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## Measuring living standards with income and consumption: evidence from the UK

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## Outline of paper

1. We document the mis-match in the LCFS between reported income and reported spending for households with low resources
  - We present evidence that this is more likely due to under-reporting of income than over-reporting of spending or consumption-smoothing
2. We document the high (and growing) under-recording of *expenditures* in the LCFS relative to National Accounts
  - Evidence suggests that spending reported by low-spenders is more likely to be accurately recorded than that of high-spenders
3. We compare impressions of trends in the level and inequality of living standards in GB according to consumption and income
  - Consumption includes imputed rent from housing
4. We describe what different impressions we get about the composition of households with low living standards if we identify such with consumption, rather than income

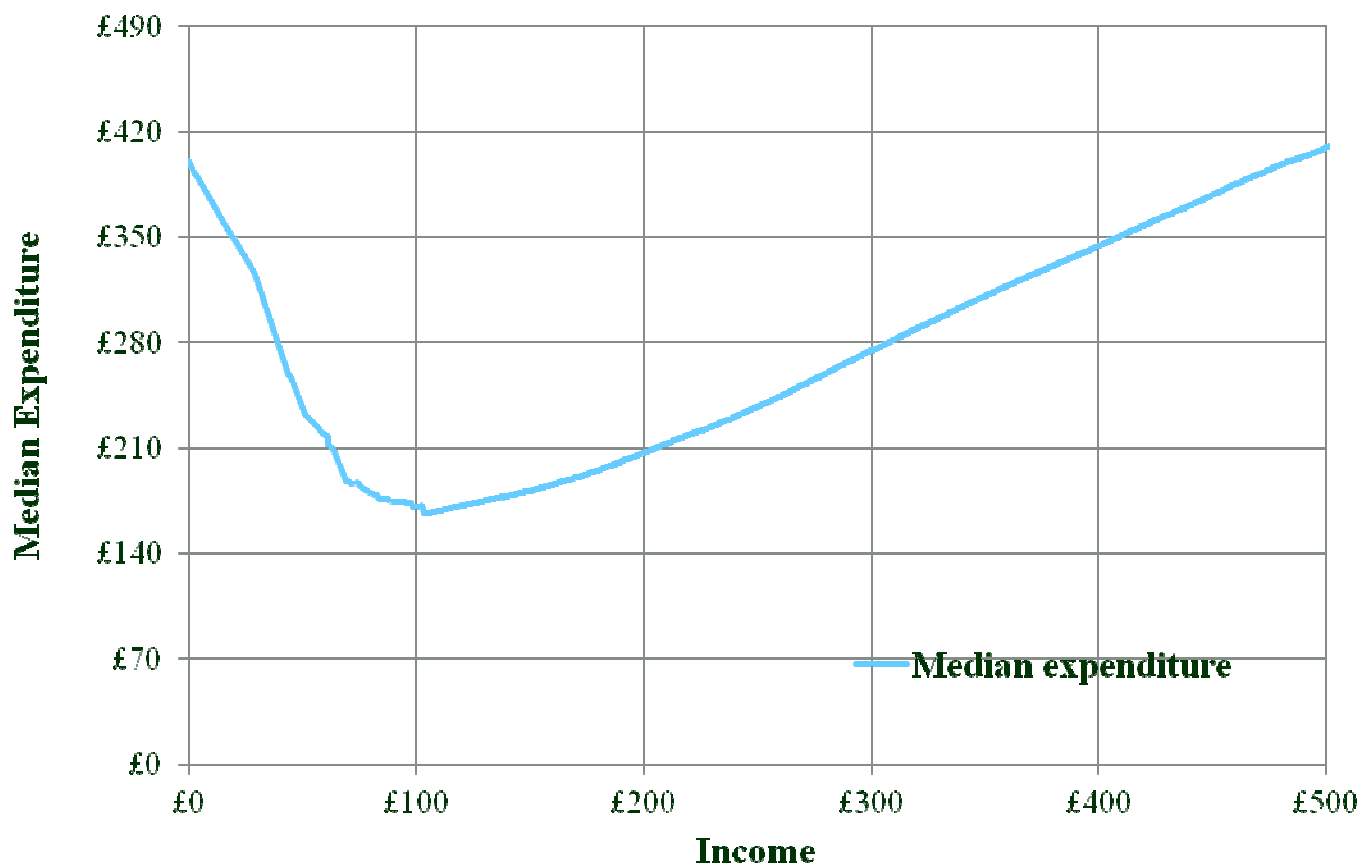
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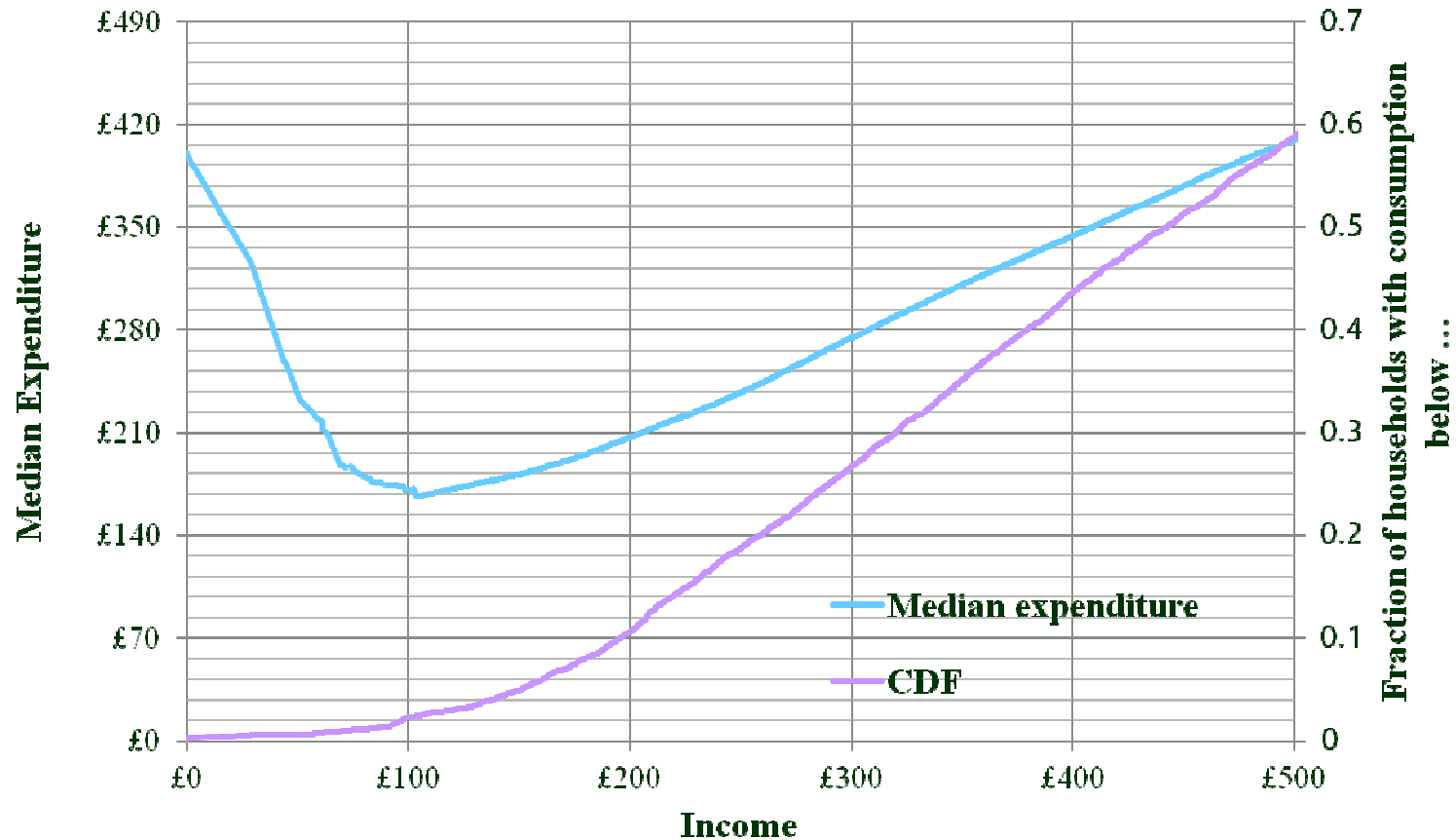
## Motivation and Literature

- Meyer and Sullivan (2003, 2006, 2008, 2009, 2010) argue that, in the US, data on household consumption measures (low) living standards more reliably than data on household income
- UK evidence: DSS (1991), Saunders et al (2002), Goodman & Oldfield (2004); Attanasio, et al. (2006); Brewer et al. (2006); Blundell & Etheridge (2008); Brewer et al. (2009)
  - Inequality in spending more stable than income inequality (1980s and 1990s)
  - Risk of income poverty is higher (lower) than the risk of consumption poverty for most non-pensioners (pensioners)
  - Those reporting very low incomes do not have the lowest living standards
  - For any given level of reported income:
    - Self-employed have higher living standards than employed
    - Workless have lower living standards than employed

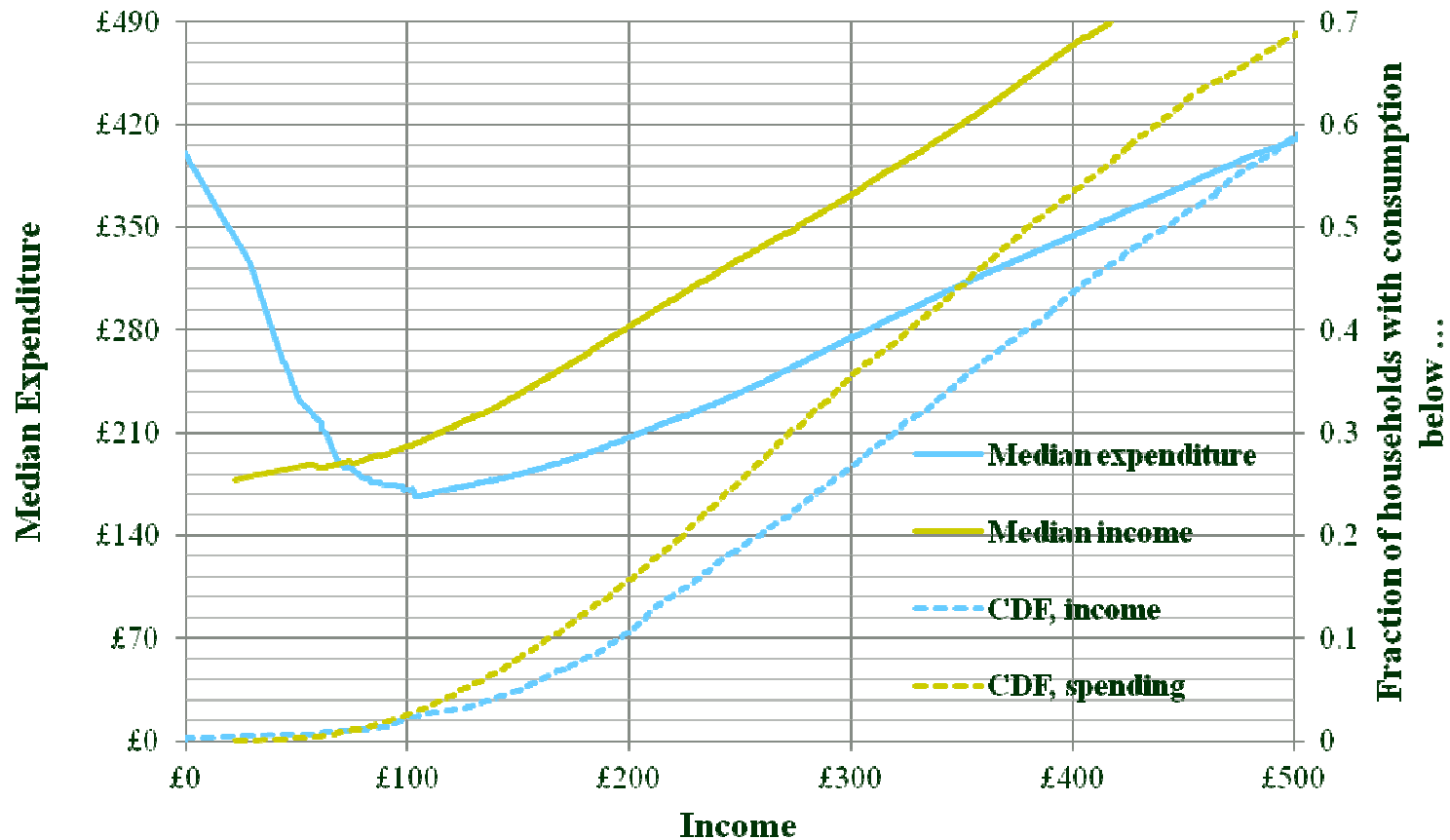
Those with the lowest cash incomes do not have the lowest cash outlays... (call this a “tick”)



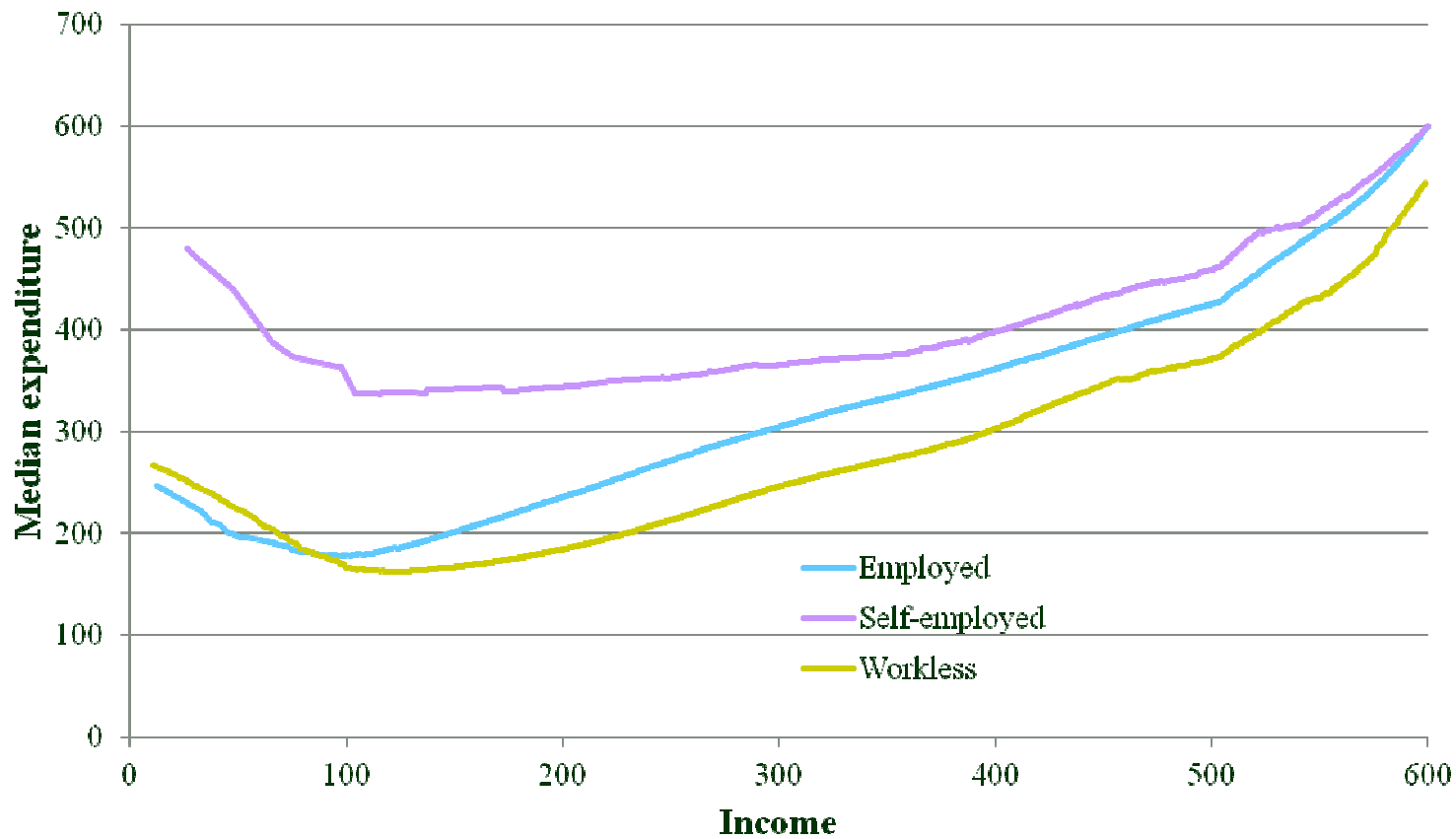
Those with the lowest cash incomes do not have the lowest cash outlays... (call this a “tick”)



...but those with the lowest cash outlays *do* have the lowest cash income

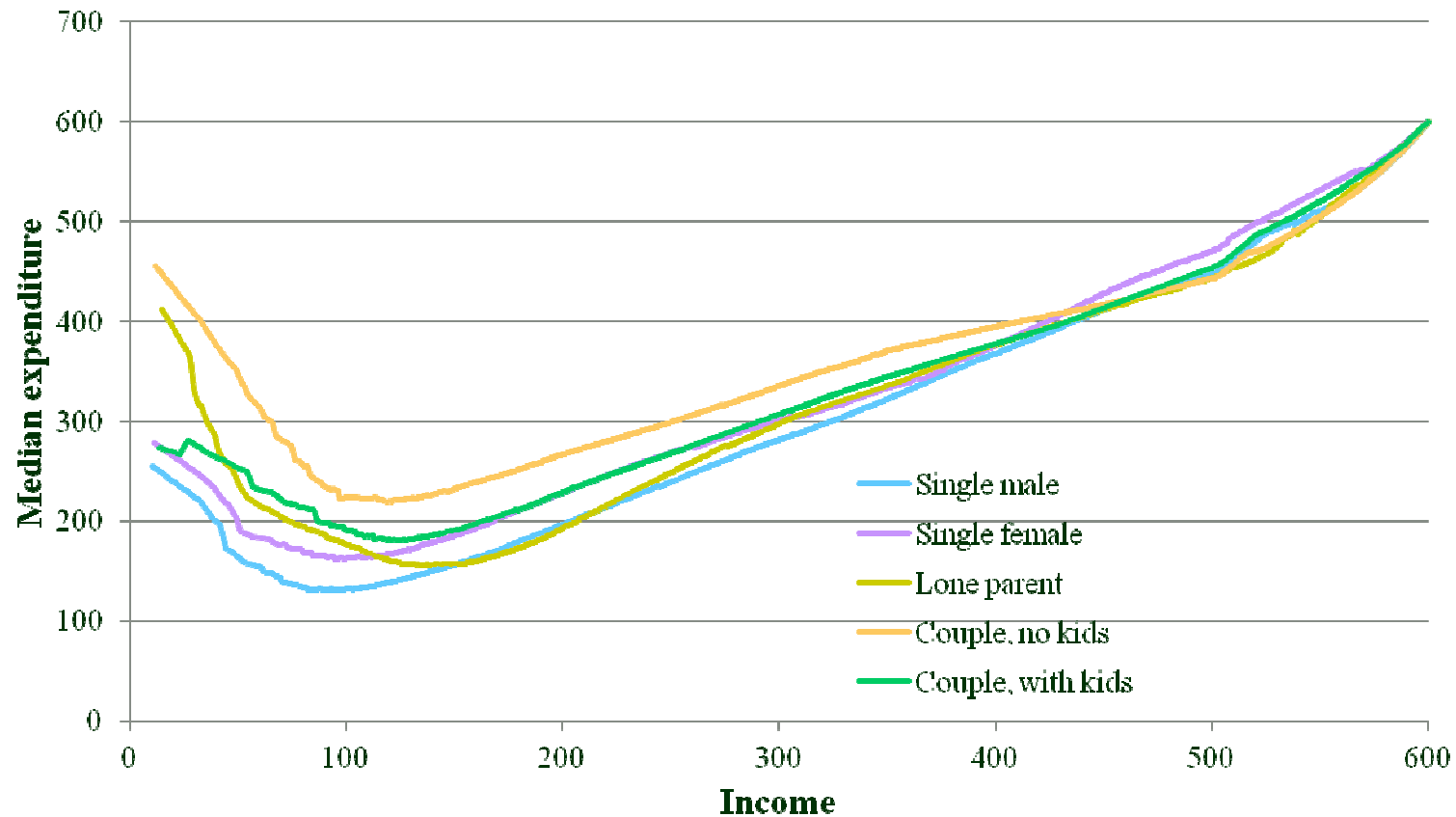


...and is not solely due to the self-employed

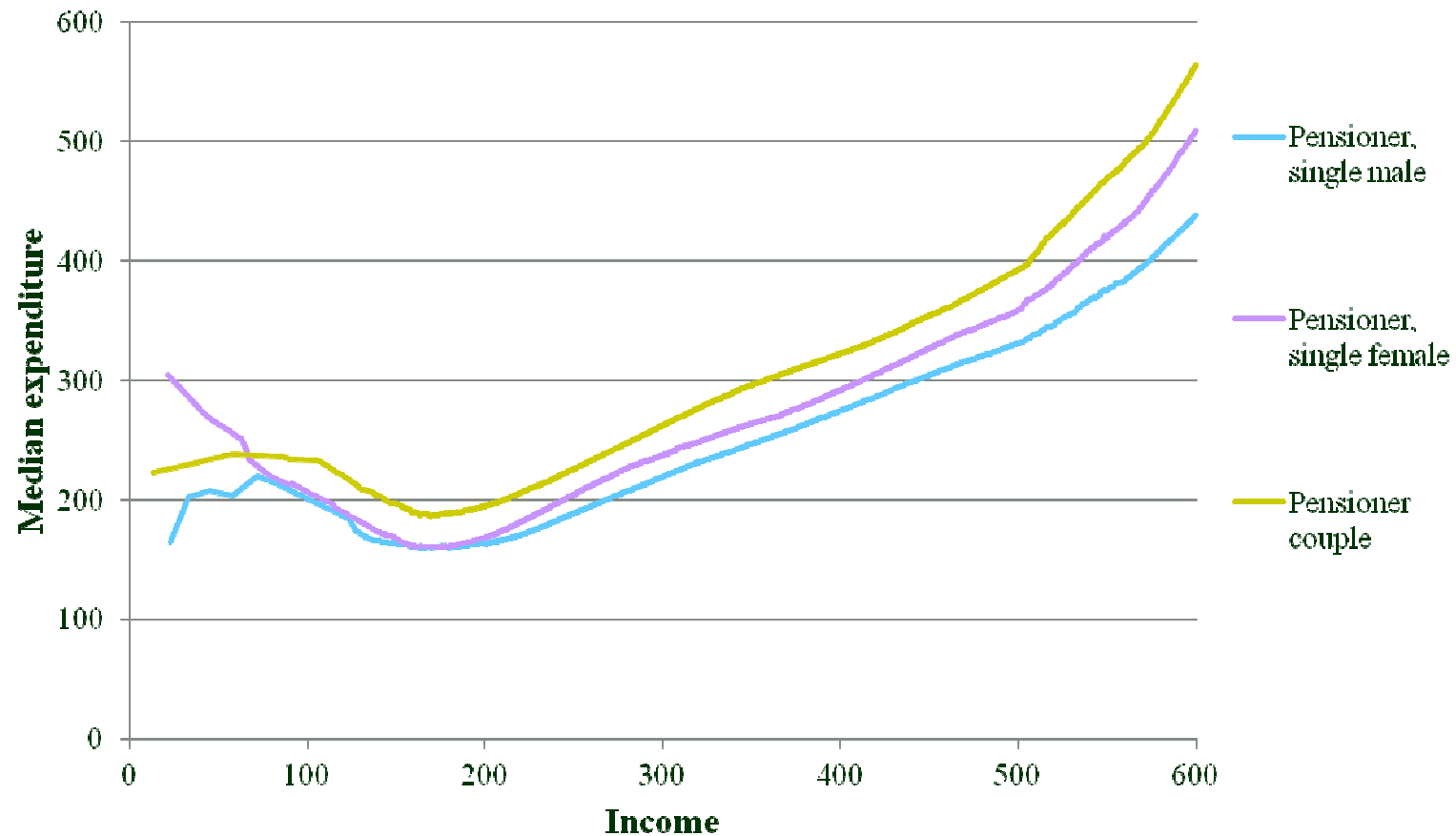




True for each non-pensioner family type...



...and for each pensioner type  
(although not stat sig)



## What explains the tick?

- Those with low reported income are:
  - Under-reporting income or
  - Over-reporting spending or
  - Dis-saving
- Can we learn anything about the relative importance of these potential causes?

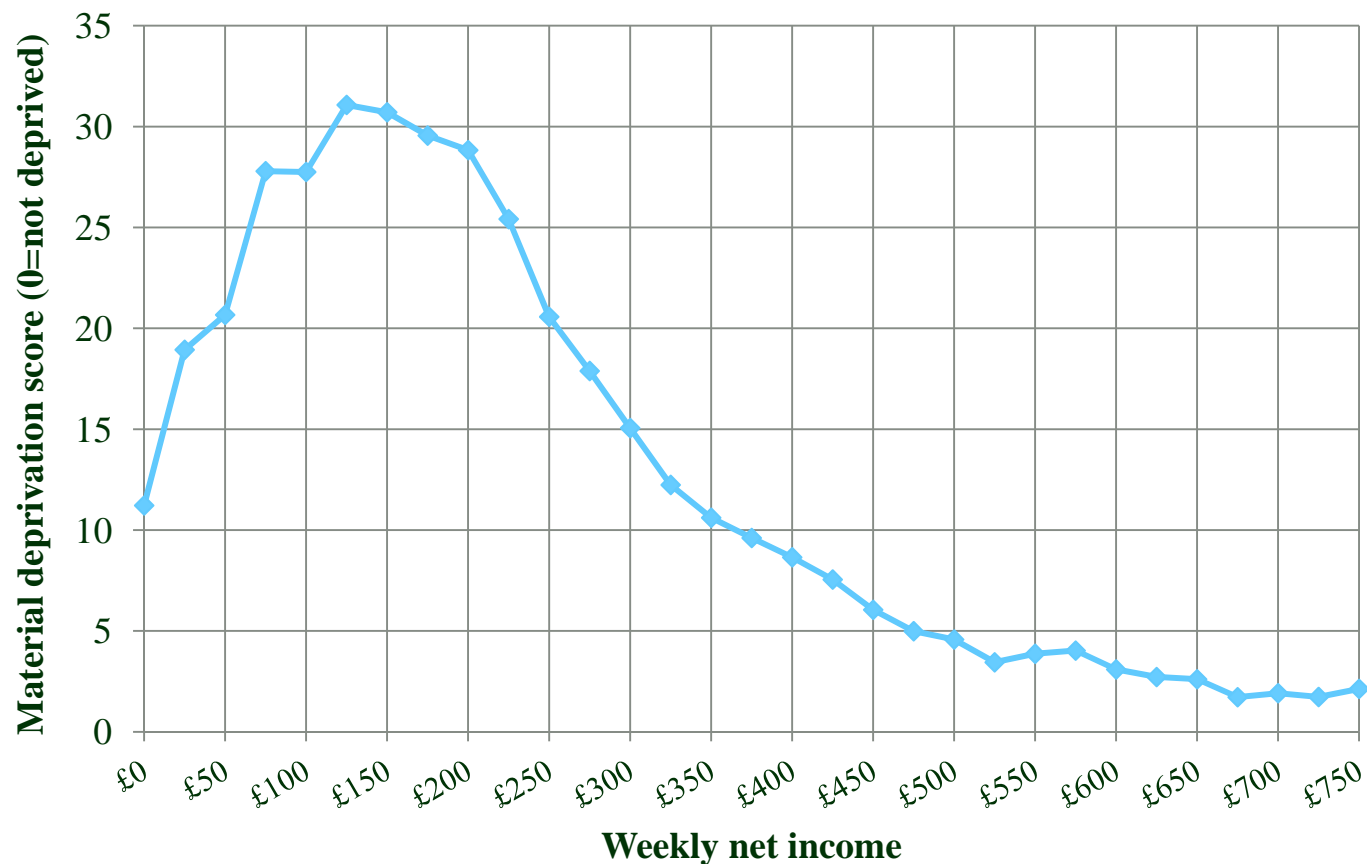
# What explains the tick?

- Over-reporting of spending is unlikely
  - Get similar tick-charts for other measures of living standards

## Brewer, O'Dea, Sibieta, Paull 2009

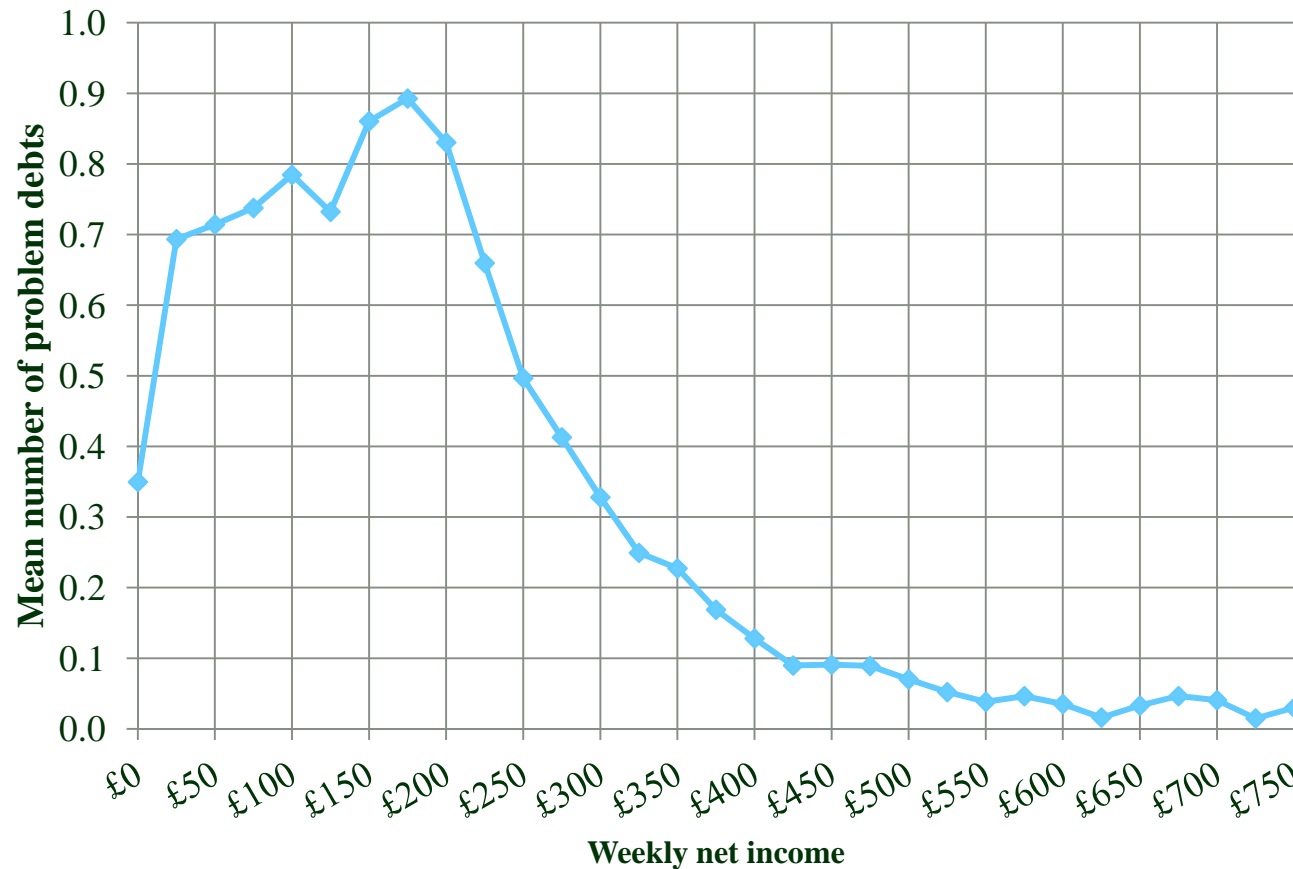
- Previous work (Brewer, O'Dea, Sibieta, Paull '09) documented the living standards of those with children reporting low incomes...
- ...across a variety of measures of living standards...
  - Expenditure; material deprivation; assets; durable ownership; problem debts
- ...using four datasets...
  - Family Resources Survey and Expenditure and Food Survey (cross-sectional)
  - Family and Children Survey and British Household Panel Survey (longitudinal)
- Results:
  - Strong evidence that the 'tick' is a general phenomenon, across surveys and measures of living standards
  - The 'tick' is not (completely) driven by temporarily low incomes
  - The tick-shape relationship between income and measures of living standards remains when income is measured over 3 years

## Living standards and income (FRS, 2004-6)



Source: Brewer, O'Dea, Paull, Sibieta (2009). Households with children only.

## Problem debts and income (FACS, 2001-6)



Source: Brewer, O'Dea, Paull, Sibieta (2009). Households with children only.

# What explains the tick?

- Over-reporting of spending is unlikely
  - Get similar tick-charts for other measures of living standards
  - See data later on spending coverage
- Under-reporting of income is likely
  - Income from some transfers are substantially under-reported (see Barnard 2011)
  - NB get similar results for other UK household datasets, so if there is income mis-measurement, it's not confined to LCFS
- Dis-saving?
  - Hard to say: no good direct measure of saving – and data on saving, income and consumption for the same individuals
    - Most of bottom of reported income distribution have no gross assets, but some do
    - Some in BHPS report net debt (WAS?)
  - But get similar tick-charts if use three-year average income

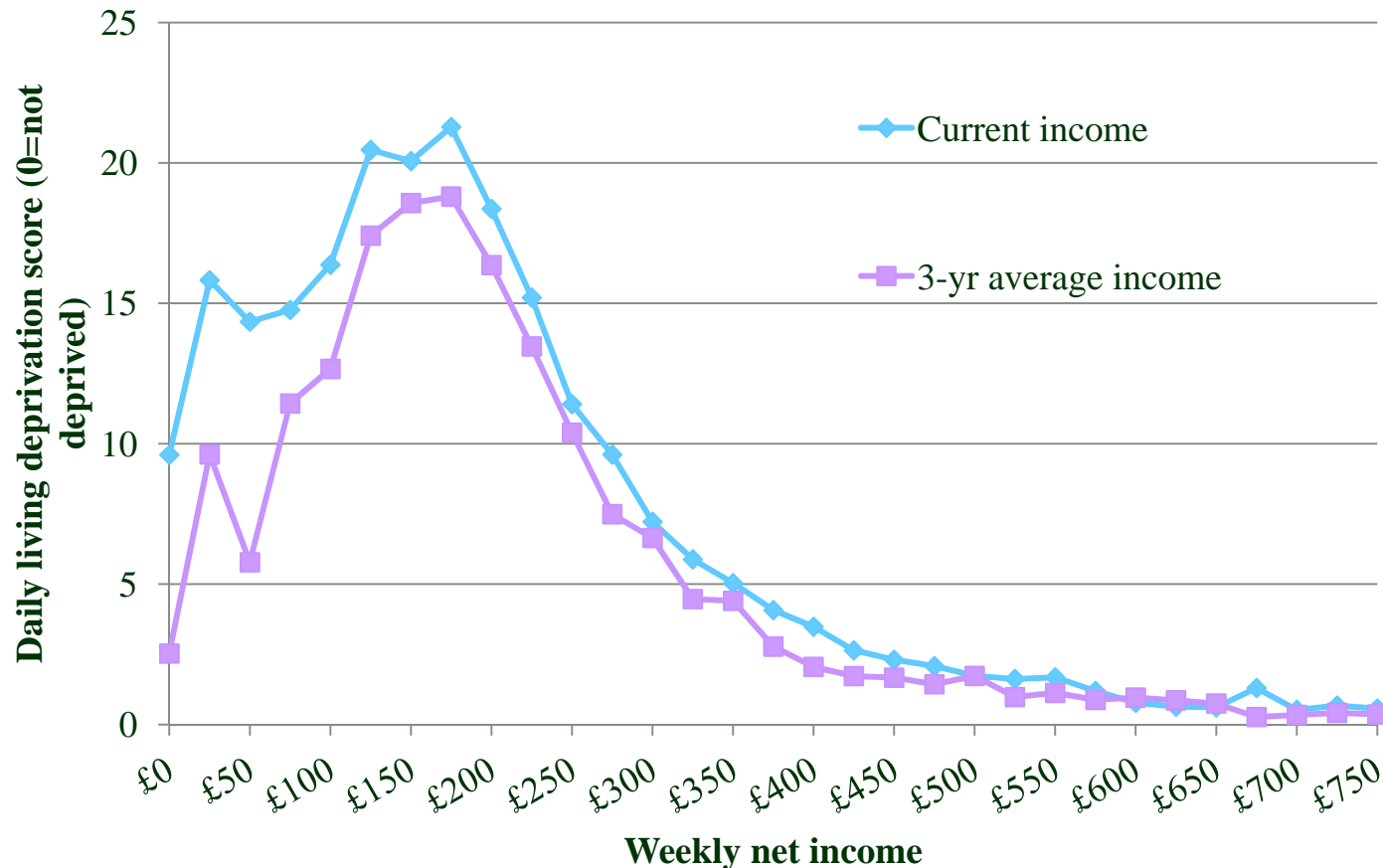


## How well is income from benefits captured in LCFS?

|                                   | Coverage | Spend (£m/yr) |
|-----------------------------------|----------|---------------|
| Retirement pension                | 95%      | 66,480        |
| “Other”                           | 52%      | 27,970        |
| Working and child tax credits     | 50%      | 21,270        |
| Rent rebates and allowances       | 83%      | 18,930        |
| Income support & pension credit   | 68%      | 16,580        |
| Child benefit                     | 96%      | 11,880        |
| Incapacity benefit                | 74%      | 6,670         |
| Maternity/Statutory maternity pay | 119%     | 1,900         |
| Jobseekers allowance              | 80%      | 1,200         |
| War pensions                      | 33%      | 1,020         |
| Student support                   | 236%     | 970           |

Notes: based on Barnard (2011) analysis of LCFS 2009 and 2010

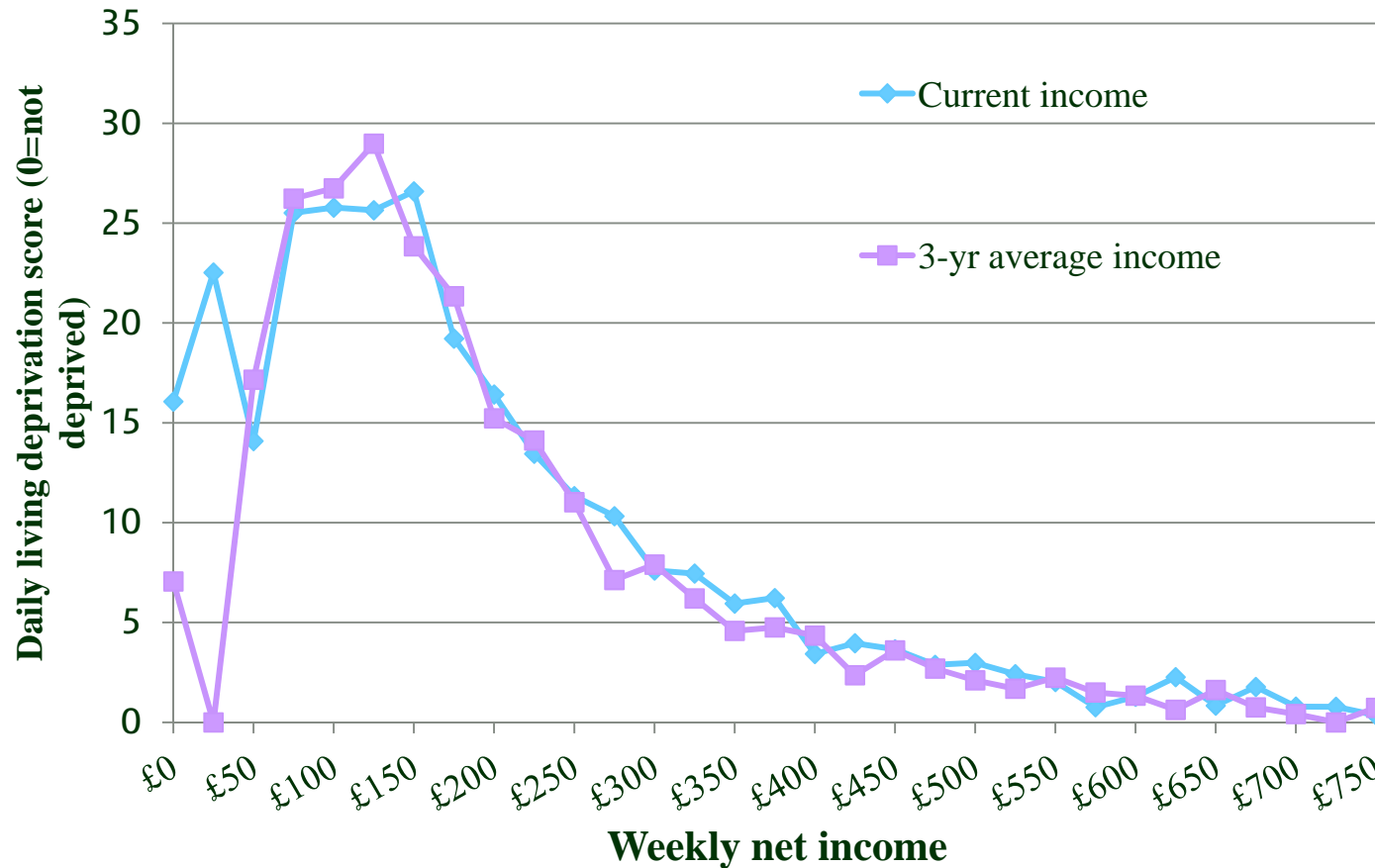
## Living standards & income (BHPS, 1996-2006)



Source: Brewer, O'Dea, Paull, Sibieta (2009). Households with children only.

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# Living standards and income (FACS, 2001-5)

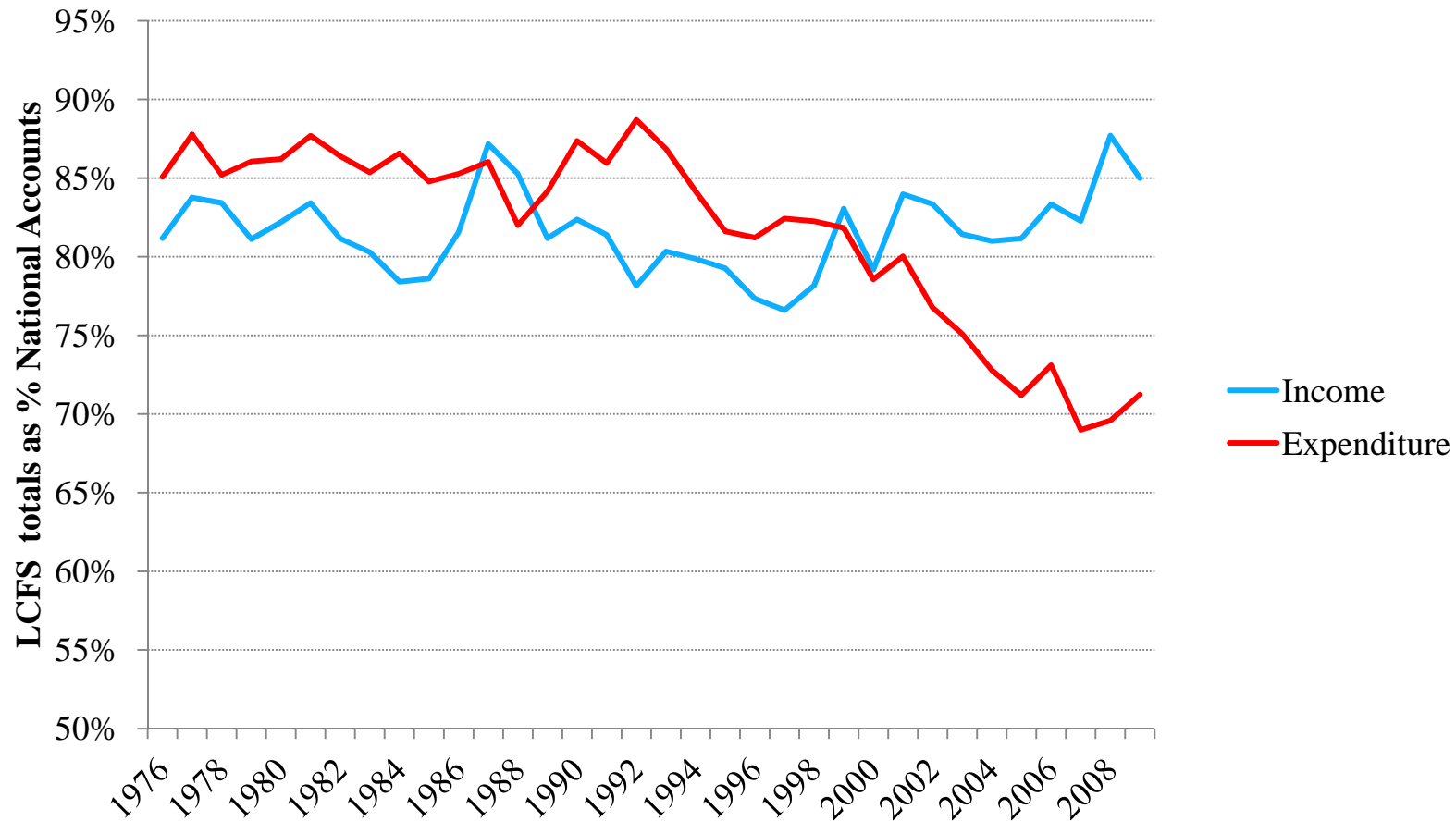


Source: Brewer, O'Dea, Paull, Sibieta (2009). Households with children only.

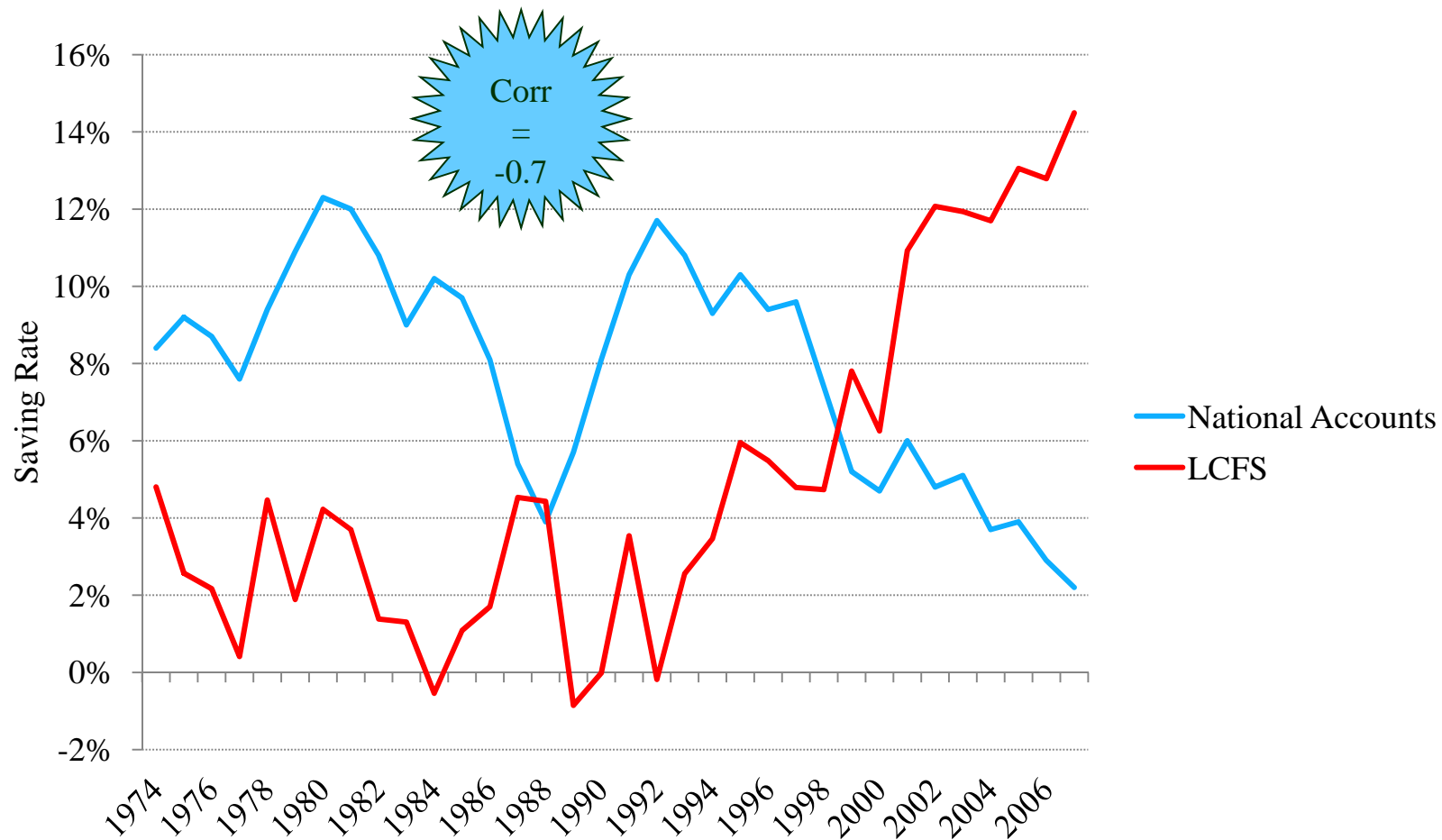
## Recap so far...

- Strong evidence that income is substantially under-reported at the bottom of the *reported* income distribution
- So policy makers should switch to monitoring consumption, not income?
- Not so fast!
- Here comes measurement problem number 2...

# Income and expenditure “coverage” of LCFS



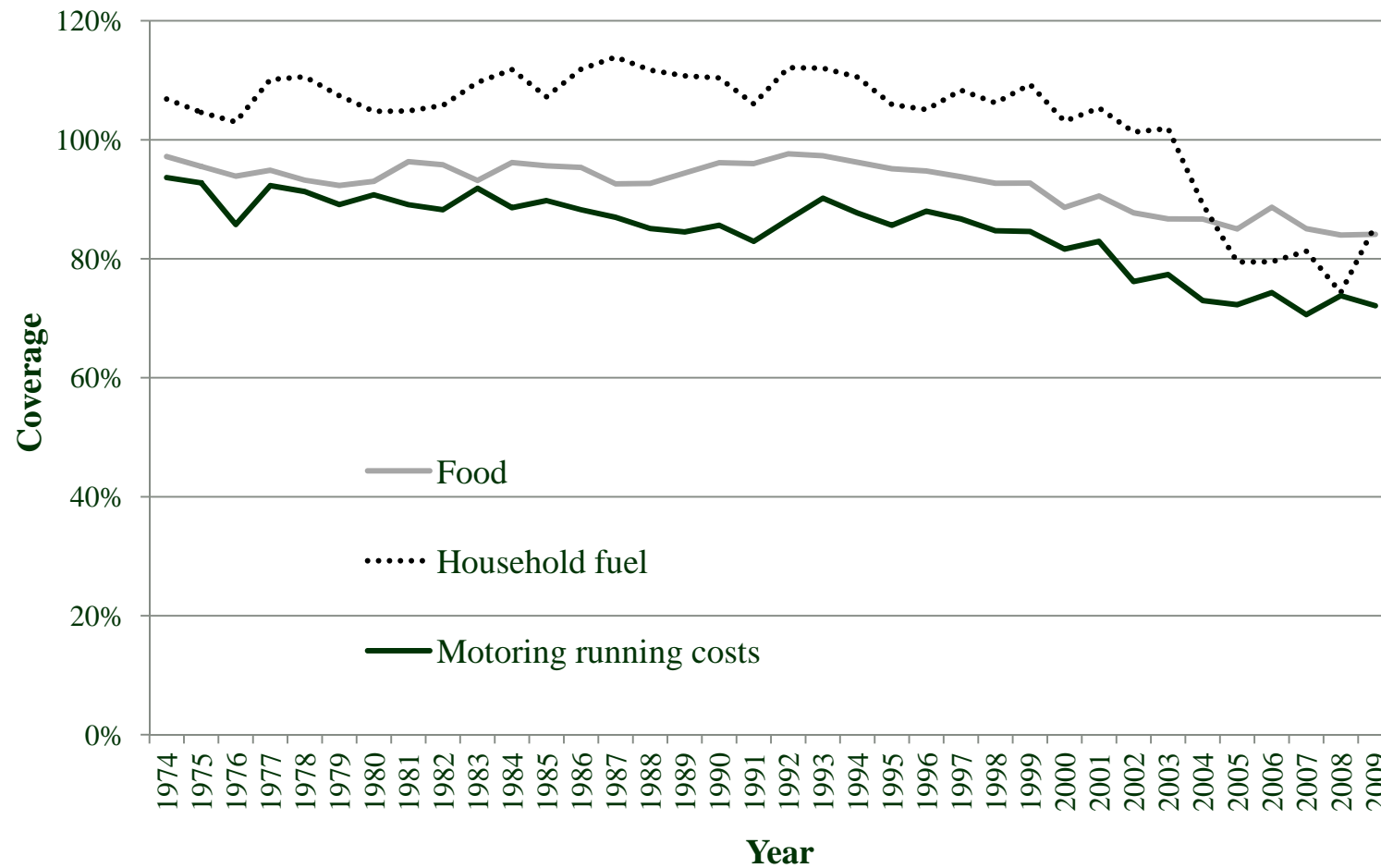
# Household saving ratios



# Where in the distribution of household expenditure (or of income) is this under-recording happening?

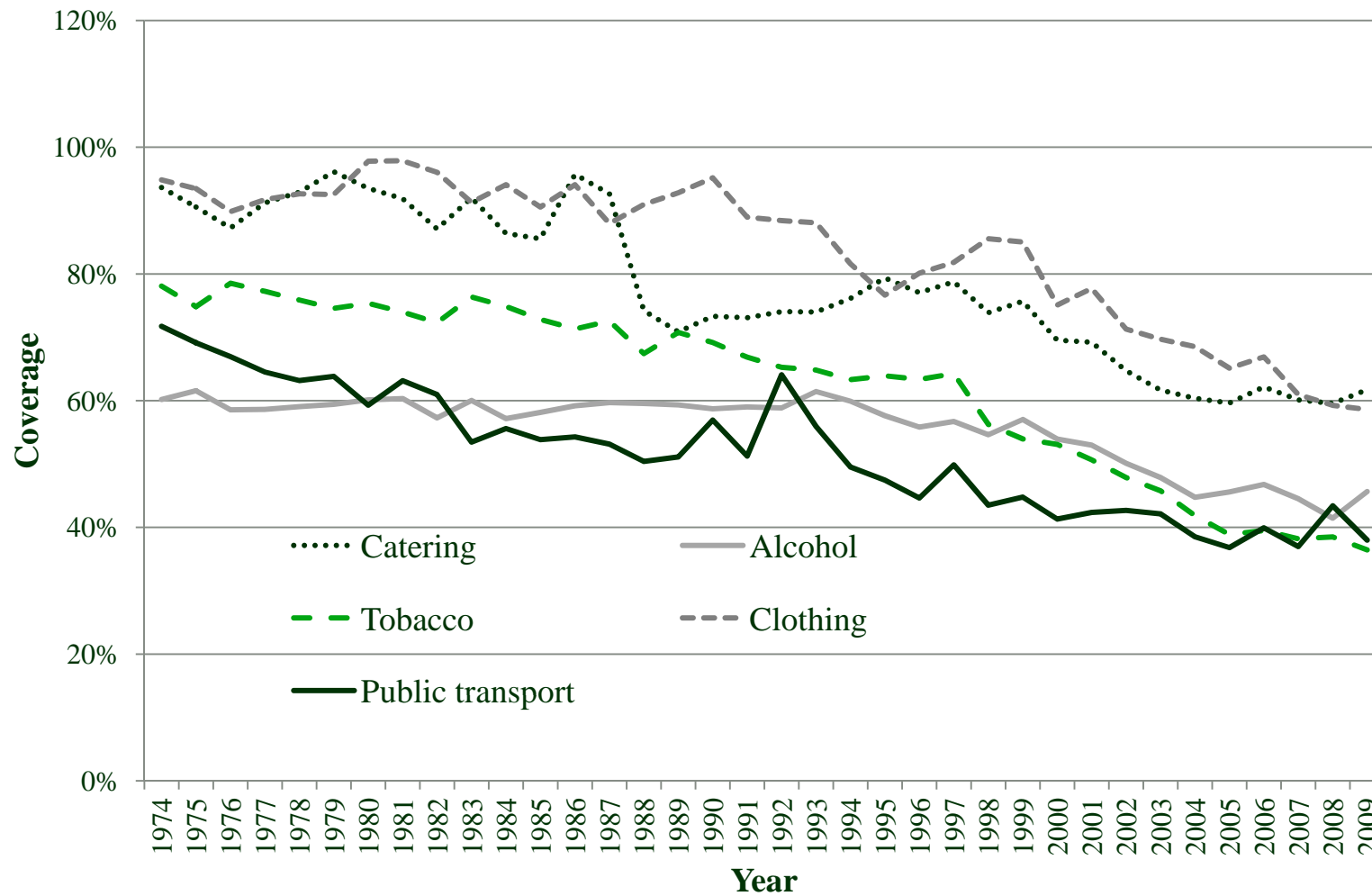
- There must be serious under-recording at the top of the expenditure distribution (these are aggregate numbers so are dominated by effect of those who spend the most)
- But is there more happening at the bottom of the expenditure distribution?
- Look at expenditure coverage by category

# Coverage: groups (1)

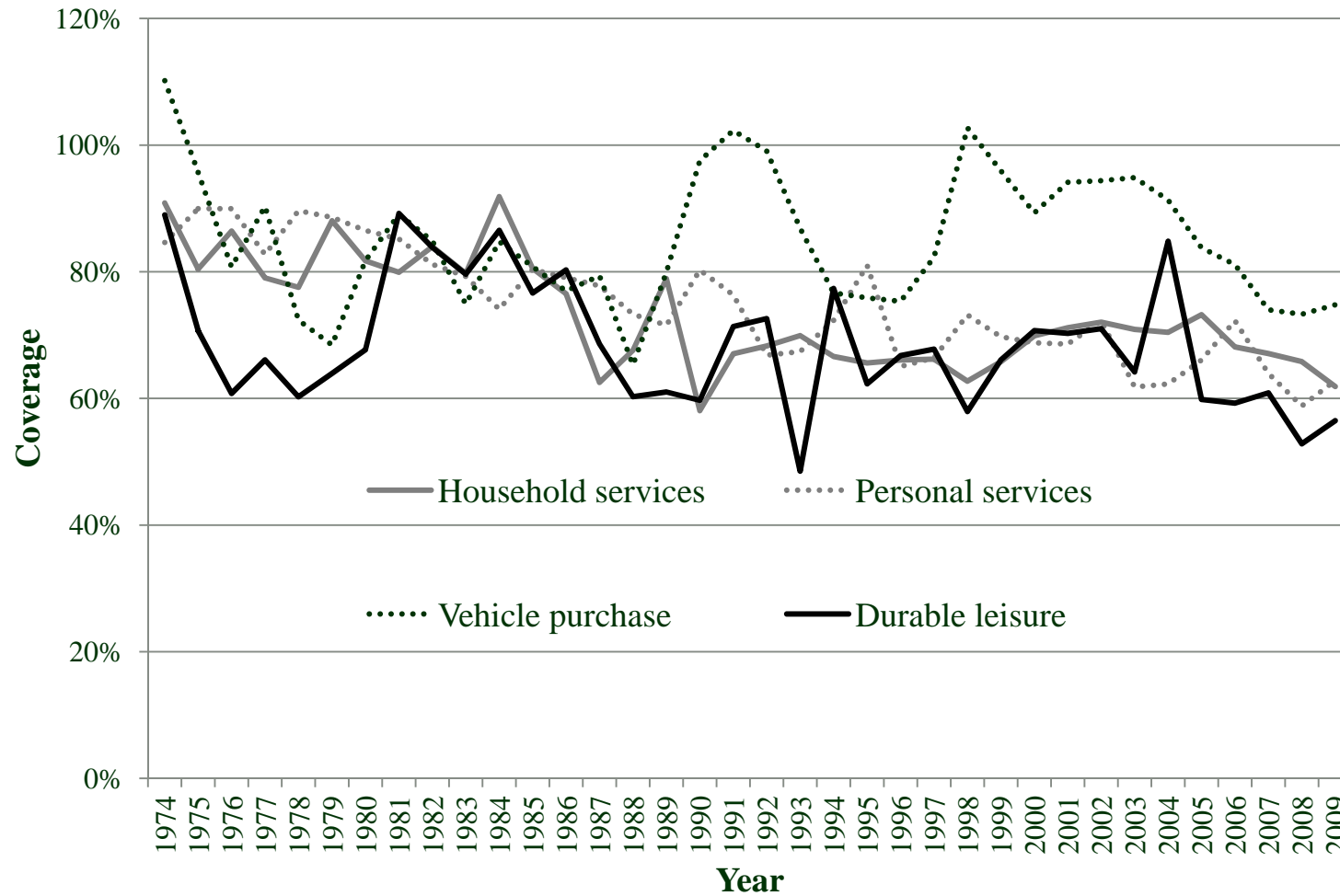




## Coverage: groups (2)



## Coverage: groups (3)



## Where in the distribution of household expenditure (or of income) is this under-recording happening?

- There must be serious under-recording at the top of the expenditure distribution (these are aggregate numbers so are dominated by effect of those who spend the most)
- But is there more happening at the bottom of the expenditure distribution?
- Look at expenditure coverage by category
- Those items with the ‘best’ coverage are those that those with the least expenditure spend more on than those with the most expenditure
  - Suggestive that under-reporting of expenditures is greater among those with the most resources

| <b>Expenditure Decile</b>    | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Budget share of ‘best three’ | 0.39     | 0.33     | 0.31     | 0.30     | 0.27     | 0.26     | 0.23     | 0.23     | 0.19     | 0.15      |

# Recap

- Serious mismatch exists between income and spending at bottom of income distribution, and for other measures of living standards
  - Evidence suggests under-reporting of income plays a role
  - Low consumption is better correlated with low material living standards than low income
- A role for consumption data in measurement of (low) living standards?
- But such a recommendation is tempered by the fact that there is another measurement problem that we don't completely understand:
  - Aggregate spending **not** captured well (though evidence is suggestive that this is greater at the top)
- Trends in low living standards differ depending on income/consumption
  - Inequality in broad income/consumption now lower than late 1980s
  - Consumption poverty peaked in early 2000s
- Low consumption and low income identify different groups