

Low-Income Dynamics – Moving to using the Understanding Society survey

Overview

This note is aimed at customers of the National Statistics Low-Income Dynamics publication and those with an interest in persistent low income and income dynamics. It provides information on the basis and timing of future publications and seeks customers' views on the content of the report in light of the cessation of the British Household Panel Survey (BHPS) and the subsuming of the BHPS sample into the much larger Understanding Society survey.

The closing date to submit views of users about tabulations and analyses in the publication is **31st January**. Views can be submitted to the HBAI team email address: TEAM.HBAI@DWP.GSI.GOV.UK.

Document structure:

- Section 1: Publication and use of persistent poverty information. This section describes where persistent poverty information is currently published and what this information is used for. It also makes clear why an alternative data source is better for cross-sectional poverty analysis.
- Section 2: Potential of the Understanding Society survey. This section explores the additional potential of the Understanding Society survey compared to the BHPS in terms of tabulations, analyses and the harmonisation of the income concept. **It asks for the views of users about tabulations and analyses in the publication.**
- Section 3: Timings of future Low-Income Dynamics publications and analyses. The change of survey instrument necessitates a gap between Low-Income Dynamics publications and a gradual transition from using the BHPS sub-sample in Understanding Society to using the full (and much larger) Understanding Society sample. This section describes this transition.
- Annex 1: Details of the BHPS and Understanding Society survey.

If you would like to be informed about developments and outcomes of the work to move the Low-Income Dynamics report to use the Understanding Society survey, please let us know, using the email address above and we will add you to our circulation list.

1. *Publication and use of persistent poverty information*

The annual National Statistics publication, Low-Income Dynamics, provides estimates of persistent low income in Great Britain overall and by population group, currently based on the BHPS. The publication is available at:

<http://research.dwp.gov.uk/asd/index.php?page=lid>

This publication is used to monitor the persistence and dynamics of poverty for the client groups children, working-age adults and pensioners. Measuring persistent poverty (defined as having low income at three or more annual interviews out of four consecutive annual interviews) recognises the negative impact that continuous or repeated periods in poverty can have. In addition, the analysis in the publication enables an examination of income mobility and the events that are associated with movements in and out of poverty.

Persistent poverty has a particular relevance to children in poverty, as it is one of the four targets set out in the Child Poverty Act 2010. It is defined in the Act as living in a household where income is below 60 per cent of median for at least three of the last four years. However, given that the existing data source for measuring persistent poverty, the BHPS, was coming to an end in its then current form the level of the target was not set and the Act allows both the target, and if necessary an alternative measure, to be prescribed in regulations before 2015. The Child Poverty Act can be found at the URL:

<http://www.legislation.gov.uk/ukpga/2010/9/contents>.

The Government maintained its commitment to the Act in the Child Poverty Strategy published in April 2011. Alongside establishing indicators of progress, the strategy set out the intention to continue to monitor and understand the factors associated with child well being and development and to explore the potential of using long term studies such as Understanding Society to better capture those living in sustained severe poverty. . The Child Poverty Strategy can be found at the URL:

<https://www.education.gov.uk/publications/standard/publicationDetail/Page1/CM%208061>.

The Understanding Society survey and the Low-Income Dynamics publication are the intended vehicles for the collection and dissemination of data related to persistent poverty, and the larger sample size of Understanding Society compared to the BHPS, makes more detailed analysis more practical, not only for children, but for other client groups as well.

This note outlines some of the options for expansion, and aims to gather the views of users as to what would be the most high priority analysis to consider for inclusion in the new report, given the current constraints upon Departmental resources.

The Child Poverty Act can be found at the URL:

<http://www.legislation.gov.uk/ukpga/2010/9/contents>

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The Child Poverty Strategy can be found at the URL:

<https://www.education.gov.uk/publications/standard/publicationDetail/Page1/CM%208061>

The Low-Income Dynamics report complements the main source of low-income statistics, the Households Below Average Income (HBAI) series. Despite the increase in sample size in the new Understanding Society survey and the subsequent increase in the validity of results, the source of the Household Below Average Income series, the Family Resources Survey (FRS) still represents a more comprehensive source of household income data.

This is because the FRS is a survey designed specifically to capture a complete measure of household incomes. While data collection in Understanding Society covers a wider range of topics than does data collection in the FRS, Understanding Society does not ask about income in as much depth. Therefore, it remains the main source of cross-sectional household income and low-income statistics.

Nevertheless Understanding Society is the only source of longitudinal income data for individuals and households, thereby allowing estimates of persistent low income to be derived. The HBAI publication, based on the FRS, remains the main source of cross-sectional household income and low-income statistics.

2. *Additional potential of using Understanding Society data*

The BHPS sample has been subsumed into the much larger Understanding Society survey, with BHPS sample members being part of the Understanding Society survey sample. This necessitates changing the DWP Low-Income Dynamics publication so that it uses the new Understanding Society data, but it also presents an opportunity to make full use of the larger Understanding Society sample and to expand and improve the Low-Income Dynamics report.

2.1 Additional tabulations

HBAI provides the following key population tabulations (note, some of these tabulations are already in the Low-Income Dynamics publication):

- Tabulations by client group; children, working-age adults, pensioners and families containing disability
- Family type
- Economic status
- Ethnic group
- UK Country and Region
- Tenure
- Pensions receipt
- Educational qualifications
- State support received
- Age of children
- Marital status
- Bills in arrears

The larger sample size of the Understanding Society survey makes some of the extra splits found in HBAI possible in Low-Income Dynamics. DWP would be very interested in your views as to which of these splits would be the highest priority to include in the Low-Income Dynamics report. If there are others areas of interest within the scope of the Understanding Society survey data that you would like DWP to consider for inclusion, please let us know.

Question 1: Are there any additional tabulations you would like DWP to consider for inclusion in Low-Income Dynamics publications based on Understanding Society?

The increased sample size of the Understanding Society survey should make it practical to provide single year and persistent low-income estimates for the population splits listed above. However this is provisional on sample size validity checks which will be carried out once the data for the 2010 calendar year become available.

2.2 Further analysis of persistent poverty and longitudinal analysis of incomes

Additionally, DWP would also be interested to hear about any further types of analysis of the persistence of low income or income mobility that you would like considered for inclusion in the report.

Question 2: Have you any additional analyses you would like us to consider for inclusion in the Low-Income Dynamics publication based on Understanding Society?

All suggested changes will be subject to prioritisation taking into account Departmental resources and it may not be possible to expand the Low-income Dynamics report to cover all areas.

2.3 Harmonisation of income definitions

The Understanding Society survey, although based on the BHPS design, collects additional and different information from its respondents. DWP is working closely with the Institute for Social and Economic Research (ISER) at the University of Essex, who have developed and run both the BHPS and Understanding Society surveys, to ensure the most effective and accurate use of the Understanding Society data by DWP.

This work not only aims to ensure the maintenance of a consistent time series of estimates across the change in survey instrument, but also to improve the consistency of the income definitions developed by DWP and by ISER. This harmonisation work also provides an excellent opportunity to make improvements to the Low-Income Dynamics methodology where possible, given the new content of the Understanding Society survey.

In future Low-Income Dynamics publications, we will make clear any changes we make to the way in which the household income measure is derived and the extent of any discontinuities.

3. *Timing of future Low-Income Dynamics publications and analysis*

There is a gap in the data collected from the BHPS sample as the respondents are moved into the Understanding Society sample. Hence there are no new data available to produce a 2009 Low-Income Dynamics report.

3.1 Current work – deriving a household income measure

At the time of publication of this technical note, work has been taken forward with the 2009 Understanding Society data consisting of the first half of wave 1 (see Annex 1 for more detail on the Understanding Society survey design). Although this is an effective test bed for the implementation of our income derivation methodology, the dataset is very raw and does not contain any imputed variables or population grossing factors. As a result, a further data release from ISER including these elements is required to provide more in-depth quality assurance and finalisation of our proposed methodology to derive income statistics. This work is expected to occur in spring 2012 following the scheduled data release.

3.2 Low-Income Dynamics publications based mainly on the BHPS sub-sample in the Understanding Society survey

The proposed publication window for the next Low-Income Dynamics report is October/November 2012, although this is dependent on the availability of Understanding Society data. This report will cover the period 1991-2010 for the persistent low-income time series based on the BHPS sample for 1991-2008, with 2010 information being taken from the BHPS sub-sample included in the Understanding Society survey.

Data collection from the former BHPS sample is now included within the main Understanding Society data collection cycle. However, there is a gap of approximately eighteen months between the final interviews held as part of BHPS Wave 18 (Autumn 2008) and the first interviews for the sample as part of Understanding Society (in the first half of 2010).. This will result in a discontinuity in the because previous LID estimates were based on household income data collected at approximately one year intervals (the BHPS had annual interviews). So, we although we will continue to looking at those individuals with low income in at least three of the last four times they have been interviewed, the gap between interviews will not be approximately constant, as before.

There is also likely to be some sample drop-out – a reduction in sample size due to the change in the survey instrument and the longer gap between interviews. Work to quantify the extent of the discontinuity and the robustness

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of the analysis currently presented will be carried out as part of the work for the publication next year.

Using the BHPS sub-sample as the main source of persistent low-income statistics is expected to continue until 2015, which will be the first year for which four years of Understanding Society data will be available.

3.3 Transition towards using the larger Understanding Society survey sample

Until we have four years of data, the larger Understanding Society sample cannot be used to produce the current measure of persistent low income. It can however be used to provide contextual information and form a basis for comparison against the primary source of cross-sectional low-income statistics, those derived from the FRS and reported in the HBAI publication. As more waves of Understanding Society data become available, more types of persistent low-income analysis will become possible using the larger Understanding Society samples.

Figure 1 below shows the expected timings for the publication of the cross-sectional, persistent, income mobility and transitional estimates currently included in the Low-Income Dynamics report.

Figure 1: Availability of Low-Income Dynamics estimates from the Understanding Society survey

Year of publication	2012	2013	2014	2015	2016
<i>Latest year of data</i>	2010	2011	2012	2013	2014
Estimate:					
Cross-sectional, single-year low-income estimates (requires single year of data)	✓	✓	✓	✓	✓
Persistent low-income estimates (main estimates - requires four years of data)	✗	✗	✗	✓	✓
Income mobility estimates: Movement within the income distribution (requires two years of data)	✗	✓	✓	✓	✓
Transition rates: Events associated into and out of low income in successive years (requires two years of data)	✗	✓	✓	✓	✓
Transition rates: Entry and exit rates for consecutive periods of persistent low income (requires five years of data)	✗	✗	✗	✗	✓

As shown in Figure 1, the first estimates of persistent poverty as currently defined sourced from the larger and more robust Understanding Society survey will become available in 2015 covering the period 2010 to 2013. At this point, the more detailed splits of persistent low income can be presented,

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as well as any additional analyses that are agreed for inclusion. We will explore the potential of extending the analysis of cross-sectional analyses from Understanding Society, income mobility estimates and transition rates in advance of 2015, starting with the 2012 publication.

Annex 1: Background to the BHPS and Understanding Society survey

The British Household Panel Survey (BHPS) was a longitudinal survey which collected income information from a nationally representative sample of individuals within private households. There were interviews undertaken annually over the period 1991 to 2008. In 2008, approximately 4,400 households in Great Britain were used in the analysis underlying the main Low-Income Dynamics persistent low-income estimates. The survey was developed and run by the Institute for Social and Economic Research at the University of Essex, (ISER). Further information on ISER is available at <http://www.iser.essex.ac.uk> while details about the BHPS itself is available at <http://www.iser.essex.ac.uk/bhps>.

The BHPS has now been subsumed into the larger Understanding Society study, also run by ISER, with BHPS sample members now being part of the Understanding Society survey sample. Understanding Society is a major research study designed to provide valuable new evidence about the people of the UK, and their lives, experiences, behaviours and beliefs. In addition to collecting data from the respondents to the BHPS, it will also collect data from a much wider sample, in total covering 40,000 households in the United Kingdom.

The sample of 40,000 households is made up of four subgroups:

- General population sample: 28,000 to 29,000 households
- Innovation panel sample: 1,500 households
- Ethnic minority boost sample: 1,000 adult individuals in each of the five main ethnic minority groups
- BHPS sample: 8,400 households

It may be that not all of these subgroups can be used in the analysis of persistent low income. This will depend on the availability of income information and weights to adjust any estimates to be nationally representative.

The Understanding Society has a complex design. As with the BHPS, there are annual interviews with respondents, but each interviewing cycle ('wave') for Understanding Society is spread over two calendar years, rather than being concentrated into the autumn of each year, as was the case for the BHPS. Each Understanding Society household is allocated to one of 24 monthly samples within each two-year data collection period, and interviewing for households within each monthly sample group is planned at annual intervals. The resulting design will mean that, for any particular calendar year, there will data available from the first year of data collection from wave $t+1$ and from the second year of data collection from wave t . That is, from a cross-sectional perspective, there is a full 40,000 household sample in any one calendar year. Figure 2 below shows a visual representation of the sample

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design. DWP will follow the ISER best practice in terms of weighting the cases in each wave. This may alter how we look at transitions and persistent poverty statistics.

The BHPS sample is included in the first half of wave 2, and in the first half of all subsequent waves, and as such was first surveyed in 2010.

Figure 2: Understanding Society data collection overview

2009	2010	2011	2012	2013	2014
Wave 1					
	Wave 2				
		Wave 3			
			Wave 4		
				Wave 5	

DWP will be working closely with ISER to make sure its analysis of the Understanding Society survey data is in line with best practice, for instance in terms of combining waves, grossing up to population totals, adjusting from non-response, and other relevant technical considerations.

Further information and details can be found on the Understanding Society website at <http://www.understandingsociety.org.uk/default.aspx>.