

Small Area Income Estimates

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Outline

- Some thoughts on Household finance transformation in ONS
- Developing our outputs:
 - Small area income estimates / ABIS
- SAIE 2017/18
- Future Work

Household finance transformation

- New technology
- Access to administrative data
- Policy interest in income, consumption and wealth
- Greater precision of estimates required
- Reducing respondent burden

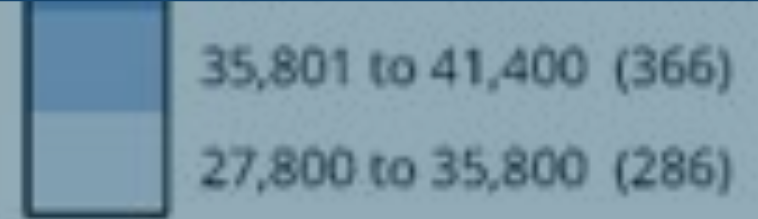
ONS ambition for admin data

Ambition is to put admin data at the heart of social statistics

In household finance statistics context, this includes -

- Developing our surveys - Survey question replacement, improving estimates, and improving sampling
- Improving small-area income statistics
- Producing 2021 Census income statistics

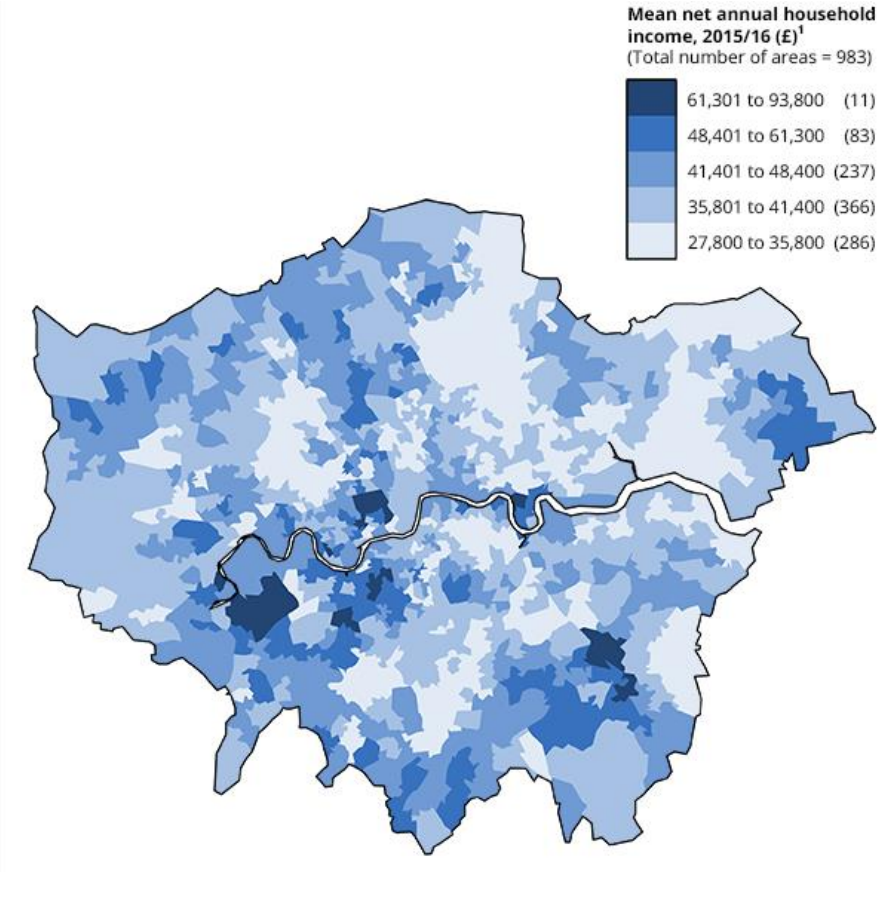
Small area income estimates (SAIE)



Survey based small area income estimates

- **SAIE are the official estimates of mean annual household income at a local area level and are designated National Statistics.**
- **SAIE are calculated using a combination of survey data from the Family Resources Survey (FRS), and published data from the Census and various aggregate admin data sources.**
- **FRS is a national survey, for most local areas there is a small, or even non-existent sample, so a model-based method is used.**
- **The models are used to discover which variables in the data relate to income on the FRS at a national level, these variables are then used to predict income at a local level**

Model-based mean net annual household income by middle layer super output area, London, financial year ending 2016



LA Estimates

- **SAIE are produced at middle layer super output area (MSOA) level. The estimates can be aggregated to LA level but the associated confidence intervals can't be produced, due to the modelling methods used.**
- **Transformation work is addressing this issue when improving the SAIE**

Other developments

- **Exploring the use of survey data from the Household Finances Survey instead of the FRS**
- **Looking at potential for greater use of admin data to help improve the SAIE models**
- **Examine potential for comparing areas (currently difficult due to CIs)**
- **Look to incorporate more contextual information e.g. male/female information**

Admin data based small-area income statistics

- Admin-based income statistics – Lower Level Super Output Area level income estimates calculated purely from administrative data.
- Response to user demand for small-area income statistics
- Published update in December 2018
- Various developments – including to equivalisation, publication of percentiles, publication of net (in addition to gross) income, comparison to survey-based estimates
- Still missing some components of income, including in particular self-employed income

Small area income estimates (SAIE)

New release 17/18 data

4 measures used at MSOA (E+W)

- Total annual household income (unequalised):
 - the sum of the gross income of every member of the household plus any income from benefits i.e. wages and salaries, self-employment, pensions, investments, benefits
- Net annual household income (unequalised):
 - the sum of the net income of every member of the household i.e. all income minus income tax, national insurance, rates/council tax, maintenance/child payments deducted through pay, contribution to students living away, contributions to occupational pensions
- Net annual household income before housing costs (equalised):
 - the same as net annual household income unequalised but is then subject to an equalisation scale
- Net annual household income after housing costs (equalised):
 - uses the same elements as net annual household income but also deducts housing costs i.e. rent, water rates, mortgage interest payments, structural insurance premiums, ground rent/service charges prior to the equalisation scale

Selected co-variate data

Census, 2011

Department for Work and Pensions benefit claimant counts, August 2017

Valuation Office Agency Council Tax Bandings, March 2017

The Council Tax bands for England and Wales are not consistent, therefore separate covariates are defined for England and Wales.
In Wales,

Office for National Statistics, House Price Statistics for Small Areas, Q1 2018

Department of Energy & Climate Change, Energy Consumption data, 2017

Her Majesty's Revenue and Customs, Pay as You Earn data, 2017/18

Regional/country identification variable

Stats Bulletin (5th March)

- Interactive maps
- New layout
- Interactive charts
- Dataset available

Future work

- Publication of small area poverty estimates
- Further use of admin data
- Combining SAIE and ABIS?

Any Questions?



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