# Discussion of ‘The inequality of extreme incomes’

Office for National Statistics

**Lidia Ceriani**
Georgetown University

**Paolo Verme**
The World Bank

Discussant: Richard Tonkin

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# Purpose of paper

- Set out the circumstances in which the addition of previously missing observations at the top & bottom of income distribution lead to increased inequality
- Provide an empirical application of these findings using data for 50 US states.

# Missing observations at the bottom

- Paper highlights issue with missing observations due to challenges in capturing migrants in surveys or Census data collection
    - For many stats offices, where collection relies on household surveys, the issues of missing populations can stretch far wider: e.g.

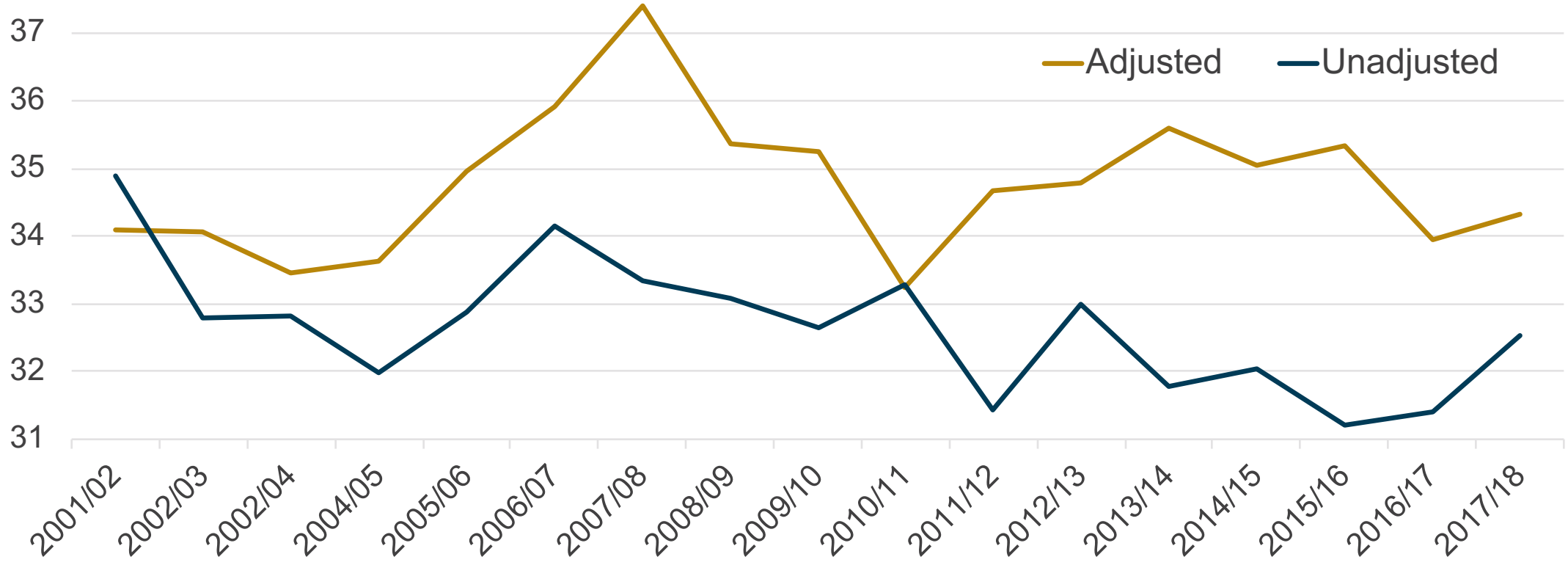
| Category | Approximate population | % of UK population |
|---|---|---|
| Homeless (inc. roofless, sofa-surfers, & those in hostels, B&B's & other unsuitable temp. accom.) | 160,000 | 0.24% |
| Travellers in caravan sites | 90,000 - 120,000 | 0.15% |
| Student halls of residence | 500,000 | 0.75% |
| Care homes & long stay hospitals | 510,000 | 0.75% |
| Other non-private household (inc. prisons, military accom. & immigration removal centres | 210,000 | 0.32% |



**Source: Bramley, Sosenko & Wood (2018)**

# Missing observations at the top

Under-coverage of top incomes is a well recognised issue which can have significant impacts on inequality levels & trends: e.g.






**Source: UK ONS, Shine et al. (2019)**

# Main findings

- Theoretical part shows adding observations at the extremes of the distribution does not necessarily lead to increased inequality
    - Empirical application highlights inequality almost always increased in practice
- Adding observations at the top of the distribution weighs more on inequality than adding observations at the bottom

# Discussion

- Well-written, clear paper which makes a useful contribution to our understanding of the impact of missing observations on inequality
  - Given the Gini coefficient doesn't necessarily increase if observations added at top/bottom of distribution, does this suggest we should focus more on alternative inequality measures? e.g. Palma Ratio

# Discussion

- Equations presented assume new observations = lowest ($x_1$) or highest ($x_n$) from original distribution
  - How are conclusions affected if the new observations for top above original distribution?
  - Missing likely to include very richest in society e.g. Forbes 400 members
- Evidence in some countries that issues at top primarily under-reporting rather than missing observations (e.g. Burkhauser et al. 2018)
  - Can the framework be extended to reflect this?



**Source: UK ONS, Shine et al. (2019)**

# Discussion of empirical application

- Data taken from US Current Population Survey
  - Lowest incomes in each state $0 - Are these genuine zeros or do they reflect survey under-reporting?
    - Not clear what income measure used – assume market income given the level of Gini's?
  - Would be interesting to see application based on e.g. disposable income where less likely to see zero incomes – would the same findings hold?
- Upper bound estimates for pop changes at top & bottom estimated from internal migration levels & estimates of legal & unauthorised migrant population
  - Assume in practice many of these individuals will have incomes away from extremes, so true values will be a lot lower

# Discussion of empirical application

- Adding 1% of pop. at top will result in inequality higher than adding 18% at bottom – though as low as 5% in Kentucky
  - For countries where missing non-private household population is a significant % of overall population (and missing at top potentially less than 1%), the missing observations at the bottom may be more important
  - Whilst researchers' focus on top incomes has been sensible, still incredibly important to better capture the poorest in society in both inequality & other statistics