



Office for
National Statistics

Examining the Distribution of Household Income, Consumption & Savings in a National Accounts Framework

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Once upon a time...

...there were two economists...

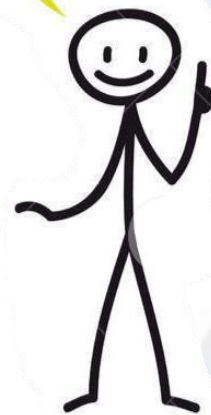
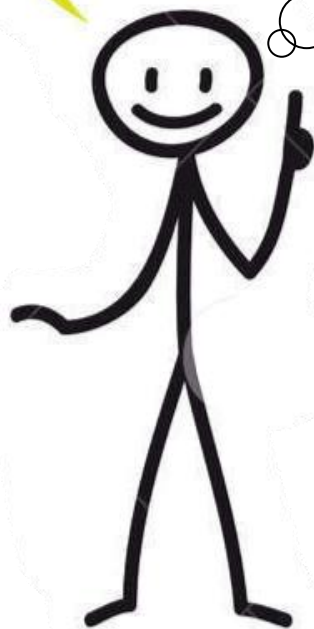
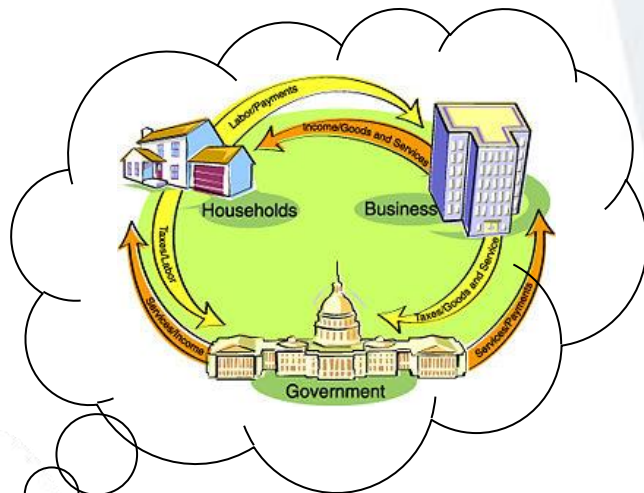


Mike Rowe



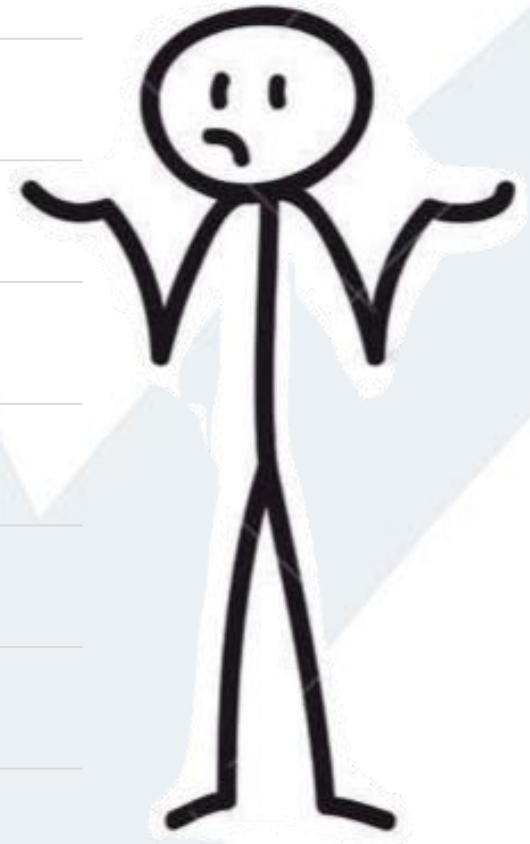
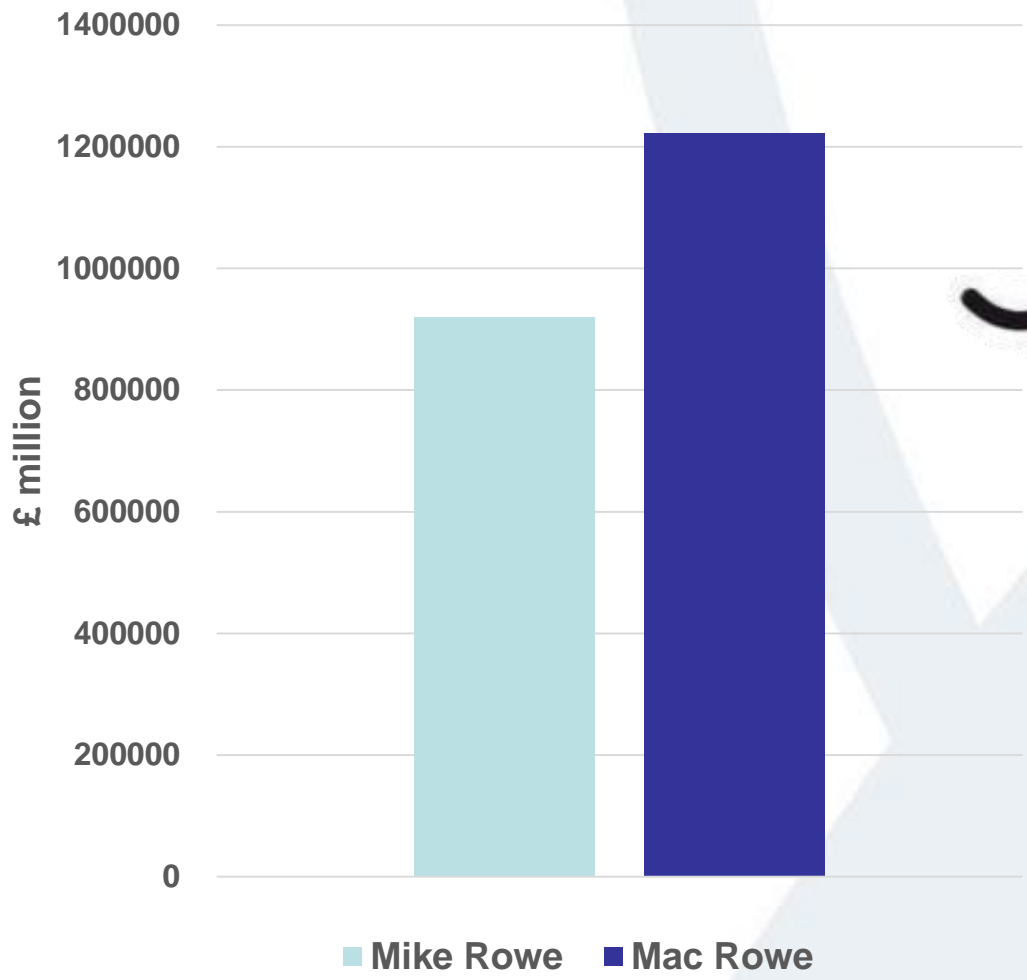
Mac Rowe

Mike and Mac both wanted to know about household incomes & spending...



One day, Mike and Mac decided to compare what they'd each found out...

UK Household Income, 2015



Reconciliation of micro/macro figures: Why?

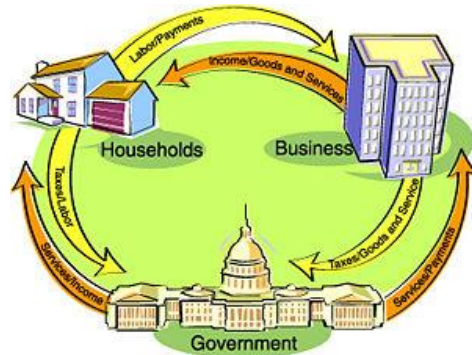
- **Coherence for users**
 - Why are the figures different?
 - What does it mean for how I should be interpreting them?
- **Helps producers develop methods/sources**
 - Where is under-coverage a particular issue, and why?
- **Facilitates production of distributional analysis within National Accounts framework**
 - Provides view of distribution of ICW consistent with economy-wide totals
 - Alignment to SNA aids international comparison
 - See e.g. Tonkin & Wildman (2016); Zwijsenburg et al. (2017)

Why might micro and macro figures differ?

- **Population coverage**
 - E.g. micro-statistics based on surveys typically only cover population living in private households
- **Conceptual differences**
 - Income and consumption concepts differ in macro (UN, 2008) and micro (UNECE, 2011; OECD, 2013) standards/guidelines
- **Measurement error**
 - Evidence of under-reporting in household surveys in different parts of distribution, with some evidence of decreasing coverage (e.g. Crossley & O'Dea, 2010; Brewer & O'Dea, 2012).

Alternative measures of NA income & saving

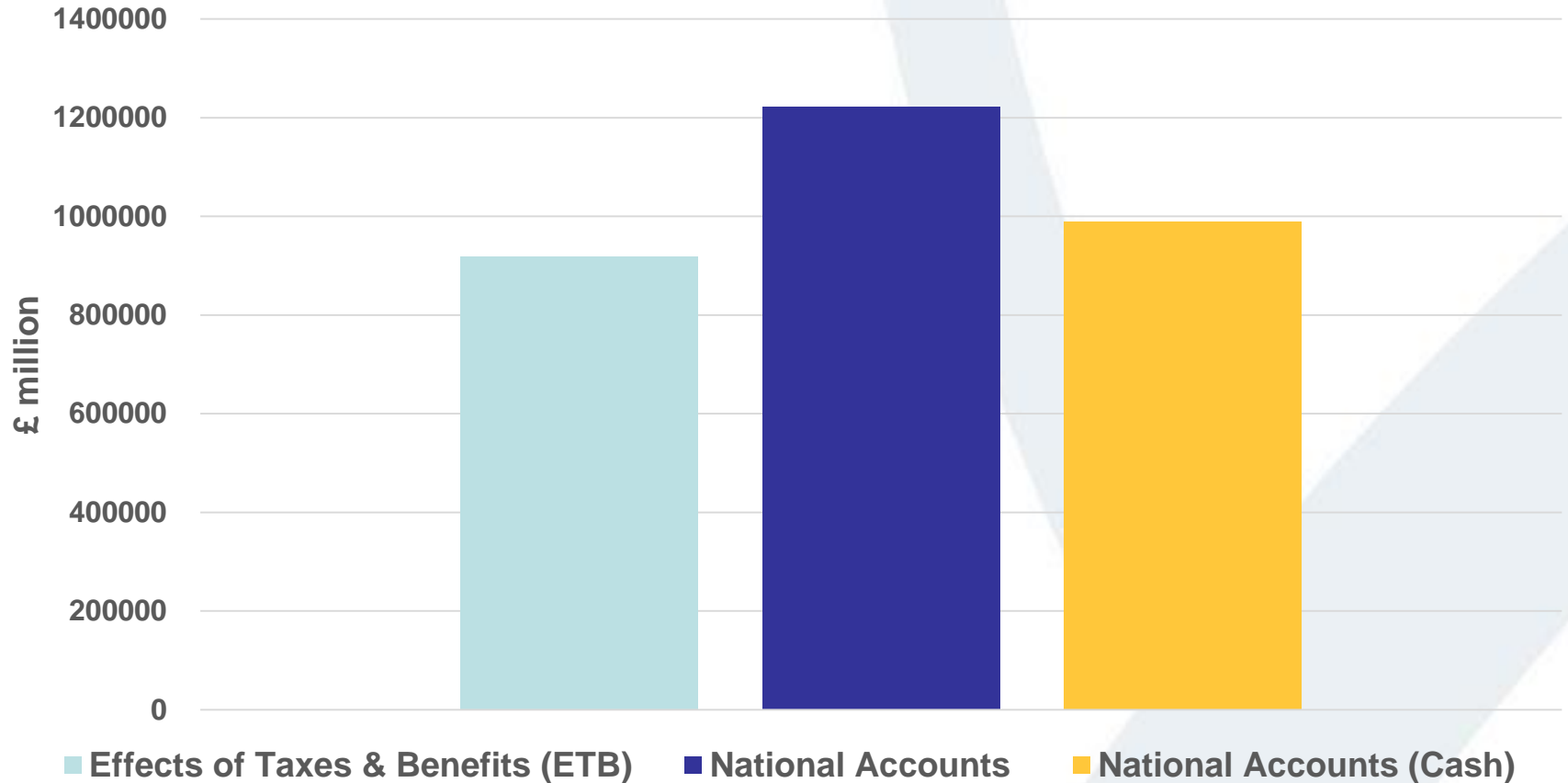
- Micro & macro statistics developed for different purposes



- NA figures include transactions not directly observed by households
 - E.g. imputed rent, FISIM
- NA figures also historically combined households & NPISH
- ONS have therefore developed 'cash' measures of household disposable income & saving
 - Consistent with UNECE (2011) & OECD (2013)

RHDI on a 'cash' basis

UK Household Income, 2015

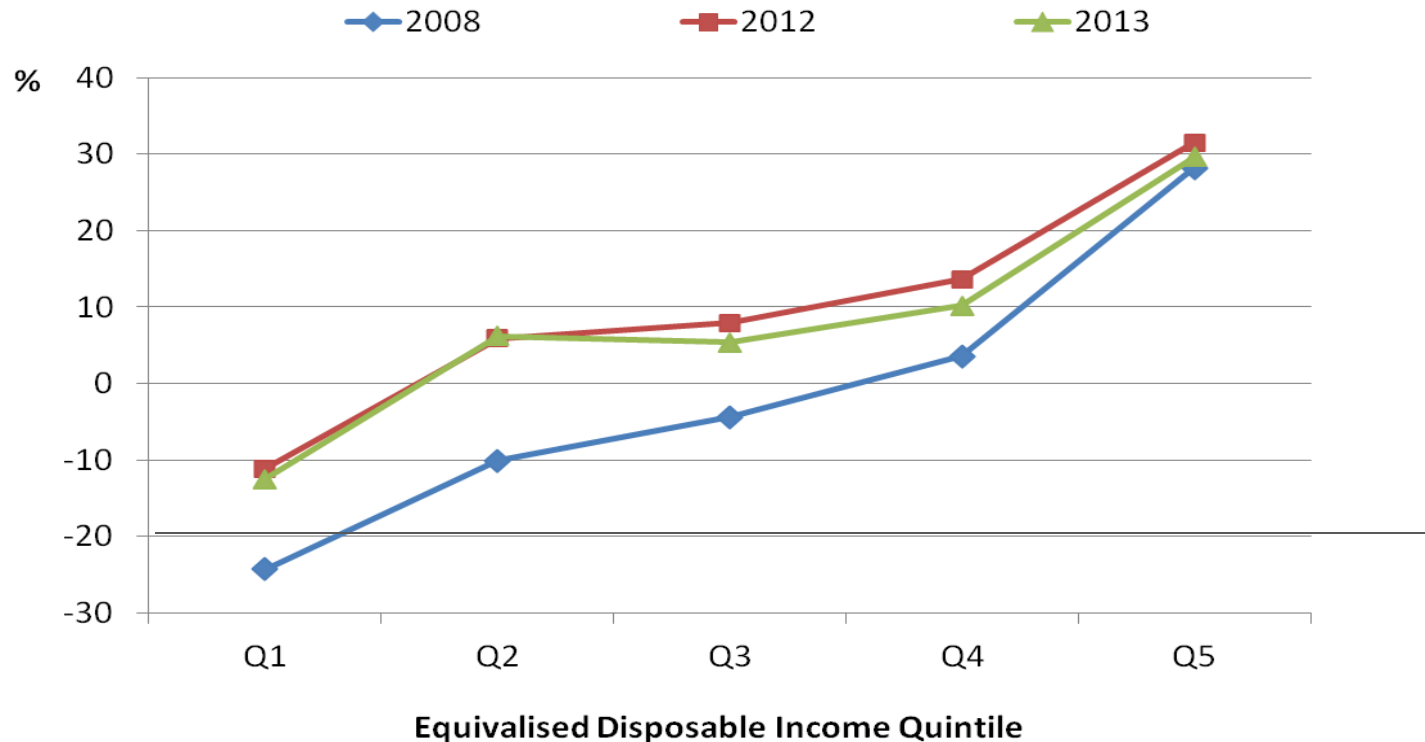


- Closer alignment at aggregate level, but still differences (due to population coverage, under-reporting etc.)

Distributional analysis within National Accounts framework

- As part of OECD Expert Group, ONS produced initial distributional income, consumption & savings measures consistent with national accounts concepts and totals
- Where possible, micro variables mapped on to the relevant NA income and consumption variables
- Microdata then imputed/scaled to NA totals
- UK Results for 2008, 2012 & 2013 published as 'Experimental Statistics'
 - ONS publication highlights analytical value but also methodological challenges
 - Positive response from users – continuing to develop & will be working with OECD as well as ESCoE & EEWG members

Savings as % of adjusted disposable income, by equivalised disposable income quintile

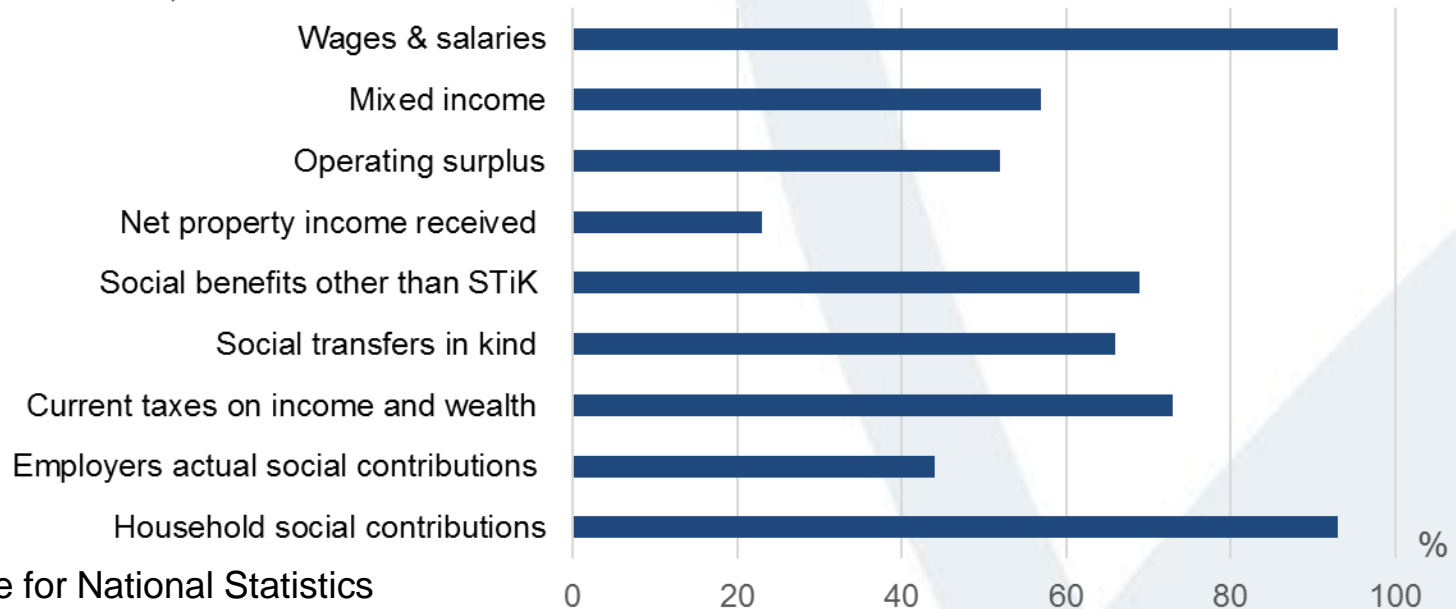


Source: Office for National Statistics

- Initial exercise highlights analytical value but also methodological challenges
- Differences between micro/macro figures mean considerable assumptions needed – caution needed in interpreting figures

Micro statistics coverage rates

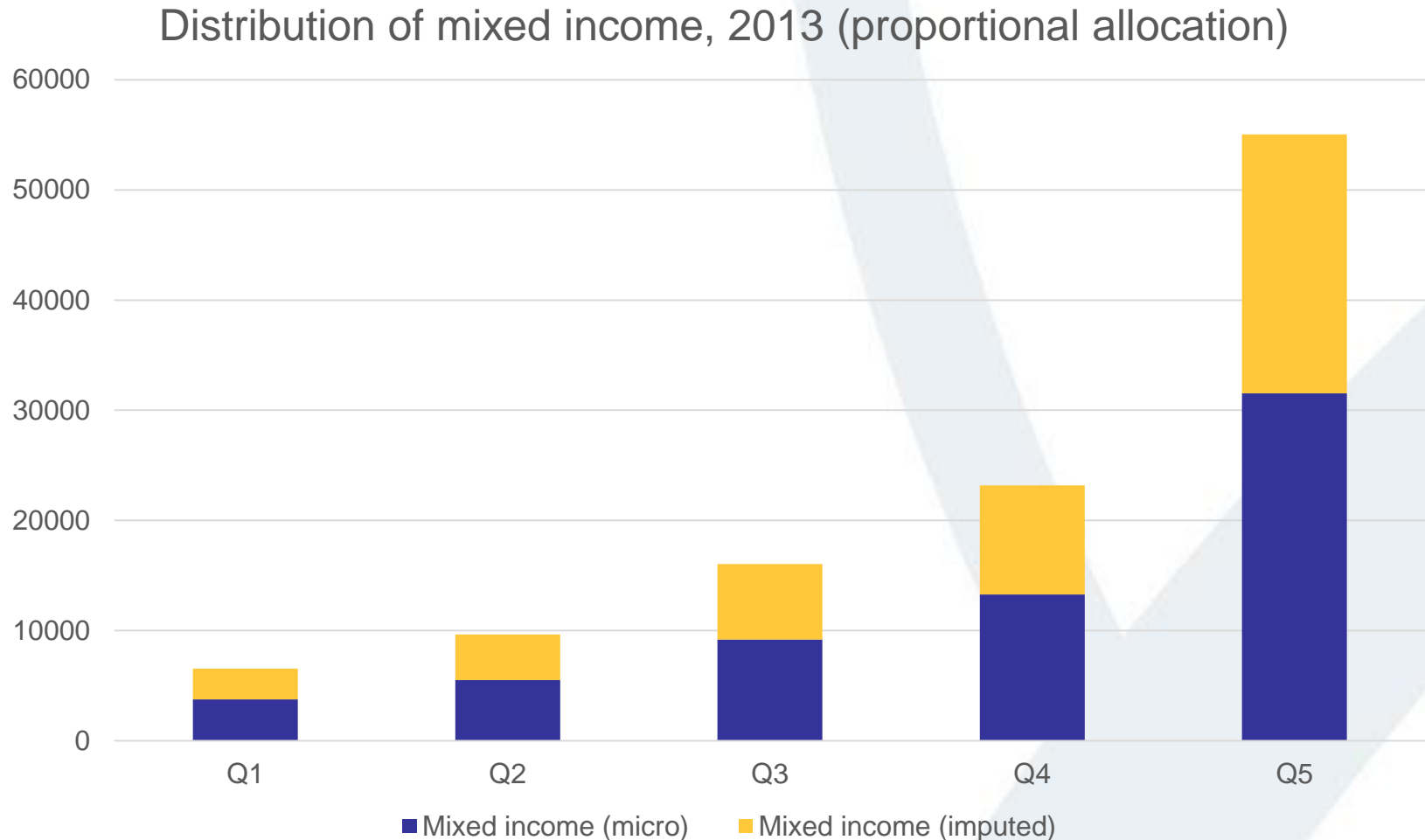
Coverage of survey based estimates of NA aggregates for income, 2013, UK



Source: Office for National Statistics

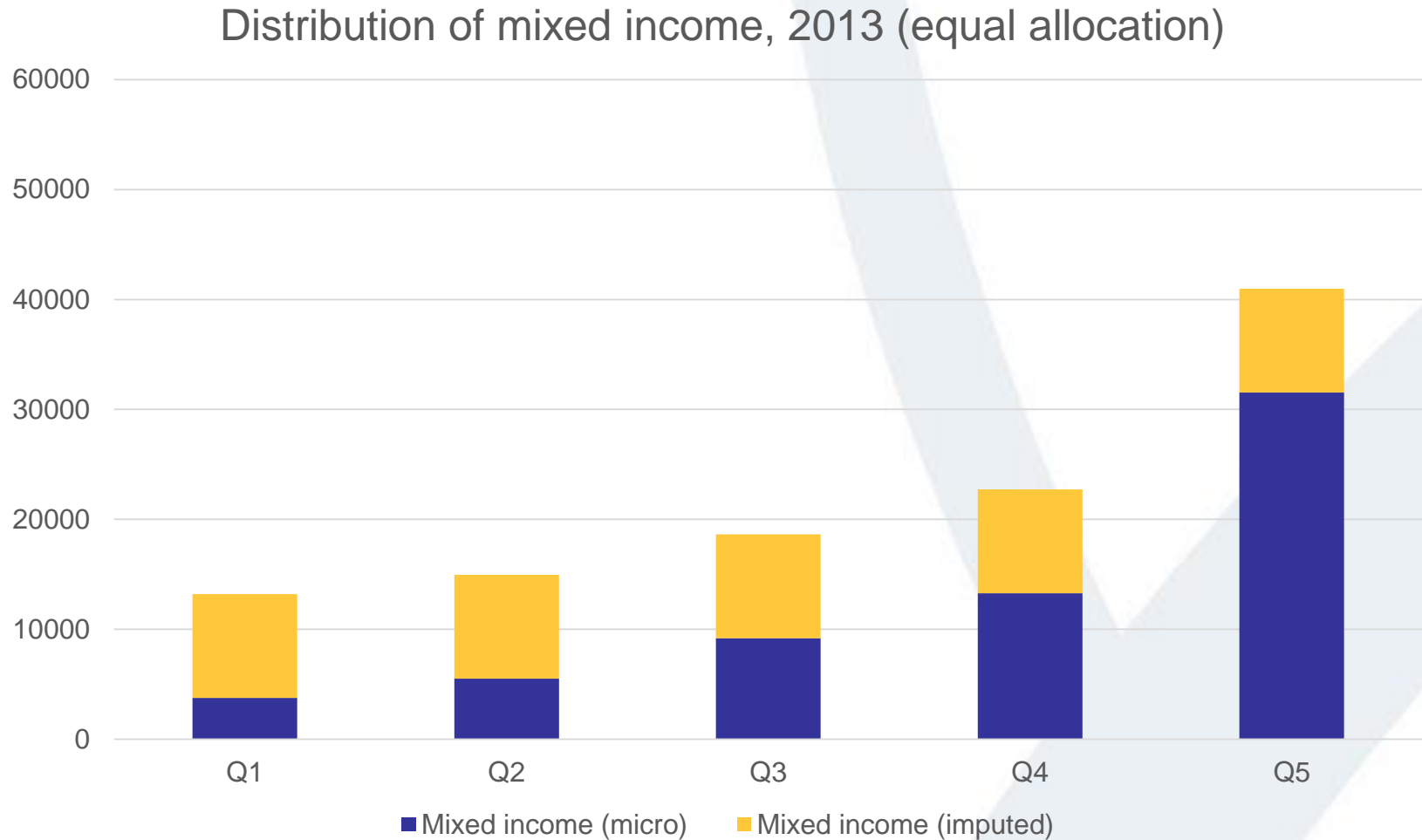
- Coverage rate for income components varied from 23% to 93%
 - NA figures included NPISH & institutional households
- Net property income received coverage particularly low
 - No direct counterpart for some sub-components in microdata
 - Known under-reporting of other components in household surveys

Impact of decisions on scaling/imputation



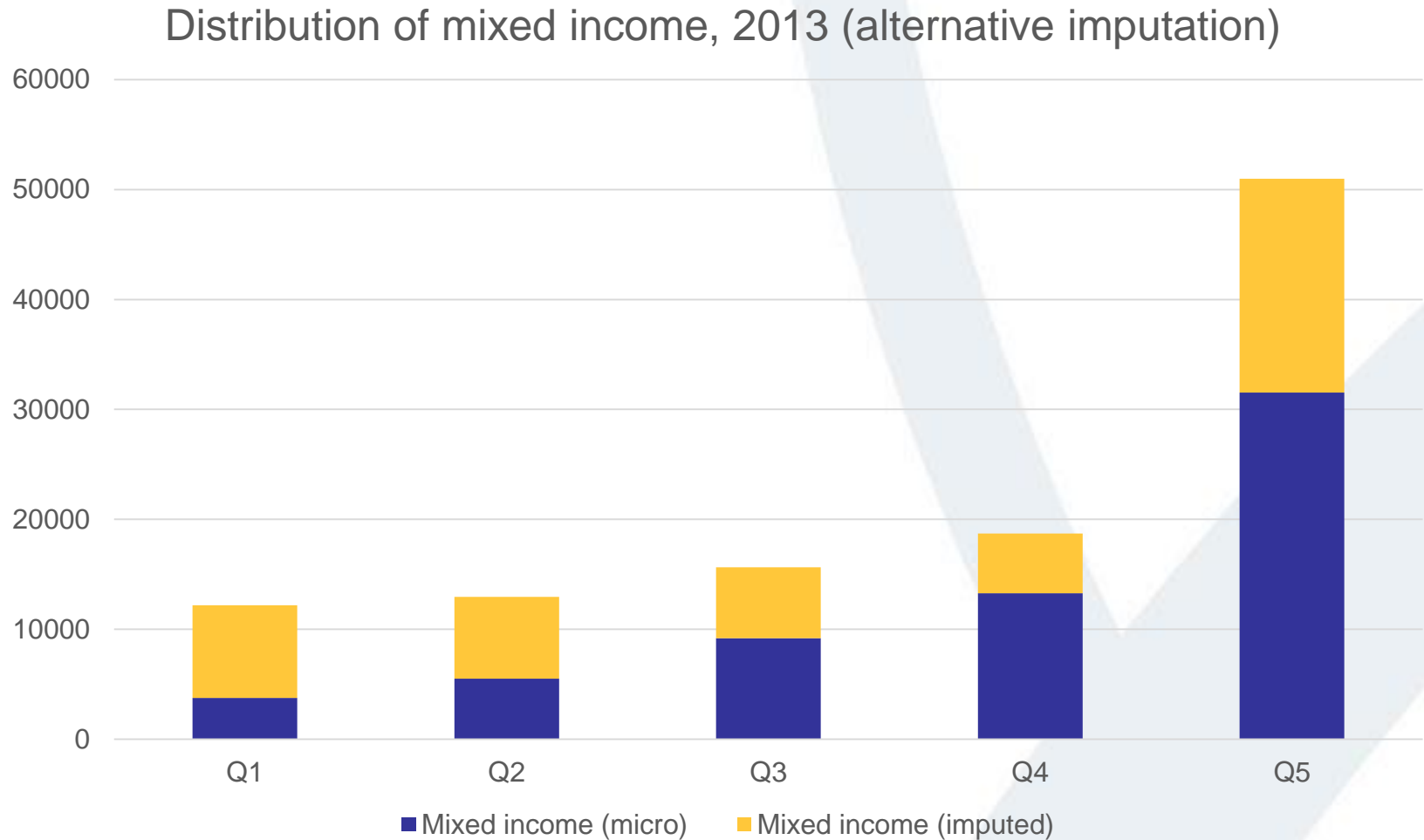
- But... some studies suggest under-reporting of self-employment income proportionately larger towards bottom of distribution (e.g. Tedds, 2007; Valentini, 2009)

Impact of decisions on scaling/imputation



- Also potential under-coverage at top due to surveys not adequately covering 'the 1%'

Impact of decisions on scaling/imputation

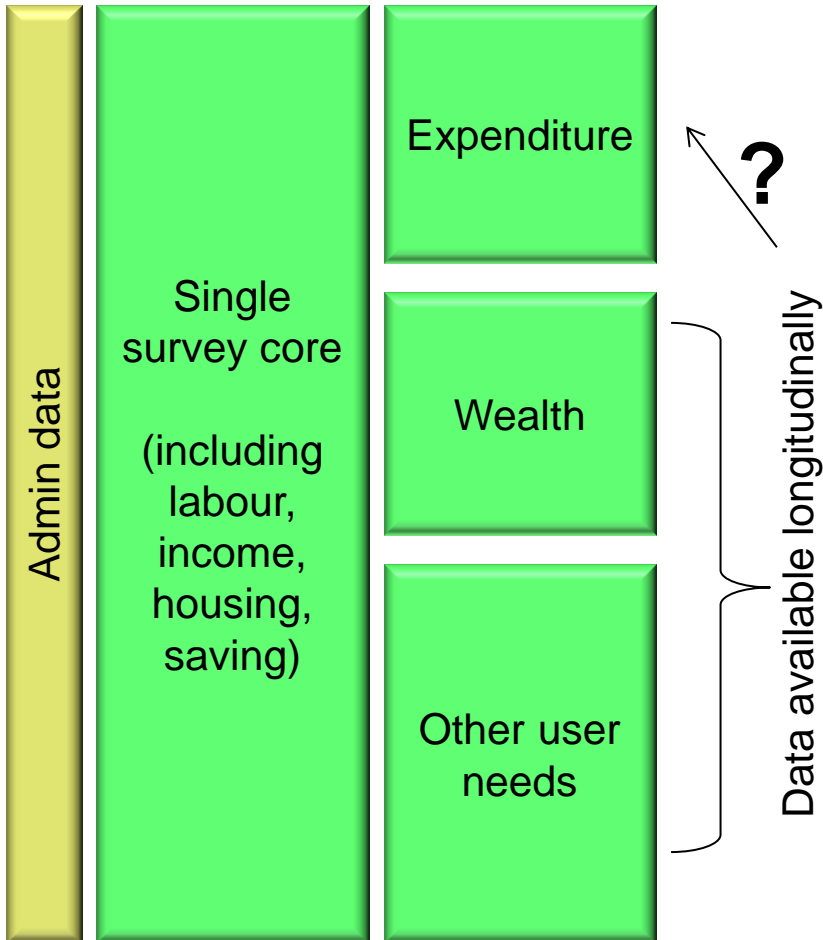


- Decisions around methods of scaling/imputation become more critical as coverage of micro data reduces

Future developments

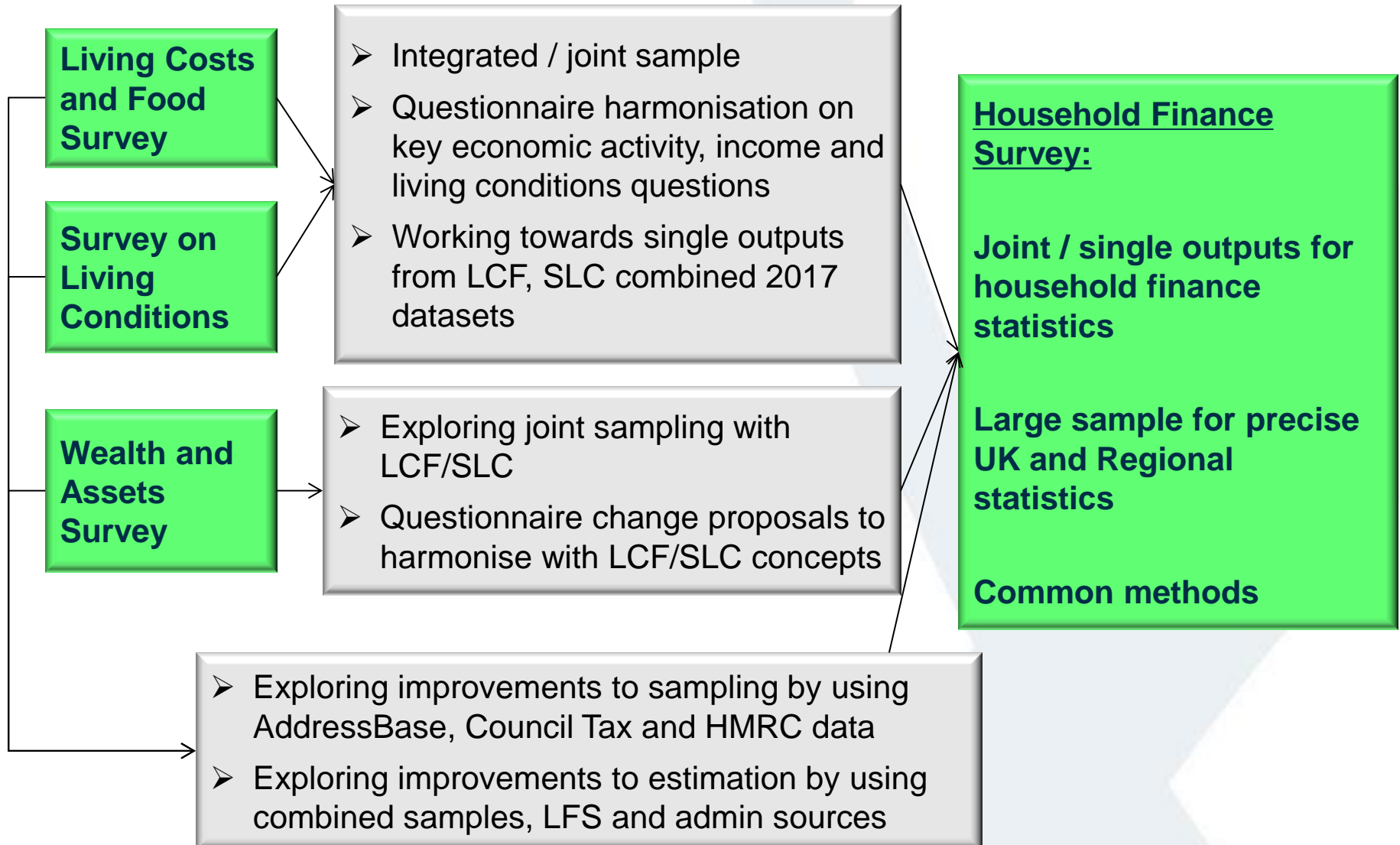
- 2017 Blue Book published 31 October
 - Will contain full household/NPISH split for first time
- Re-do OECD exercise based on new Blue Book data
 - Improved methods for variable mappings/imputations
 - Time series
- Continue to work with OECD, Martin Weale, Tom Crossley & others on improving methods
- Expand to cover distribution of household wealth in NA framework
- Ongoing development of income, consumption & wealth distribution data/statistics under ONS transformation programme

Vision for future data collection



- Greater coherence / thematic approach
- Joint analysis of income, consumption and wealth possible
- High quality data for analysis of income distributions (including top and bottom)
- Responsive to user requirements
- Precise regional estimates (NUTS2)
- Timely estimates
- Use of new technology and mixed mode data collection
- Best use of administrative data
- Reduced costs and respondent burden

Progress and short-terms plans



Any questions?

