



The
University
Of
Sheffield.

The British Household Panel Survey (BHPS) and its successor, Understanding Society (US)

Professor Karl Taylor

Department of Economics

25th March 2014



OUTLINE

1. Background BHPS
2. Sampling
3. Waves and sample sizes
 - unbalanced: individuals/households
 - balanced: individuals/household
4. Attrition and representativeness
5. BHPS successor US
6. Examples of using BHPS



1. Background to BHPS

- <http://ukdataservice.ac.uk/>
- Survey conducted by the ISER.
- Approximately 10,000 annual individual interviews.
- Waves 1-18 over the period 1991-2008.
- Main objective of BHPS to further understanding of social and economic change at the individual and household level in Britain.



2. Sampling (see volume A)

- Initial sample for Wave 1 of the BHPS consisted of 8,167 addresses.
- Interviews were attempted at all private households found at these addresses.
- All individuals enumerated in respondent households became part of the longitudinal sample.
- All these sample members are known as Original Sample Members (OSMs).



- Sample for subsequent waves consists of all adults in all households containing at least one member who was resident in a household interviewed at Wave 1.
- Eligibility depended on domestic residence in England, Wales, or Scotland south of the Caledonian Canal.



- New eligibility for sample inclusion could occur between waves in the following ways:
 - a. A baby born to an OSM;
 - b. An OSM moves into a household with one or more new people;
 - c. One or more new people move in with an OSM.



- Interviews are sought with all resident household members aged 16 or over on 1 December of the sample year.
- Hence includes OSMs previously coded as children.
- Proxy interviews with another household member, or telephone interviews, are carried out for eligible members who are either too ill or too busy to be interviewed.



- Additional sub-samples:
 - a. ECHP
 - from wave 7
 - b. Scotland and Wales extension
 - from wave 9 – to ↑ Scotland & Wales sample size
 - originally 400-500 households in each country
 - after extension 1,500 households in each country
 - Includes north of Caledonian canal
 - c. Northern Ireland Panel
 - from wave 11
 - target sample 2,000 household in NI



3. Waves & sample sizes

- Individual level data in wINDRESP file prefixed w = A-R.
- Household level data in wHHRESP file prefixed w = A-R.
- 'PID' x-wave individual identifier.
- 'wHID' household identifier.



The
University
Of
Sheffield.

Year	Number of households
1991	5,511
1992	5,227
1993	5,232
1994	5,127
1995	5,033
1996	5,064
1997	6,090
1998	6,005
1999	8,797
2000	8,761
2001	10,631
2002	9,352
2003	9,045
2004	8,897
2005	8,709
2006	8,603
2007	8,346
2008	8,144
Average	7,365



The
University
Of
Sheffield.

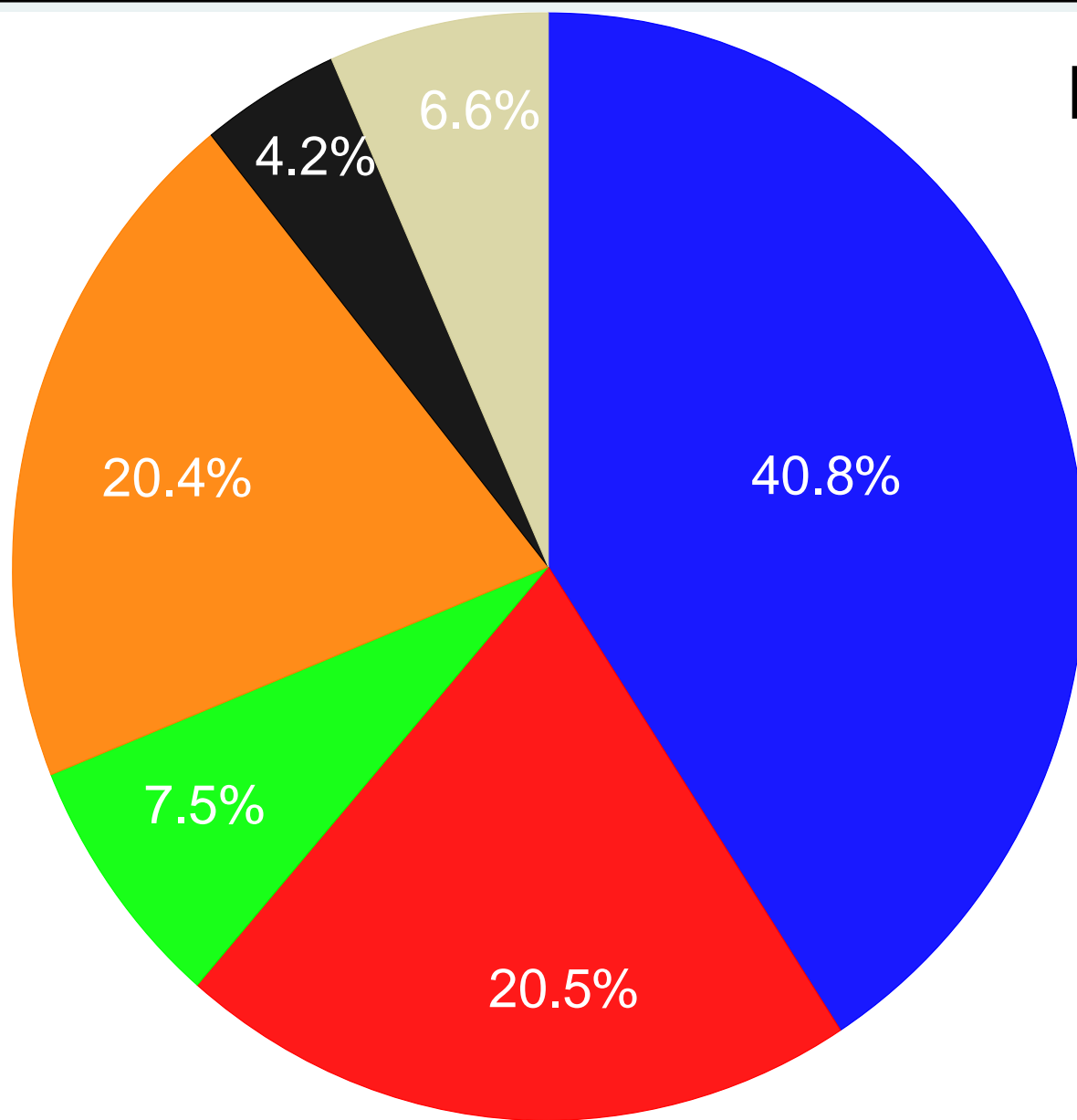
Year	Freq.	Percent	Cum.
1991	10,264	4.29	4.29
1992	9,845	4.12	8.41
1993	9,600	4.02	12.43
1994	9,481	3.97	16.4
1995	9,249	3.87	20.27
1996	9,438	3.95	24.22
1997	11,193	4.68	28.9
1998	10,906	4.56	33.46
1999	15,619	6.54	40
2000	15,603	6.53	46.53
2001	18,866	7.89	54.42
2002	16,597	6.94	61.37
2003	16,238	6.79	68.16
2004	15,791	6.61	74.77
2005	15,616	6.53	81.3
2006	15,391	6.44	87.74
2007	14,872	6.22	93.97
2008	14,418	6.03	100
TOTAL	238,987		



Unbalanced data

- $NT=238,987$ observations.
- N =number of individuals.
- T =number of time periods.
- $N=32,379$ (aged 16-101).
- $T=18$ (average $T=7.4$).
- Household relationships wHGR2R.

N=32,379



reference person



lawful spouse



live-in partner



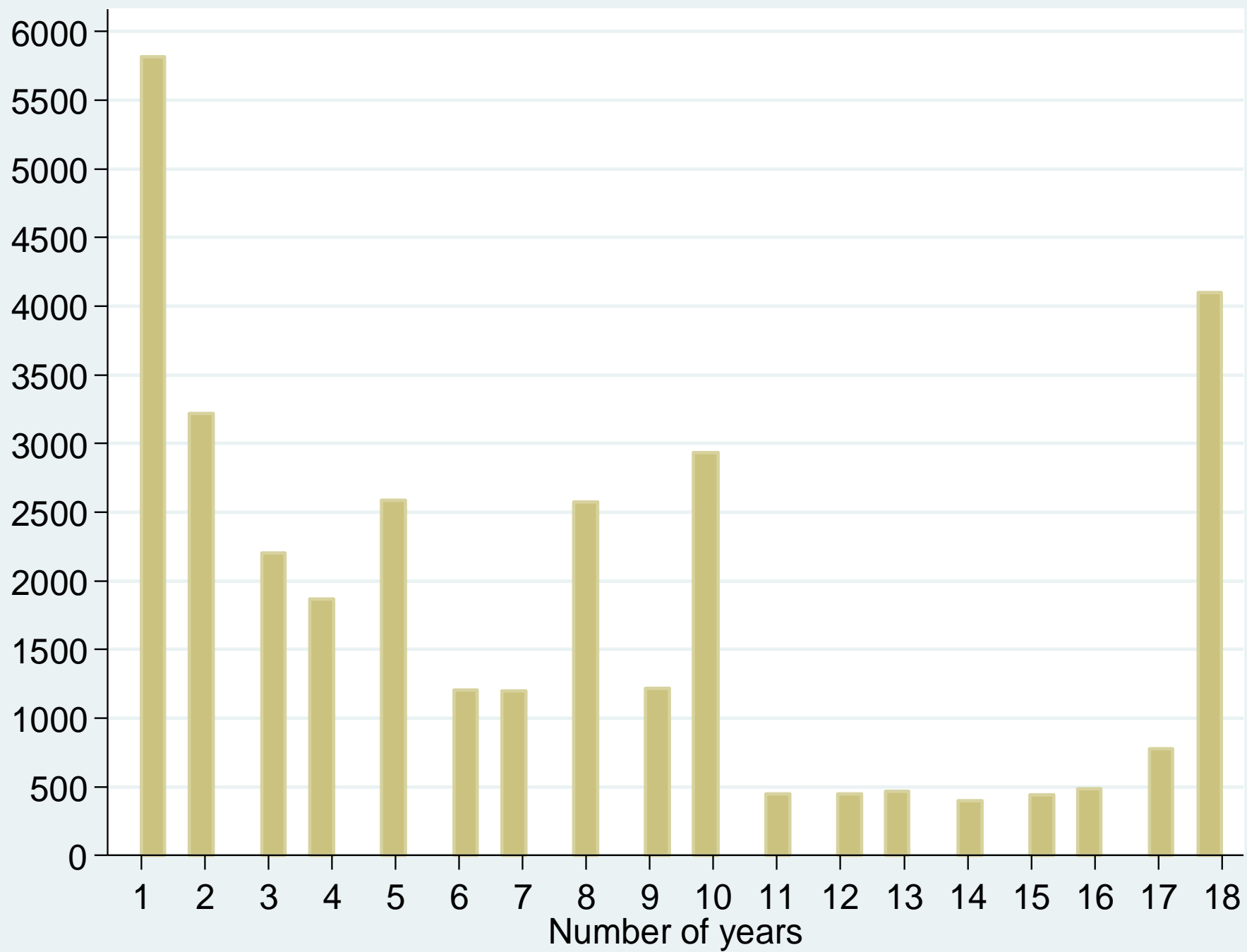
natural child

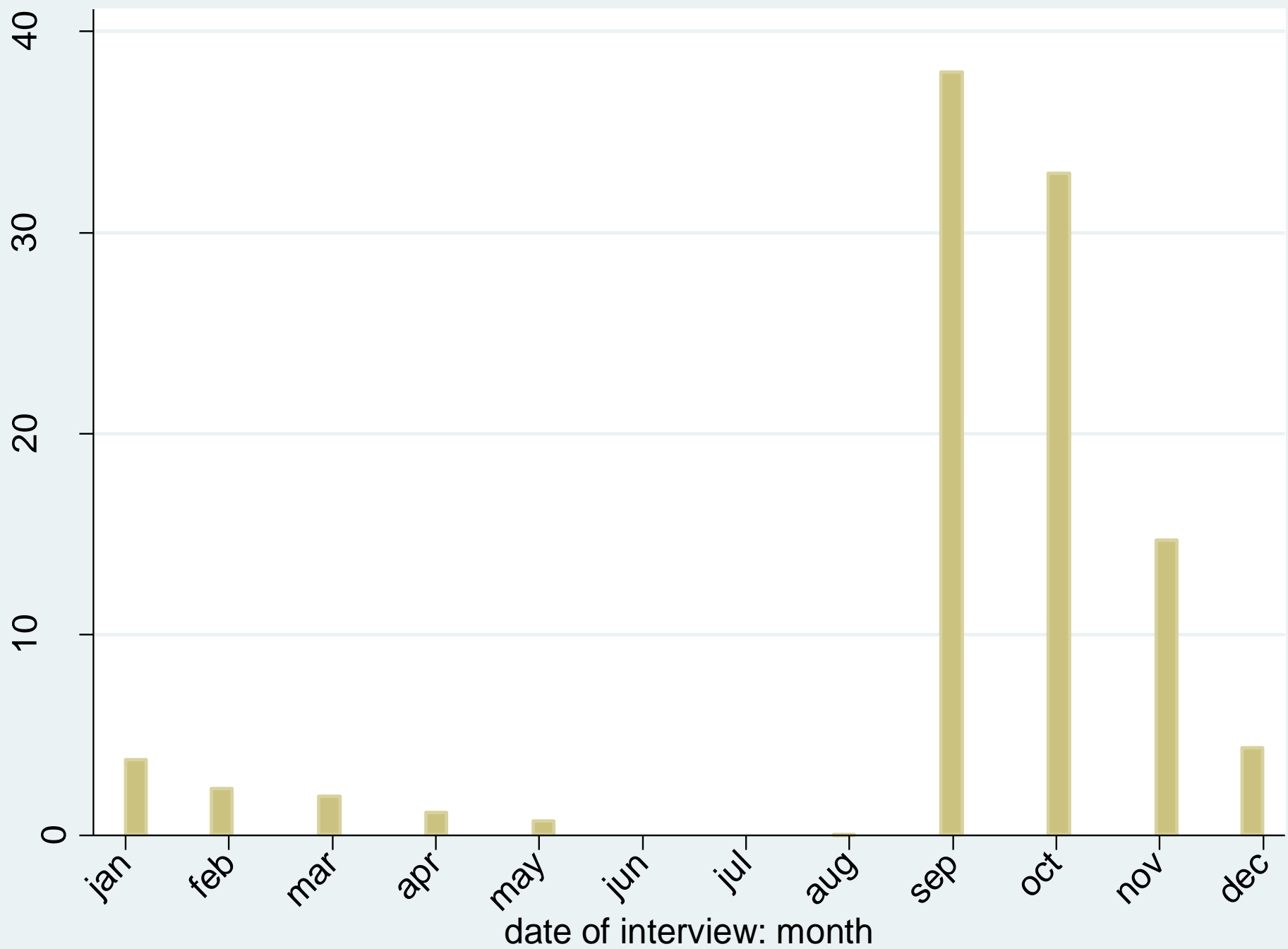


other relative



unrelated sharer







The
University
Of
Sheffield.

Balanced data

- $N=4,098$ individuals.
- $T=18$.
- $NT=73,764$.



4. Attrition and representativeness

- Attrition is the permanent loss of data for a sampled individual due to non-participation in the study. It is problem for 2 key reasons:
 1. As a panel sample decreases in size over its duration, the precision of estimates derived from that sample also decreases;
 2. Attrition may not be random – unrepresentative, biased estimates.



- At each wave a thorough refusal conversion process is undertaken to attempt to minimise attrition due to refusal and other forms of non-response.
- Process covers both previous wave refusals, and also new refusals encountered in the current wave.



- Cross-sectional and updated longitudinal weights are included with each wave of the BHPS.
- Weighting is important for ensuring that sample estimates are representative of the population from which the sample was drawn.

Table 25

Guide to the selection of BHPS weights for analysis

	Longitudinal analysis of individual respondent original sample members	Longitudinal analysis of all individual original sample members, including children	Cross-sectional analysis of individual respondents, including temporary sample members	Cross-sectional analysis of all individuals, including children, and including TSMs
GB or UK level analysis:				
Original BHPS sample	wLRWGHT from latest wave in longitudinal sequence	wLEWGHT from latest wave in longitudinal sequence	wXRWGHT from wave to be analysed	wXEWGHT from wave to be analysed
Original BHPS sample + ECHP sub-sample (waves 7 to 11)	Weight not available	Weight not available	wXRWGHTe from wave to be analysed	wXEWGHTe from wave to be analysed
Original BHPS sample + Scotland and Wales extension samples (wave 9 onwards)	wLRWTSW1 from latest wave in longitudinal sequence	wLEWTSW1 from latest wave in longitudinal sequence	wXRWTSW1 from wave to be analysed (wXRWTUK1 from wave 11 onwards)	wXEWTSW1 from wave to be analysed (wXEWTUK1 from wave 11 onwards)
Original BHPS sample + Scotland, Wales and Northern Ireland extension samples: (wave 11 onwards)	wLRWTUK1 from latest wave in longitudinal sequence	wLEWTUK1 from latest wave in longitudinal sequence	wXRWTUK1 from wave to be analysed	wXEWTUK1 from wave to be analysed



- The longitudinal respondent weights (wLRWGHT) selects out cases who gave a full interview at all waves in the BHPS files.
- At each wave these cases are re-weighted to take account of previous wave respondents lost through refusal at the current wave or through some other form of sample attrition.



5. BHPS successor US

- <http://ukdataservice.ac.uk/>
- Understanding Society collects information about the social and economic circumstances and attitudes of people living in 40,000 UK households.
- 2,640 postcodes in England, Scotland and Wales – 2,400 addresses from Northern Ireland.



- Interviews began in 2009 with all eligible members of the selected households.
- Adults are interviewed every 12 months either face-to-face or over the phone using Computer Assisted Interviewing (CAI).
- 10-15 year-olds fill in a paper self-completion questionnaire.
- Currently 3 waves.



Unbalanced data

- $NT=155,320$ observations.
- N =number of individuals.
- T =number of time periods.
- $N=70,592$ (aged 14-103).
- $T=3$ (average $T=2.2$).
- 'PIDP' x-wave individual identifier.
- 'wHIDP' household identifier.



Balanced data

- $NT=93,552$ observations.
- N =number of individuals.
- T =number of time periods.
- $N=31,184$.
- $T=3$.



Linking BHPS and US

- The sample issued at wave 2 consisted of all members from the BHPS sample who were still active at Wave 18 of the BHPS and who had not refused consent to be issued as part of the Understanding Society sample.



- NT=22,747 observations.
- N=number of individuals.
- T=number of time periods.
- N=12,543 (aged 16-98).
- T=2 (average T=1.8).
- 'PID' individual identifier BHPS cohort.

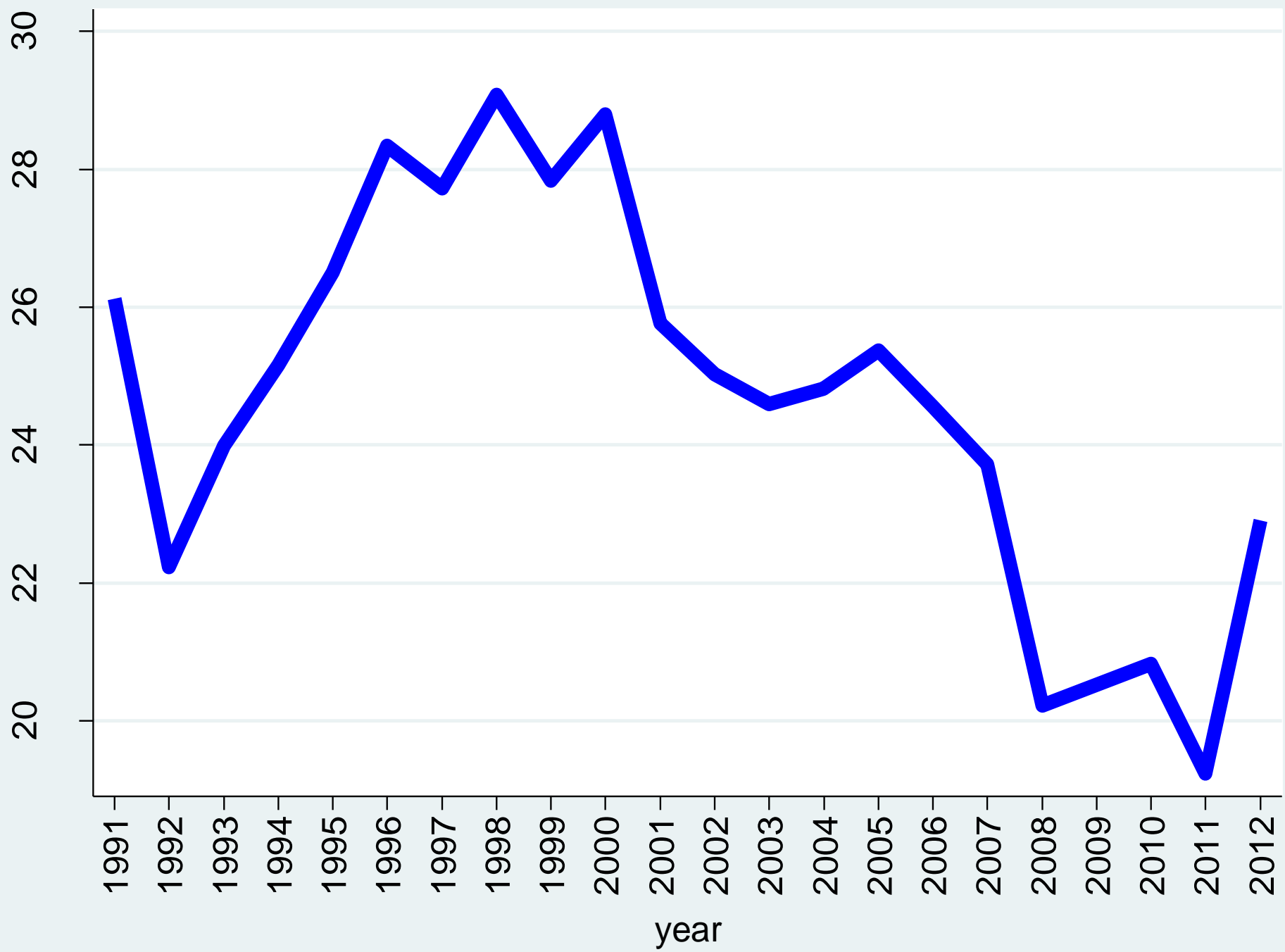


6. Examples of using BHPS

A. Financial Expectations and Economic Outcomes.

i) Brown and Taylor (2006) **Fiscal Studies.**

BHPS (US) respondents are asked 'looking ahead, how do you think you will be financially a year from now?' (i) better off, (ii) worse off, (iii) or about the same.

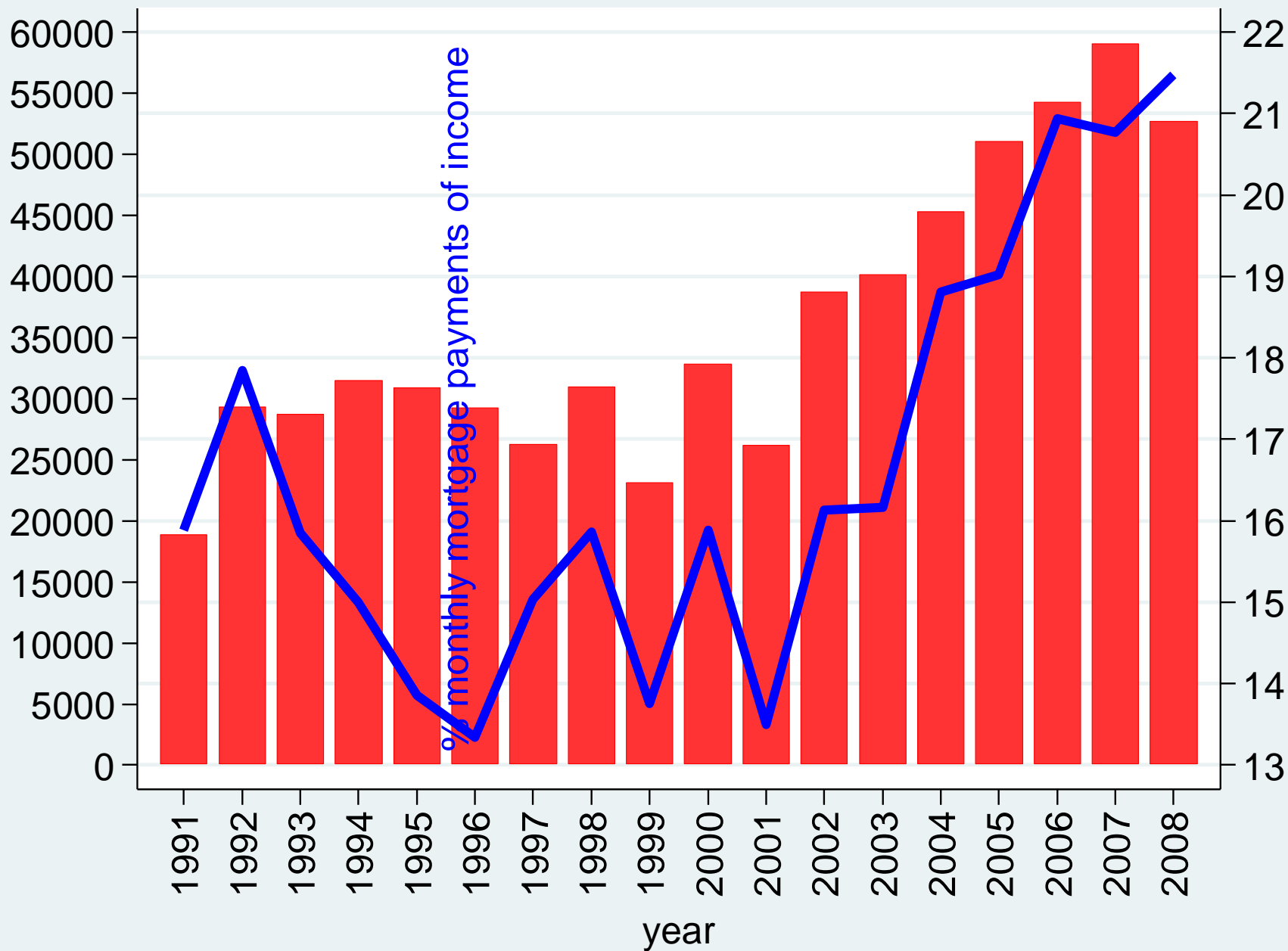




ii) Brown, Garino and Taylor (2008) **Southern Economic Journal.**

- Explore the relationship between the amount of outstanding mortgage debt at the household level and financial expectations.
- BHPS households are asked:
'How much did you borrow originally when you bought the property? How much was your last total monthly instalment on the mortgage(s)?'

Secured Debt





B. Wellbeing and economic influences

i) Brown, Taylor and Wheatley Price (2005)
Journal of Economic Psychology.

- Explore the association between debt and psychological well-being .
- Find that those who have outstanding (non-mortgage) credit, and who have higher amounts of such debt, are less likely to report complete psychological well-being.



ii) Ratcliffe and Taylor (2012) **IZA paper.**

- Investigate the association between stock market activity and mental wellbeing over the period 1991-2008.
- Evidence that annual changes in the price index are associated with better mental wellbeing while greater uncertainty in the price index is associated with poorer mental wellbeing - even after controlling for macroeconomic conditions.



References

- BRITISH HOUSEHOLD PANEL SURVEY USER MANUAL VOLUME A INTRODUCTION, TECHNICAL REPORT AND APPENDICES.
https://www.iser.essex.ac.uk/bhps/documentation/pdf_versions/volumes/bhpsvola.pdf
- Brown, S., Taylor, K. and S. Wheatley Price (2005) 'Debt and Distress: Evaluating the Psychological Cost of Credit.' Journal of Economic Psychology. 26(5), 642-63.
- Brown, S. and K. Taylor (2006) 'Financial Expectations, Consumption and Saving: A Microeconomic Analysis.' Fiscal Studies. 27(3), 313-38.
- Brown, S., Garino, G. and K. Taylor (2008) 'Mortgages and Financial Expectations: A Household Level Analysis.' Southern Economic Journal. 74(3), 857-78.
- Ratcliffe, A. and K. Taylor (2012) 'Who Cares About Stock Market Booms and Busts? Evidence from Data on Mental Wellbeing.' IZA Discussion Paper 6956.