

# Understanding the Link Between Micro and Macro Consumption Data *(a project for 2017-18)*

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# Motivation(s)

- At least three:
  - Understanding the distribution of headline growth
  - Understanding macroeconomic developments and testing macro models
  - Assessing micro-data

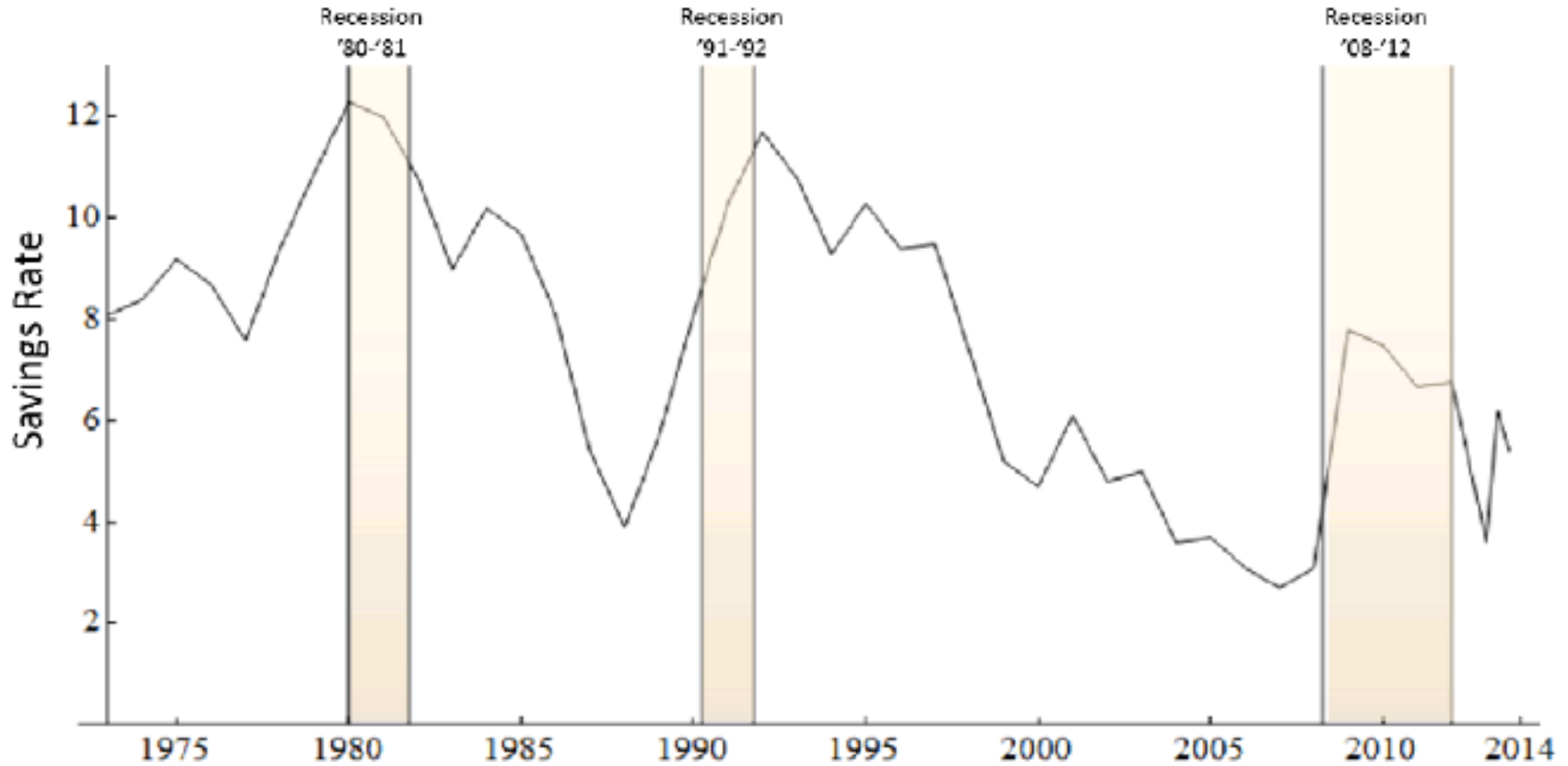
# Distributional National Accounts

- Distribution of growth
- Following Stiglitz et al., 2009 (see also, OECD, 2013, ONS 2014, Piketty et al., 2015 and Fixler et al, 2016).
- Take the micro-data to NA concepts and totals
  - Apportion headline growth figures
  - International comparisons

# Understanding Macroeconomic Developments

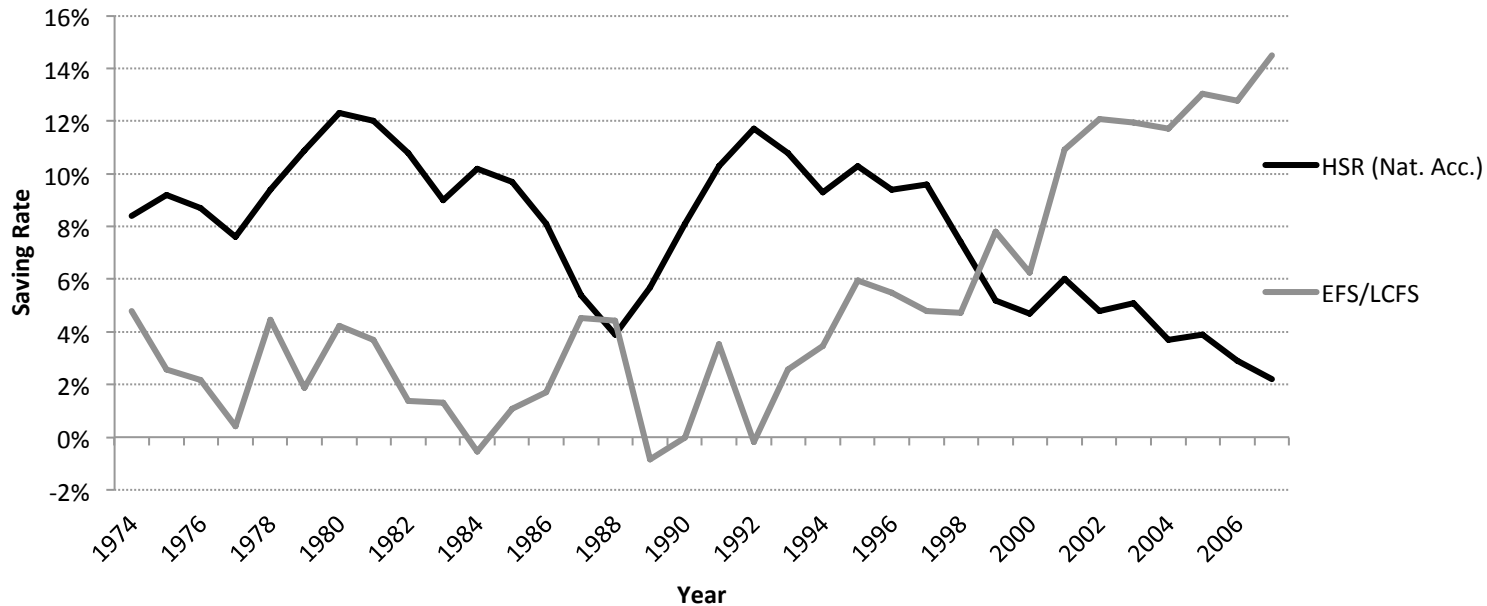
- Many macroeconomic phenomena admit multiple explanations
  - Eg. Increase in household saving after financial crisis
- Difficult to distinguish different models from aggregate time series
- Micro-data would help (age, cohort, education employment.....), but
- Not credible if inconsistent with aggregate data

# Saving on a Rainy Day



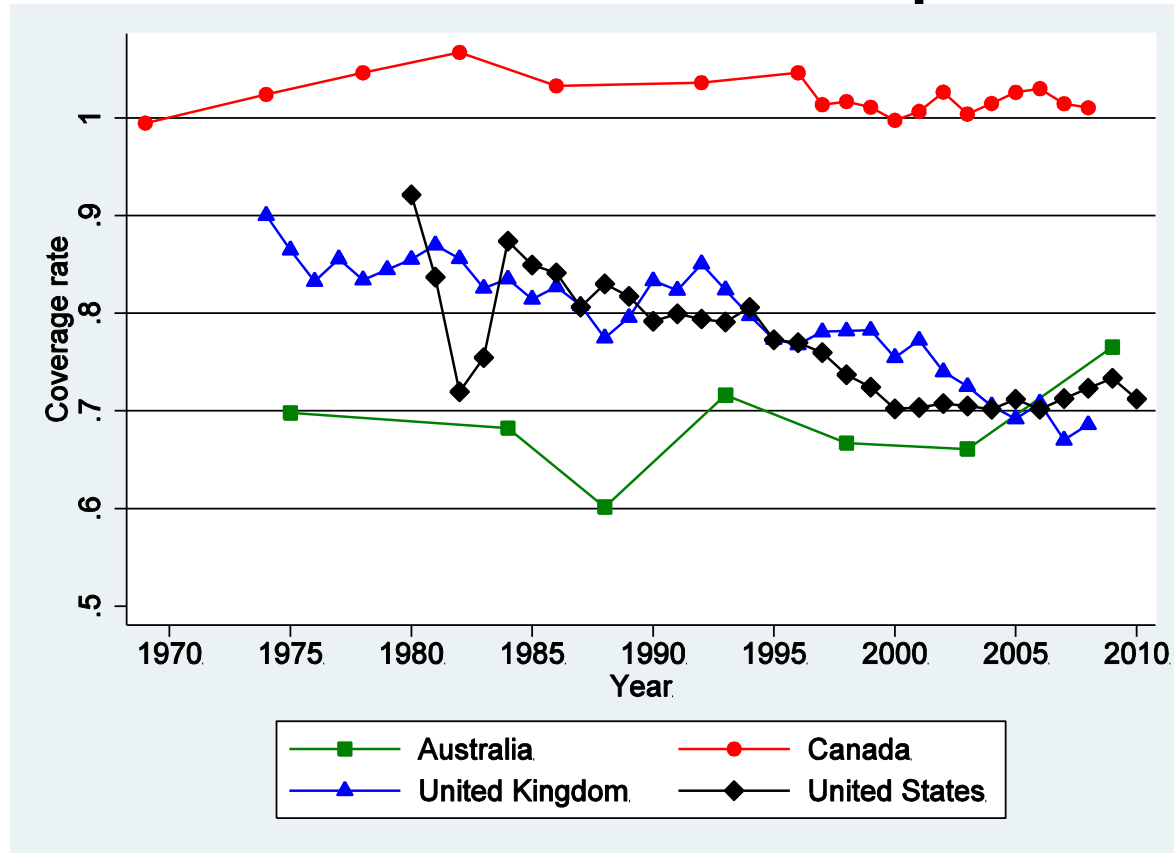
Source: Alan, Crossley and Low, (2012)

# Understanding Macroeconomic Developments



- Source: Crossley&O'Dea (2010)
- From 1992 to Financial Crisis the correlation is -0.7

# Increasing Disparity Between Micro and Macro Consumption



- Ratio of aggregated micro-data to national accounts total for consumption expenditure
- Source: Barrett et al. , 2015 (calculations due to the authors)

# Understanding Macroeconomic Developments

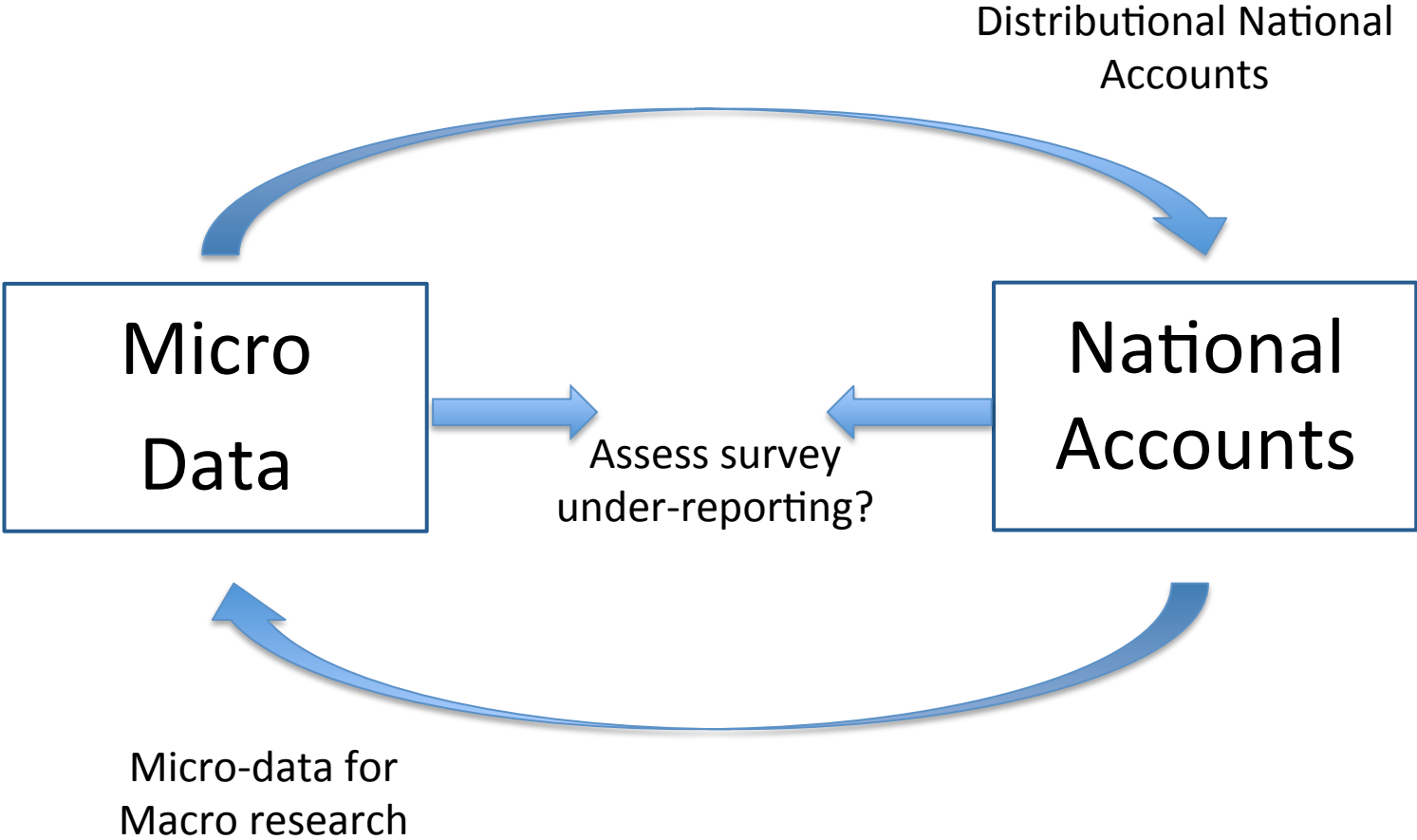
- NA concepts deviate considerable from household cash flows (Cynamon & Fazzari, 2017)
- Micro-concept much closer to what *households observe and choose*
  - Therefore superior for testing micro-foundations of macro based on household behaviour
  - Perceived living standards



# Assessing Micro-data

- Considerable recent worry about the quality of data from household surveys (Meyer et al., 2015)
- For household budget surveys (consumption) under-reporting is key concern
- Fewer comparators than income – compare to NA (eg. Barrett et al, 2015; Passero et al, 2015)

# Different Approaches for Different Purposes



# Previous ONS Work

- Distributional accounts for household income and consumption (ONS, 2015; Zwiijnenburg et al, 2017)
  - part of an OECD working group
  - micro data taken to the NA concept, and then scaled to NA totals,
  - NA totals apportioned to groups of households.
- Experimental alternative measures of disposable income and the household saving ratio (ONS, 2017).
  - exclude transactions that are imputed or unobserved by households → household cash flow basis

# Coverage by Category

**Table 2: Coverage of survey based estimates of National Accounts aggregates for consumption, 2013 UK**

UK

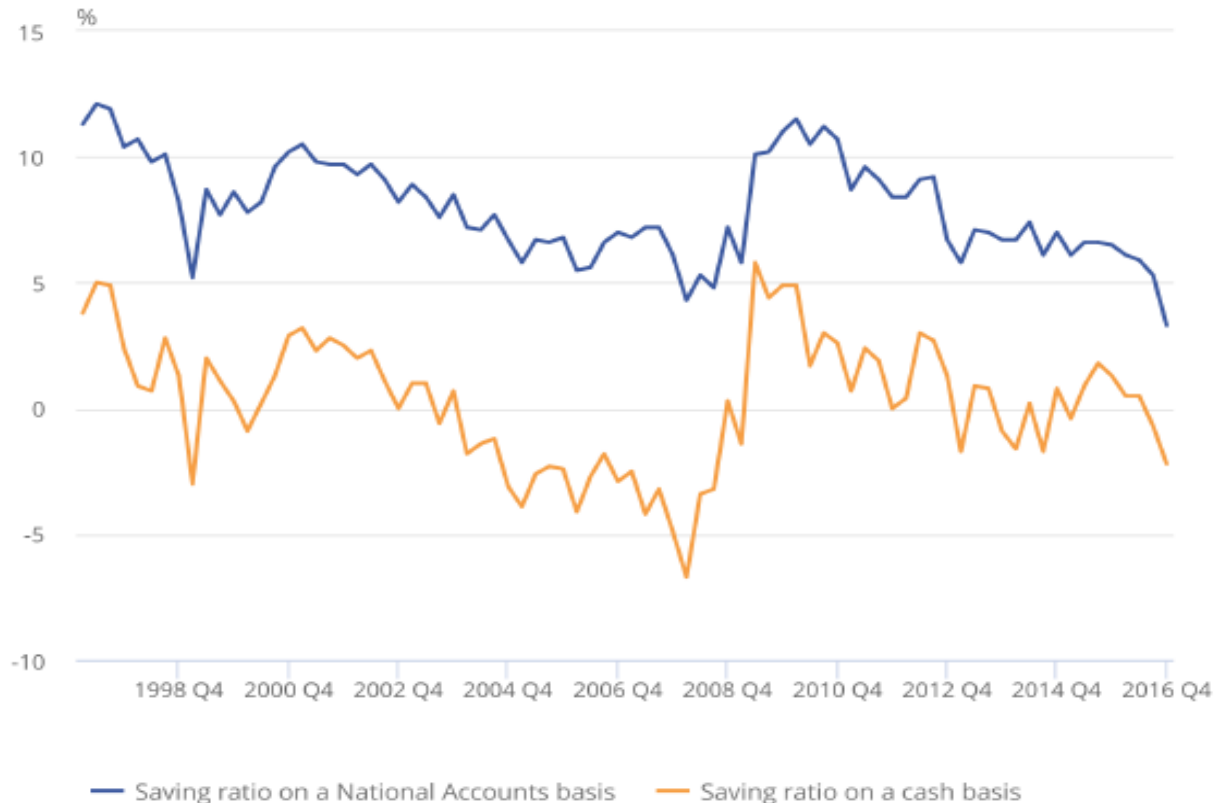
Component	National Accounts Total	Microsource Total	Discrepancy	Coverage Rate (%)
Food and non-alcoholic beverages	96,199	82,018	14,181	85
Alcoholic beverages, tobacco and narcotics	43,526	16,803	26,723	39
Clothing and footwear	58,905	31,085	27,820	53
Housing, water, electricity, gas and other fuels	258,913	181,548	77,365	70
Furnishings, households equipment and routine maintenance of the house	49,300	45,920	3,380	93
Health	19,121	11,711	7,410	61
Transport	150,124	94,616	55,508	63
Communications	21,975	20,171	1,804	92
Recreation and culture	104,353	88,848	15,505	85
Education	17,882	12,254	5,628	69
Restaurants and hotels	101,277	56,268	45,009	56
Miscellaneous goods and services	135,949	54,870	81,079	40
Final domestic consumption expenditure	1,057,524	696,111	361,413	66
Actual final consumption	1,339,555	875,714	463,841	65

Source: Office for National Statistics

# Alternative Measure of the Saving Ratio

Figure 2: UK national accounts saving ratio and cash saving ratio

Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2016



Source: Office for National Statistics

# Worries About Proportional Scaling

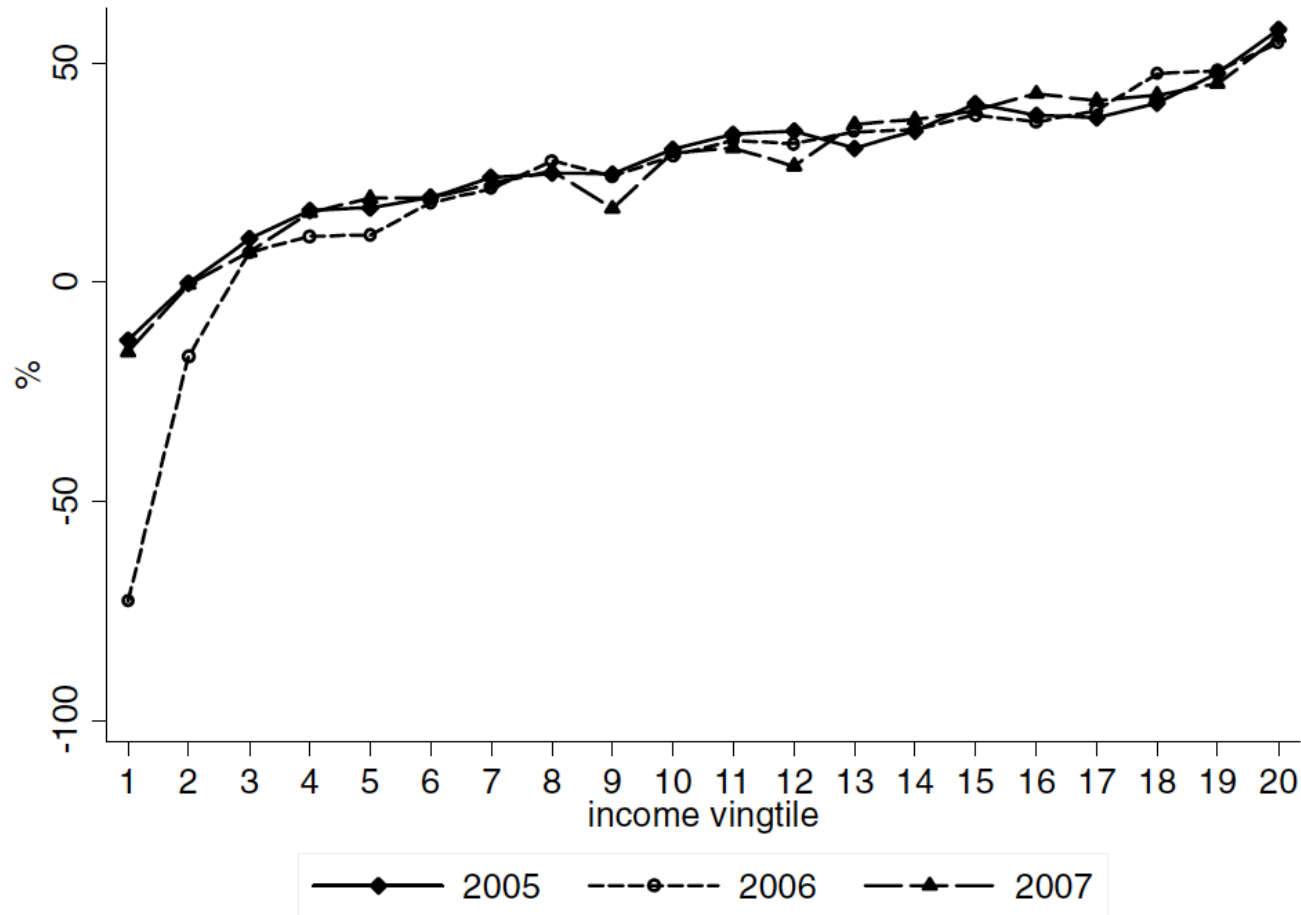


FIGURE 3 Mean savings rate by income vingtile, Surveys Of Household Spending, 2005, 2006, 2007

# Our plans

*“Further light would be shed on the factors behind the discrepancy by means of a reconciliation between the FES/EFS data and the figures produced in the national accounts, but that can be provided only by the Office for National Statistics”*

*- Weale (2009)*

# Our plans

- Build on two existing strands of ONS work
- Exploit newly available NPISH-Household sector split
- Consider alternative reconciliations
- Alternatives to proportional scaling
- Document adjustments to raw household spending data (eg. balancing) in the production of national accounts
  - Better understanding of discrepancies
  - Start with food and clothing & footwear



# Ultimate goals

- Best possible micro-data for studying macroeconomic developments
- Better assessment of micro data and possible feedback to design and production of micro data

# Thank you

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