



## Poverty and Social Exclusion in the UK

**Working Paper Methods Series No. 21**

### Main PSE UK Survey Sampling Frame

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October 2011

ESRC Grant RES-060-25-0052



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# Poverty and Social Exclusion in the UK

## Overview

The Poverty and Social Exclusion in the UK Project is funded by the Economic, Science and Research Council (ESRC). The Project is a collaboration between the University of Bristol, University of Glasgow, Heriot Watt University, Open University, Queen's University (Belfast), University of York, the National Centre for Social Research and the Northern Ireland Statistics and Research Agency. The project commenced in April 2010 and will run for three-and-a-half years.

The primary purpose is to advance the 'state of the art' of the theory and practice of poverty and social exclusion measurement. In order to improve current measurement methodologies, the research will develop and repeat the 1999 Poverty and Social Exclusion Survey. This research will produce information of immediate and direct interest to policy makers, academics and the general public. It will provide a rigorous and detailed independent assessment on progress towards the UK Government's target of eradicating child poverty.

### Objectives

This research has three main objectives:

- To improve the measurement of poverty, deprivation, social exclusion and standard of living
- To assess changes in poverty and social exclusion in the UK
- To conduct policy-relevant analyses of poverty and social exclusion

For more information and other papers in this series, visit [www.poverty.ac.uk](http://www.poverty.ac.uk)

This paper has been published by Poverty and Social Exclusion, funded by the ESRC. The views expressed are those of the Author[s].

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## Introduction

The Poverty and Social Exclusion in the UK (PSEUK) survey will re-interview respondents to the 2010/11 Family Resources Survey (FRS) who have provided permission to be contacted again. A sampling frame is required to select a minimum achieved sample of 4,000 households and 6,000 individuals in Britain and a minimum achieved sample of 1,000 households and 1,500 individuals in Northern Ireland.

Follow-up surveys have three main advantages;

- 1) Information about respondents and their households is available for two points in time – the original FRS survey and the PSEUK follow-up survey.
- 2) The follow-up survey does not need to ask respondents for information which changes infrequently e.g. the educational qualifications of adults.
- 3) Response rates are usually high as only respondents who have already agreed to be re-contacted are approached. Where respondents do refuse to be re-interviewed considerable information is available from the previous survey, thus allowing analysis of the effects of non-response bias.
- 4) The original survey can be used as a sampling frame to oversample important population groups (e.g. the ‘poor’, ethnic minorities, etc.) and so ensure that there are sufficient cases to permit sub-group analyses.

## The 1999 PSE Survey Sampling Design

The 1999 Poverty and Social Exclusion (PSE) survey re-interviewed respondents to the 1998/99 General Household Survey (GHS). The sample design was influenced by three main considerations:

- Sufficient cases were required for the analysis of key variables by sub-groups.
- Sufficient cases were required for separate analysis of households and individuals in Scotland.
- Sufficient cases of low-income households and respondents were required to examine their characteristics.

The sample design therefore gave a greater probability of selection to people in lower income groups and Scotland. Households in the lower income groups were identified by using a measure of equivalised income; that is, a measure of household income which takes account of household size and composition.

An equivalised income measure was developed based on the budget standards research of Jonathan Bradshaw and Sue Middleton, in conjunction with the Office for National Statistics (ONS). The McClements equivalence scale, which was used as the standard by ONS at that time, was felt not to be appropriate for the PSE, as it did not assign sufficient weight to children, particularly young children. The scale used for the PSE was designed to take account of this. Each member of the household was assigned a value, shown in Table1:

**Table 1: 1999 PSE Equivalised income scale for sample selection**

Type of household member	Equivalence value
Head of household	0.70
Partner	0.30
Each additional adult (anyone over 16)	0.45
Add for first child	0.35
Add for each additional child	0.30
If head of household is a lone parent, add	0.10

The values for each household member were added together to give the total equivalence value for that household. This number was then divided into the gross income for that household. For example, the equivalence value for a lone-parent household with two children is  $0.7 + 0.35 + 0.3 + 0.1 = 1.45$ . If the household's gross income is £10,000, its equivalised income is £6,897 ( $=£10,000/1.45$ ).

Equivalentised income was grouped into quintiles, with the bottom quintile comprising households with the lowest incomes and the top quintile those households with the highest incomes. The quintiles were then sampled in the following proportions, as set out in Table 2:

**Table 2: Probability of selection for income quintiles in the 1999 PSE Survey**

Quintile group	Proportion sampled
Bottom quintile (lowest income)	40%
Fourth quintile	30%
Third quintile	10%
Second quintile	10%
Top quintile (highest income)	10%

## The 2011 PSEUK Sample Design

The 2010/11 FRS can be used as a sampling frame for the main PSEUK survey that is stratified to over-sample:

1. Respondents in Northern Ireland (minimum achieved sample 1,000 households)
2. Respondents in rural Scotland (achieved sample 220 households)
3. Respondents in Scotland (minimum achieved sample 1,000 households)
4. Respondents from ethnic minorities (minimum achieved sample 1,000 households)
5. Low income/poor respondents

Please note that funding for a rural Scottish boost sample is currently in negotiation with the Scottish Government and if approved the minimum achieved sample in Scotland will increase from 1,000 households to 1,220 households and therefore the minimum achieved sample in Britain will also increase from 4,000 households to 4,220 households.

### ***Northern Ireland Sample***

The Northern Ireland sample will be a random sample of households in the 2010/11 Northern Ireland FRS survey, where respondents have given permission to be re-contacted.

The sample will be drawn from the lists of private addresses held for rating valuation purposes by Land and Property Services, an agency of the Department of Finance and Personnel (Northern Ireland). The addresses are stratified into three regions, Belfast, East of Northern Ireland and West of Northern Ireland and sampled proportionately.

### **Scottish Rural Boost Sample**

This boost sample will be drawn using the Scottish Government's urban-rural classification. Four area types are defined as 'rural';

1. Accessible towns
2. Remote towns
3. Accessible rural
4. Remote rural

Table 3 shows the likely area based distribution of the PSEUK sample in Scotland (column 1) and the ideal area distribution of the rural Scottish boost sample (Col 2).

**Table 3: Boosting the Scottish sample**

	<b>Likely PSE sample 1000</b>	<b>Boost 220</b>	<b>Total 1220</b>	<b>Over (under) sampling</b>
<b>6-fold classification</b>				
Large urban	410		410	-8%
Other urban	310		310	-5%
Accessible towns	80	40	120	2%
Remote towns	40	90	130	7%
Accessible rural	100	30	130	0%
Remote rural	60	60	120	4%
<b>Total</b>	<b>1000</b>	<b>220</b>	<b>1220</b>	<b>0%</b>
<b>2-fold classifications</b>				
Urban+towns	840	130	970	-4%
Rural	160	90	250	4%
<b>Total</b>	<b>1000</b>	<b>220</b>	<b>1220</b>	<b>0%</b>
Urban	720	0	720	-13%
Accessible	180	70	250	2%
Remote	100	150	250	11%
<b>Total</b>	<b>1000</b>	<b>220</b>	<b>1220</b>	<b>0%</b>

## ***Scottish Boost Sample***

The Scottish Boost sample will be a random sample of households living in Scottish PSUs, where respondents have given permission to be re-contacted. Scottish PSUs will be sampled/identified using the Government Office Region variable in the FRS.

## ***Ethnic Minority Definition***

The ethnic minority sample will be a random sample of households with respondents from ethnic minority groups in Britain, where respondents have given permission to be re-contacted. An Ethnic Minority group is defined using the FRS variable *Ethgrp Showcard A3* (see below)

### **SHOW CARD A3**

To which of these ethnic groups does [name] consider he/she belongs?

1. White † British
2. White † Irish
3. Any other white background ( please describe)
4. Mixed † White and Black Caribbean
5. Mixed † White and Black African
6. Mixed † White and Asian
7. Any other mixed background ( please describe)
8. Asian or Asian British † Indian
9. Asian or Asian British † Pakistani
10. Asian or Asian British † Bangladeshi
11. Any other Asian/Asian British background ( please describe)
12. Black or Black British † Caribbean
13. Black or Black British † African
14. Any other Black/Black British background ( please describe)
15. Chinese
16. Any other ( please describe)

In order to maintain comparability with the Understanding Society survey (see discussion below) an ethnic minority respondent is defined for sampling purposes as *Ethgrp Showcard A3* categories 4 thru 15, plus those in categories 3 or 16 who describe themselves as having a 'North Africa' (e.g. Morocco), Turkey, Iran, Sri Lankan or Arab/Middle Eastern or Far Eastern (e.g. Singapore) ethnicity.

## ***Understanding Society Ethnic Minority Boost Sample***

The ESRC has asked the PSE team to liaise and work with the Understanding Society (US) project. Thus we will as far as possible try to make the PSE Ethnic Minority boost sample comparable with the Understanding Society ethnic boost sample. The US team used a screening instrument to identify the 14 ethnic minority groups for their boost sample.

1. Indian
2. Mixed Indian
3. African Asian
4. Pakistani
5. Bangladeshi
6. Caribbean/West Indian
7. Mixed Caribbean/West Indian
8. North African
9. Black African
10. Sri Lankan
11. Chinese
12. Other far eastern
13. Turkish
14. Middle eastern/Iranian

They excluded ‘*Other non-white minorities with diverse origins*’ and ‘*White Minorities*’ (e.g. ‘Polish’, ‘Gypsies/Roma/travellers (GRT)’, etc.) from the boost sample as this would have increased the cost of their boost sample and ‘*the dividing line between white people with UK and other origins is not easy to establish rigorously*’<sup>1</sup>.

The GRT group is arguably one of the most disadvantaged and poorest ethnic groups in the UK and European Union. Similarly, it would seem fairly easy to distinguish between recent Polish and Eastern European immigrants and ‘White’ people of UK origin. For these reasons the PSE team has agreed that in addition to the US categories 1-14 above, it would also include the following ethnic minority groups to boost the sample from the ‘*Any other white background*’ category:

15. Irish Traveller
16. Traveller
17. Gypsy/Romany
18. Polish
19. All republics which made up the former USSR

<sup>1</sup> <http://research.understandingsociety.org.uk/publications/working-paper/2009-02.pdf>

- 
- 20. Romanian
  - 21. Kosovan
  - 22. Albanian
  - 23. Bosnian
  - 24. Croatian
  - 25. Serbian
  - 26. Other republics which made up the former Yugoslavia

### ***Low Income/Poverty Sample Boost***

Ideally it would be best to select 'poor' households using a combined low income and deprivation measure. Unfortunately in the 2010/11 FRS, deprivation questions are only asked of adults who are either over 65 or where there are dependent children in the household. Thus the 'poor' will be defined for PSEUK sampling purposes as those in the bottom equivalised income quintiles.

A new equivalisation scale has been derived from the relative costs implicit in the 2011 Minimum Income Standard for the United Kingdom report (a simplified version has been used). Income for this purpose is defined as Net Household Income after housing costs (AHC) have been deducted.

**Table 4: 2011 PSEUK AHC equivalised income scale for sample selection**

<b>Type of household member</b>	<b>PSE 2011 Equivalence Scale</b>	<b>Modified OECD AHC used for HBAI</b>
Head of household	0.65	0.58
Partner	0.35	0.42
Each additional adult (16 and over)	0.40	0.42
Child (under 16)	0.25	0.20
If any household member has a limiting long term illness add	0.30	0

The values for each household member are added together to give the total equivalence value for that household. This number is then divided into the net income after housing costs for that household. For example, the equivalence value for a lone-parent household with a disabled child is  $0.65 + 0.25 + 0.3 = 1.20$ . If the household's net income after housing costs are deducted is £10,000, its equivalised income is £8,333 ( $=£10,000/1.20$ ).

Equivalised income will be grouped into quintiles, with the bottom quintile comprising households with the lowest incomes and the top quintile those households with the highest incomes. The quintiles will then be sampled in the following proportions, as set out in Table 5:

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**Table 5: Probability of selection for income quintiles in the 2011 PSEUK Survey**

<b>Quintile group</b>	<b>Proportion sampled</b>	<b>Number of Households N = 4,000</b>
Bottom quintile (lowest income)	30%	1,200
Fourth quintile	25%	1,000
Third quintile	15%	600
Second quintile	15%	600
Top quintile (highest income)	15%	600

### ***Weighting and Analyses***

Weights will be calculated by NatCen and NISRA to correct for non-responses and sampling biases. Estimation errors should be calculated using Complex Sample Statistics to allow for the complex sample design.