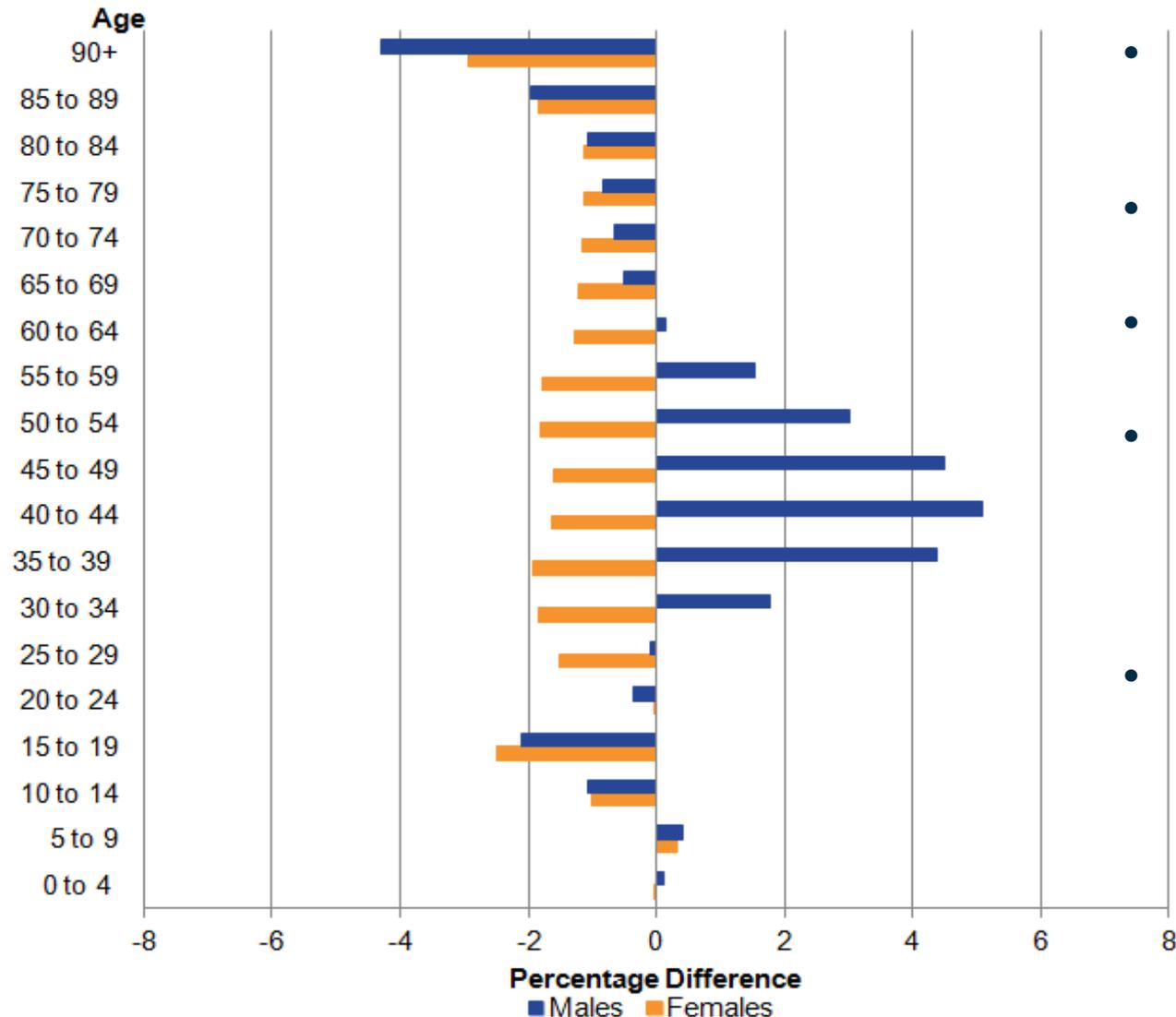


- New methodology v2
- 96% of LA's (334) are within the quality standard
- This compares with 94% (327) using V1

LA's moving into P1 and P3 quality standards (total populations)



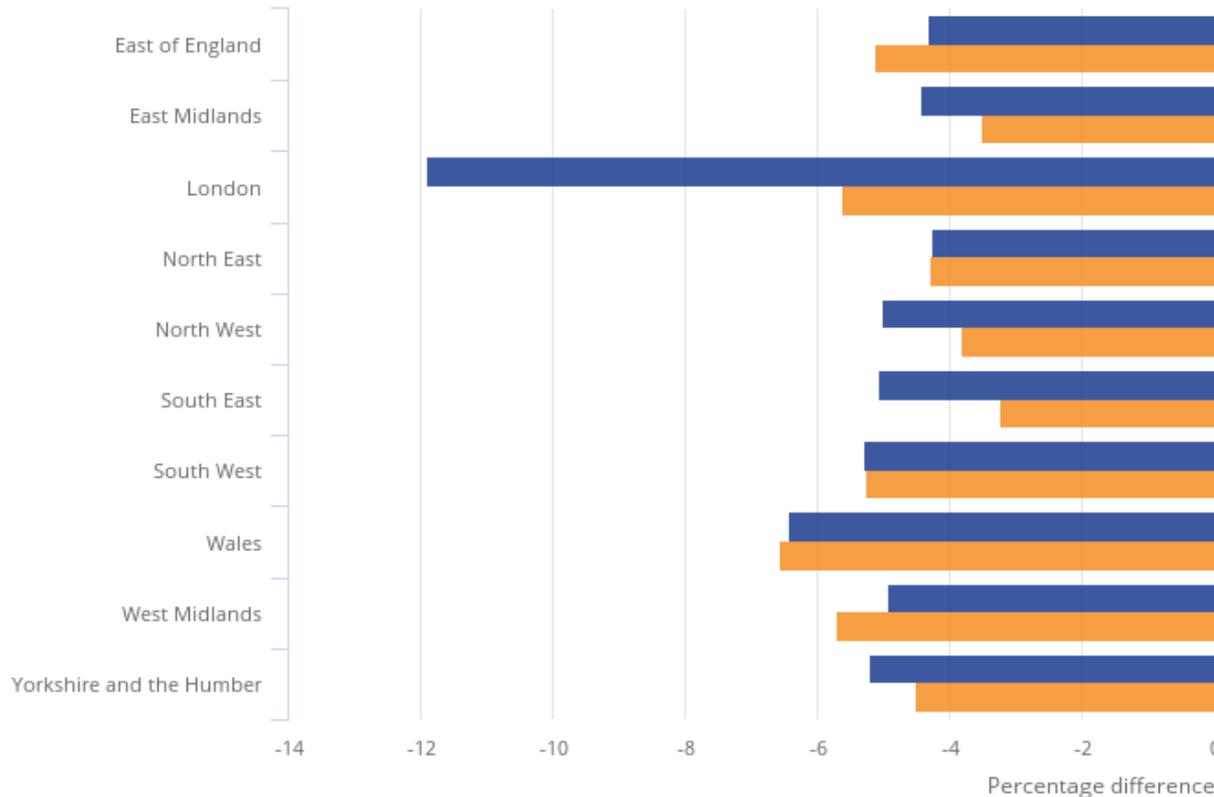
Comparison of SPD V2.0 with 2011 Census by five-year age group and sex, England and Wales, 2011



- Local authority totals hide some of the differences at age/sex
- Develop use of activity data
- Develop estimation methods – publish Feb
- Further development of appropriate methods to independently assess quality of population estimates
- Population Coverage Survey Test strategy and design, first test late 2017

Progress so far – number of occupied addresses (‘households’)

Comparing with Census for 2011 and LFS figures for 2015

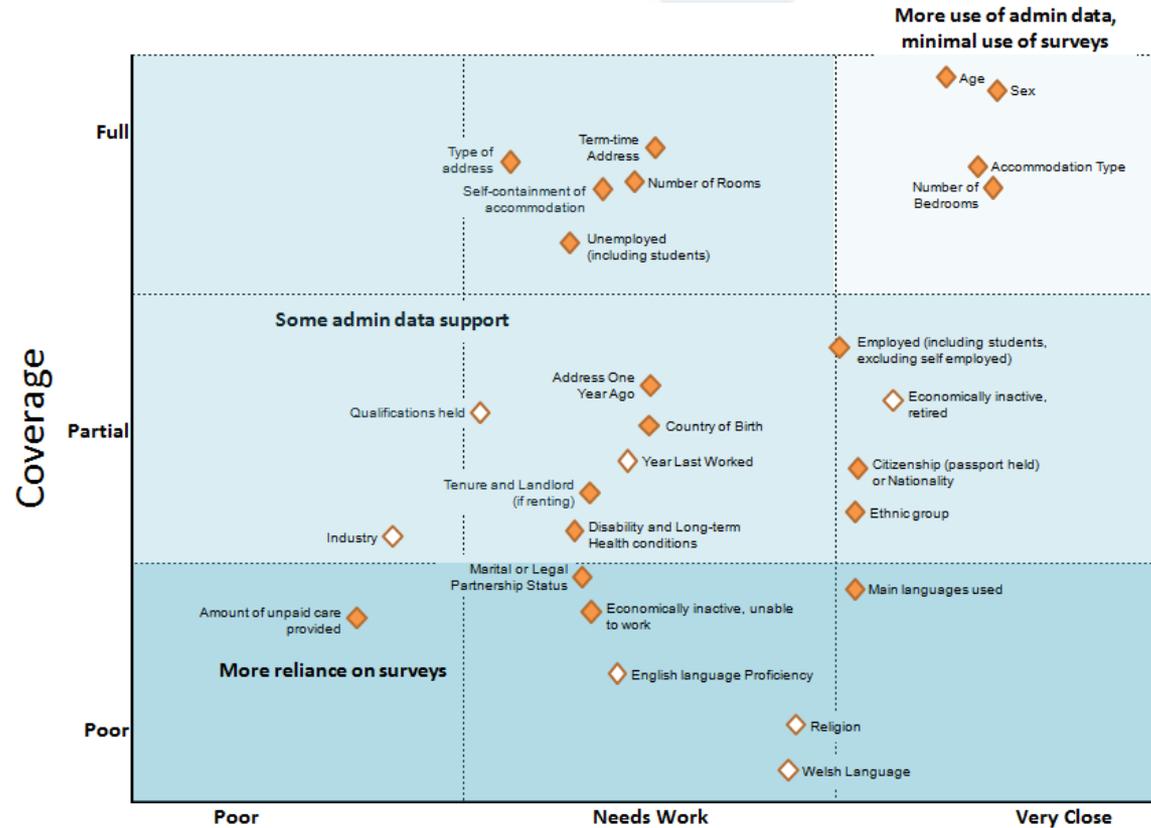


● difference from 2011 Census estimate ● difference from 2015 LFS estimate

Source: Office for National Statistics

- The definition of ‘households’ is based on identifying occupied addresses in administrative data
- This is different to the traditional definition used in censuses and surveys.
- Also produced household size and used SPREE methodology to combine admin and survey data

Assessment of admin data to support progress on characteristics topics



- ◆ Some data available to ONS
- ◇ Some data exists, but it is not available to ONS

Characteristics where data is not available, and there is insufficient meta-data to subjectively score.

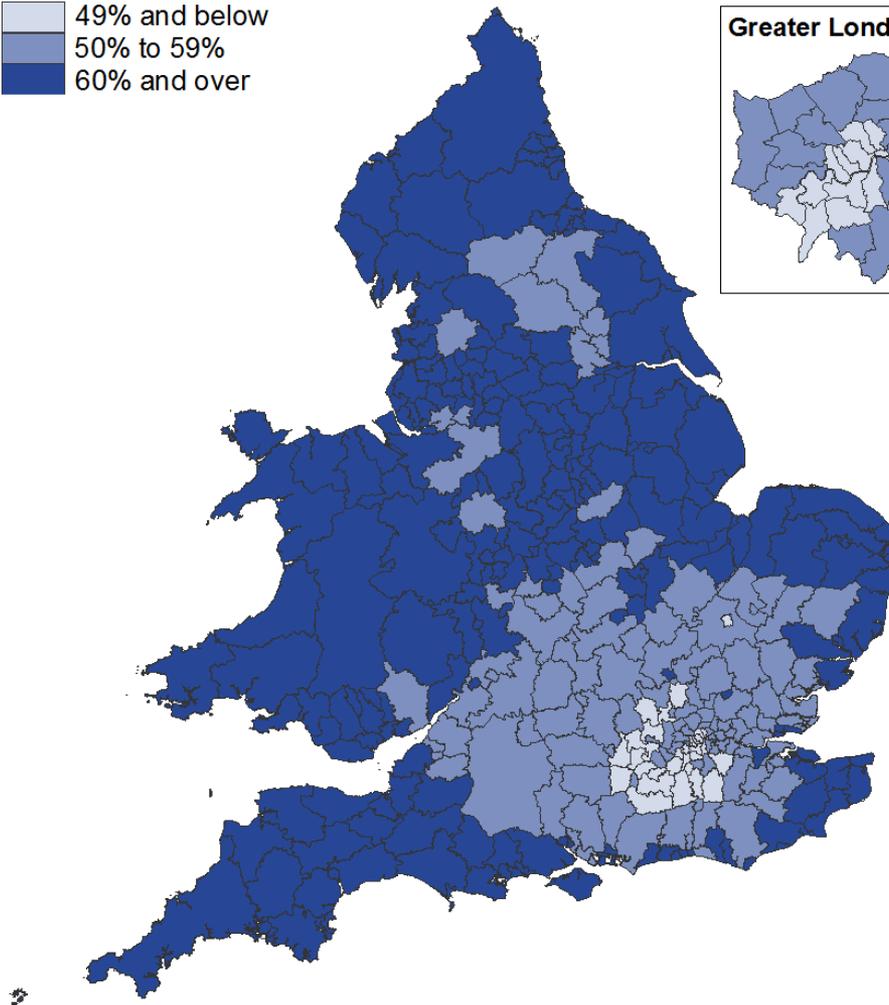
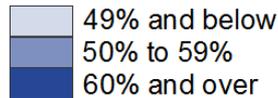
- Household Composition
- Number of hours worked
- Second residences (other addresses)
- Number of cars and vans
- Migration (Year of arrival, Length of stay)

- Characteristics with no accessible data:**
- General Health
 - National Identity
 - Address of place of work
 - Supervisor status
 - Method of transport to place of work
 - Economically inactive, looking after family
 - Family relationships
 - Occupation

Percentage of the population with PAYE and benefits income of £20,000 or below by local authority

Tax year 2013/14

Males and females, aged 16 and over



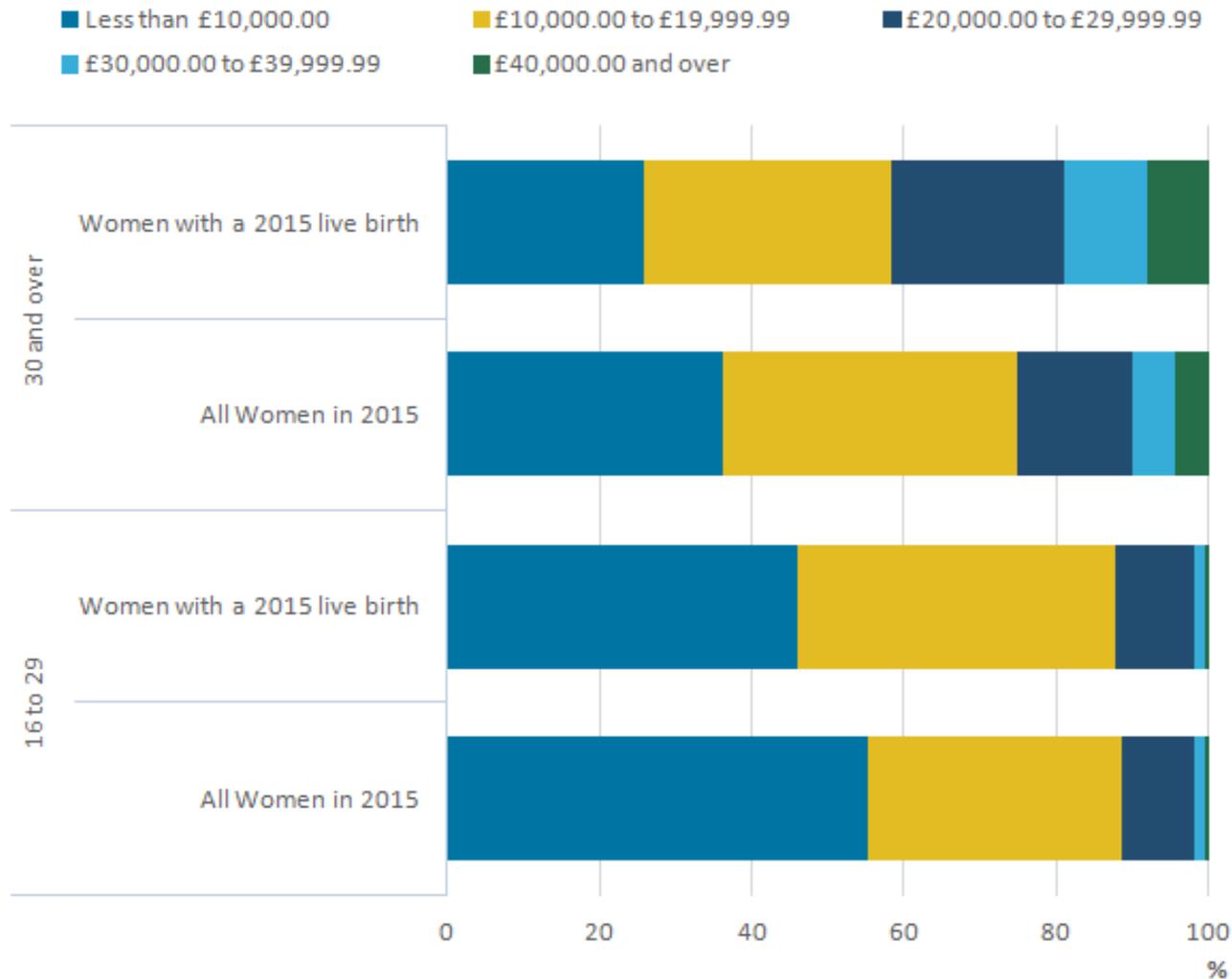
Notes:

Data Source: Pay As You Earn (PAYE) employment and pension data and tax credits data from HMRC and benefits data from DWP.

Limited as a number of components of income are missing, e.g. Self Assessment

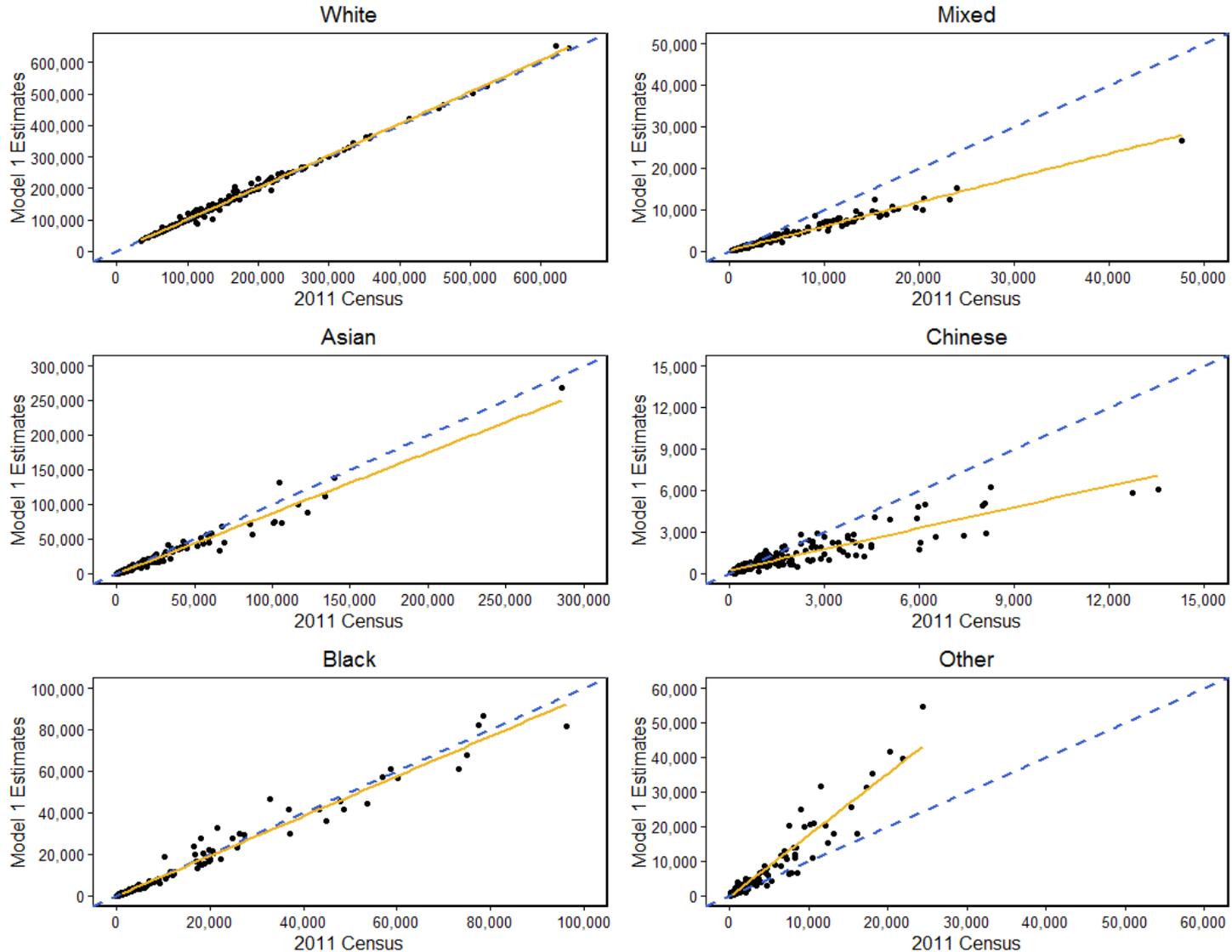
PAYE and benefits income refers to individual gross nominal annual estimates income

New mothers' income from PAYE and benefits



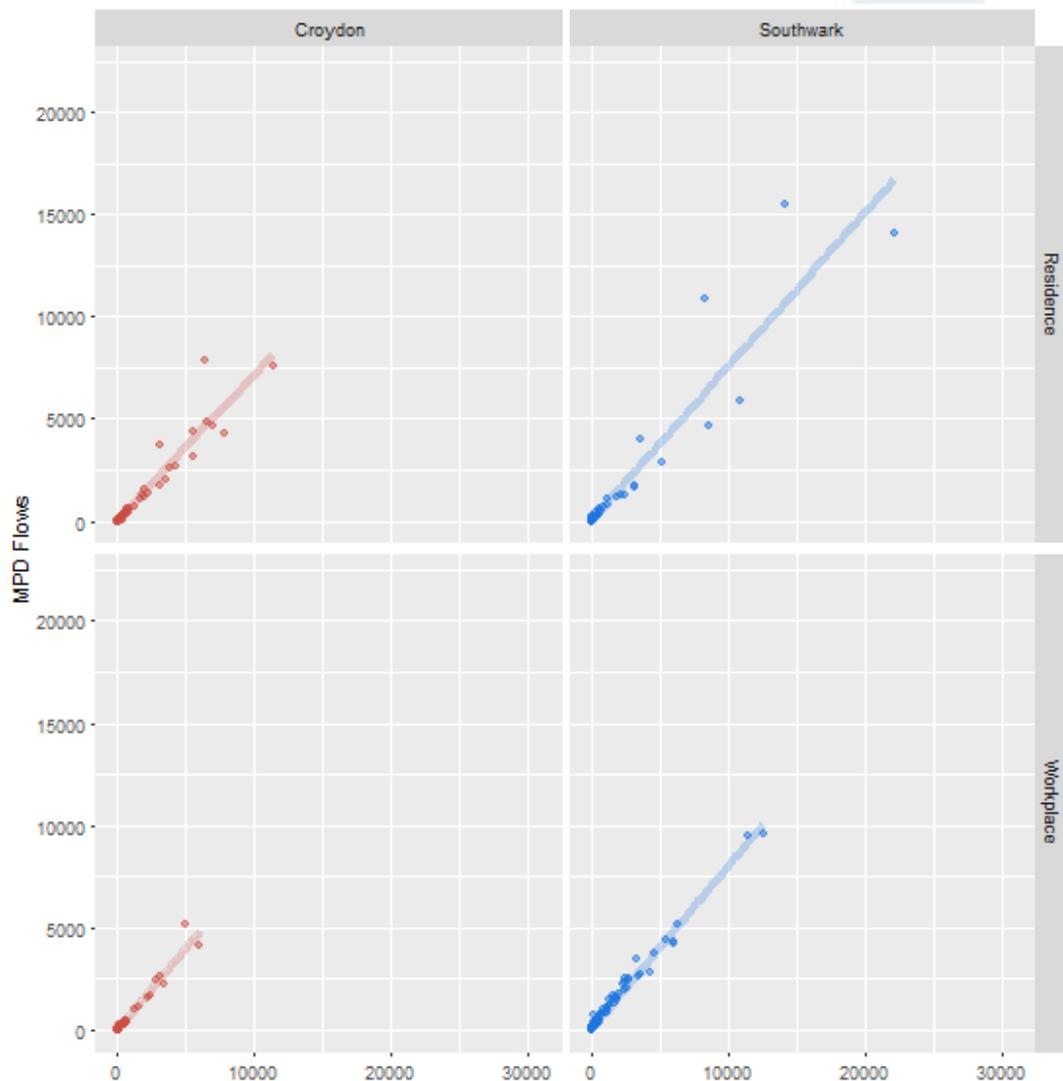
Source: Office for National Statistics
Tax year ending 2014 for women who had a live birth in 2015 and all women in 2015

Ethnicity - GSPREE model vs 2011 Census



Source: Office for National Statistics

Using mobile phone data to estimate commuting flows



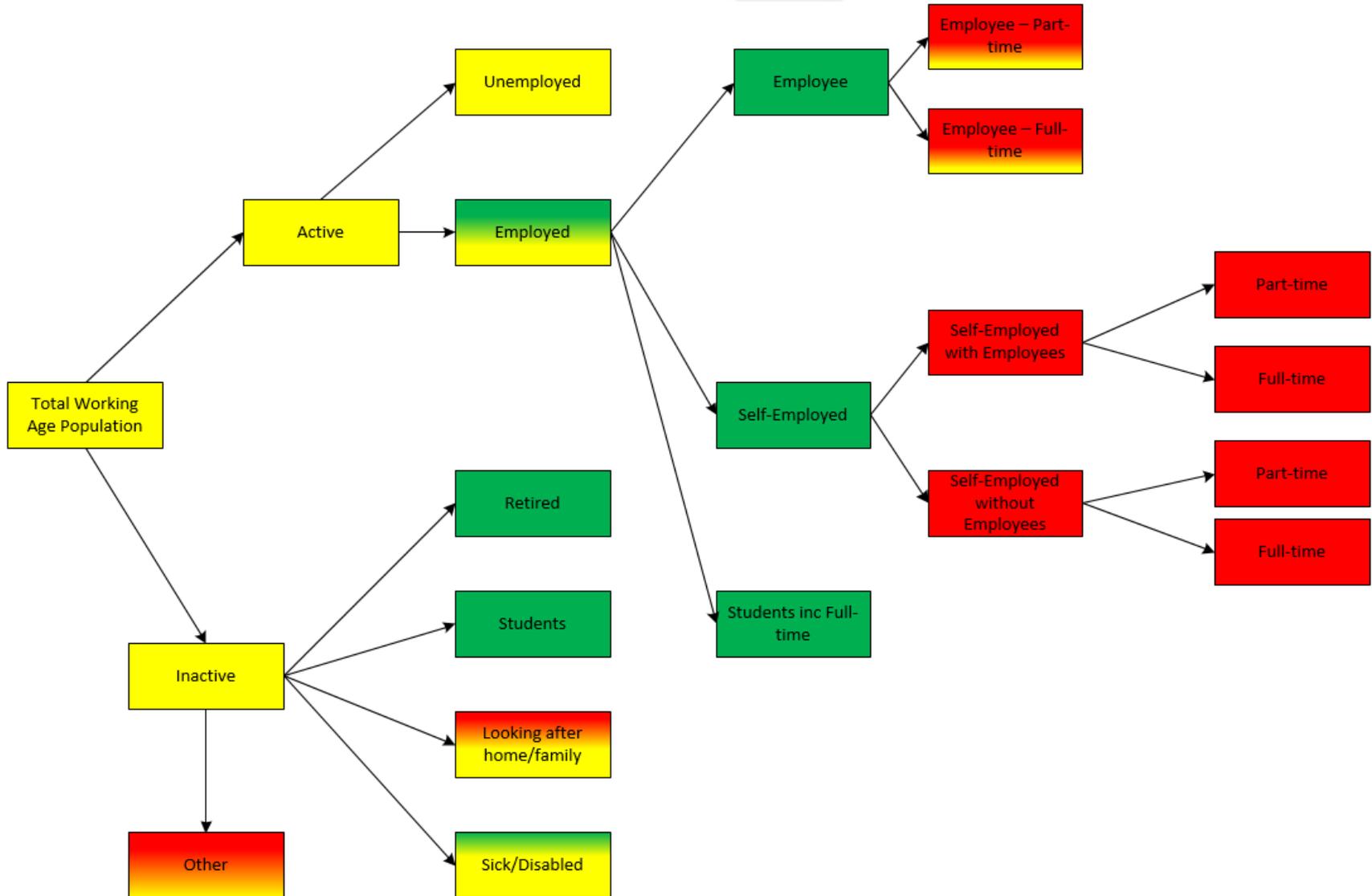
Source: Office for National Statistics

Notes:

Mobile phone data flows dated to 30 June 2015, re-weighted to ages 16 and over

Census data adjusted to represent 30 June 2015, ages 16 and over

Economic activity



Challenges

Some of our main challenges for an Admin Data Census are:

- To develop a methodology and survey for coverage adjustment
- To estimate international migration
- To produce small area AND multivariate outputs

Keen to hear from anyone working on similar challenges or any lessons learnt

Stay in touch

- Publications on
www.ons.gov.uk/census/census-transformationprogramme/administrative-data-census-project
- Follow [@becky_tinsley](https://twitter.com/becky_tinsley)
- You can contact us on:
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