

Belfield, Chris; Cribb, Jonathan; Hood, Andrew; Joyce, Robert

Research Report

Living standards, poverty and inequality in the UK: 2015

IFS Report, No. R107

Provided in Cooperation with:

The Institute for Fiscal Studies (IFS), London

Suggested Citation: Belfield, Chris; Cribb, Jonathan; Hood, Andrew; Joyce, Robert (2015) : Living standards, poverty and inequality in the UK: 2015, IFS Report, No. R107, ISBN 978-1-909463-95-0, Institute for Fiscal Studies (IFS), London, <https://doi.org/10.1920/re.ifs.2015.0107>

This Version is available at:

<https://hdl.handle.net/10419/141977>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Living Standards, Poverty and Inequality in the UK: 2015

Chris Belfield
Jonathan Cribb
Andrew Hood
Robert Joyce

Living Standards, Poverty and Inequality in the UK: 2015

Chris Belfield

Jonathan Cribb

Andrew Hood

Robert Joyce

Institute for Fiscal Studies

Copy-edited by Judith Payne

Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE

Published by

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE
Tel: +44 (0) 20-7291 4800
Fax: +44 (0) 20-7323 4780
Email: mailbox@ifs.org.uk
Website: <http://www.ifs.org.uk>

Printed by

Pureprint Group, Uckfield

© The Institute for Fiscal Studies, July 2015

ISBN 978-1-909463-95-0

Preface

The Joseph Rowntree Foundation has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policymakers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the authors and not necessarily those of the Foundation. Neither are the views expressed necessarily those of the other individuals or institutions mentioned here, including the Institute for Fiscal Studies, which has no corporate view. Co-funding from the ESRC-funded Centre for the Microeconomic Analysis of Public Policy at IFS (grant reference ES/H021221/1) is also very gratefully acknowledged.

Data from the Family Resources Survey were made available by the Department for Work and Pensions, which bears no responsibility for the interpretation of the data in this report. The Labour Force Survey data were supplied through the UK Data Archive. The data are Crown Copyright and reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland. The Households Below Average Income data prior to 1994–95 were constructed from the Family Expenditure Survey. These data are available from the UK Data Archive.

The authors would like to thank Paul Johnson and David Phillips for their helpful comments. Any errors and all views expressed are those of the authors.

Contents

Executive Summary	1
1. Introduction	9
2. Living Standards	11
2.1 Trends in UK living standards	13
2.2 Average income and its components	20
2.3 Prospects for living standards	25
2.4 Conclusion	26
3. Inequality	27
3.1 Income inequality across the whole population	29
3.2 Pensioners, working households and workless households	34
3.3 Prospects for inequality	40
3.4 Conclusion	41
4. Income Poverty	43
4.1 Trends in income poverty	46
4.2 Family work status and poverty (working-age only)	52
4.3 Earnings and benefits for low-earning working families	57
4.4 Prospects for income poverty	63
4.5 Conclusion	64
5. Arrears and Material Deprivation	67
5.1 Trends in arrears on household bills	69
5.2 Trends in material deprivation	78
5.3 Material deprivation and income	83
5.4 Conclusion	88
Appendix A.	
The Households Below Average Income (HBAI) methodology	91
Appendix B.	
Benefit and tax credit income: comparing HBAI and administrative data	97
Appendix C.	
Supplementary analysis to Chapter 4	99
References	104

Executive Summary

How have household incomes evolved since the onset of the financial crisis? How has the gap between rich and poor changed? How have living standards changed over time for different parts of the population? How many people are in poverty and which groups are most likely to face poverty?

Each year, the government produces statistics about the distribution of income in the UK ('Households Below Average Incomes' or HBAI), which help answer these questions and many more. This report is the fourteenth in an annual series published by the Institute for Fiscal Studies (IFS) that analyses these statistics and digs deeper to explore the driving forces behind key trends in living standards, inequality and poverty.

Our first such report, in 2002, highlighted robust year-on-year growth in living standards and falling levels of poverty, while inequality was rising gradually. This latest report covers data up to and including 2013–14. The picture is strikingly different. Average incomes are edging up slowly again after falling sharply after the Great Recession. Income inequality has fallen back to levels last seen one or two decades ago, depending on the measure. Relative poverty is lower than before the recession, but that is because the poverty line fell in line with average incomes: in absolute terms, the poor did not tend to see falls in income of the magnitude experienced by those on middle and higher incomes, but their disposable incomes have at best been stable once their housing costs are properly accounted for. Important new themes have emerged, including increasing numbers in work alongside a deterioration of the financial position of working families, especially relative to pensioners.

The main measure of income used in our analysis is net household income, which is 'equivalised' to take account of differences in household size and composition. We measure each household's total income from all sources (including earnings, self-employment income, pensions, benefits and tax credits) minus income tax, National Insurance contributions and council tax. We then apply 'equivalence scales' to each household's income, accounting for the fact that (for example) a net income of £200 per week will mean a higher standard of living for a single individual than it will for a couple with four children, all else equal.

Chapter 2 – Living Standards

Average incomes have tended to grow over time as the economy has expanded. Since our consistent data series began more than 50 years ago in 1961, mean household net incomes have grown by about 2.1% per year in inflation-adjusted terms. An alternative measure of 'average income' is median income, which is the income of the individual right in the middle of the income distribution. Median household net income has grown by an annual average of 1.9% since 1961.

However, income growth has fluctuated over time. For instance, there was strong growth in the late 1990s, but weak growth between 2002 and 2007, even before the financial crisis hit. Recessions are typically associated with falls in household incomes, and the most recent recession was no exception. Even more striking, perhaps, has been the slowness of the subsequent recovery in living standards.

Key findings on living standards from this year's report include:

- According to the most recent HBAI data, median net household income in the UK grew by 0.8% in 2013–14, after adjusting for inflation using a measure based on the Consumer Prices Index (CPI) that includes all housing costs (as throughout this report). This follows weak growth of 0.4% in 2012–13. This slow (and statistically insignificant) two years of growth meant that median income had almost crept back to its pre-recession (2007–08) level, though was still 2.4% lower than the peak in 2009–10.
- Trends in the overall median mask stark differences between pensioners and non-pensioners. Median pensioner income in 2013–14 was 7.0% above its pre-recession (2007–08) level, while median non-pensioner income was 2.7% below that level.
- The official HBAI statistics still use the discredited Retail Prices Index (RPI) to adjust for inflation. This is known to systematically overstate inflation and hence to understate real income growth. Over a number of years, this can significantly distort our understanding of trends in living standards. For example, using the RPI implies that median income in 2013–14 is still 1.8% below its 2002–03 level, rather than 5.2% above its 2002–03 level when using a variant of CPI inflation that includes all housing costs. DWP is planning to review its use of the RPI once the UK Statistics Authority has responded to last year's Review of Consumer Price Statistics led by Paul Johnson.
- Income growth at the very top of the income distribution was particularly high in 2013–14, which pushed mean income growth up to 2.6%. This probably significantly overstates the underlying change in mean living standards, as it likely largely reflects policy-induced distortions to the timing of income. The reduction in the additional rate of income tax from 50% to 45% in 2013–14 encouraged some high-income individuals to move income from 2012–13 to 2013–14 in order to pay less tax on it.
- Leaving aside the very-highest-income individuals, income growth in 2013–14 was driven primarily by a recovering labour market, with strong employment growth (though the employment growth measured in HBAI was stronger than suggested by other data sources), even as average earnings among those in work remained almost stagnant in real terms. A large rise in the personal allowance, reducing income tax payments, played a role too. On the other hand, cuts to working-age benefits and tax credits accelerated and acted to reduce income growth.

- The profile of changes in living standards around this recession differs greatly from those surrounding previous ones. The peak-to-trough income fall after 2009–10 was not particularly large in the context of those seen around the three previous recessions. However, the period of falling income this time around was preceded by years of weak growth and followed by a slow recovery. As a result, median income in 2013–14 (four years after the peak) is back at about the same level as it was three years prior to the peak (2006–07); for previous recessions in the 1970s, 1980s and 1990s, median income four years after the peak was between 13% and 17% higher than seven years earlier.

Chapter 3 – Inequality

Income inequality is often defined as the gap between rich and poor. More generally, it refers to differences in income between different parts of the population, such as young and old.

Over the last half century, the gap between rich and poor has risen. This can be largely attributed to the sharp rise in inequality during the 1980s, as the incomes of those in work pulled away from those of the rest of the population and as high earners saw the fastest growth. Since then, changes in overall inequality have been less dramatic, though a small group right at the very top have continued to ‘race away’. On the other hand, the gap between young and old has fallen. The incomes of pensioners have caught up with those of the working-age population over the course of the last 20 years, as a result of higher private pension incomes and rising entitlements to state pensions and other benefits.

Recent years have seen the incomes of those in work fall relative to the rest of the population, as earnings have risen much less quickly than prices. This has reversed some of the increased inequality between rich and poor, but accelerated increases in the incomes of the old relative to those of the young.

Key findings on inequality from this year’s report include:

- Income inequality in the UK barely changed across almost all of the distribution in 2013–14. For example, real incomes grew by 1.4%, 0.8% and 1.5% at the 20th, 50th and 80th percentiles respectively (none of which is statistically significantly different from zero).
- There was a larger increase in incomes at the very top of the distribution in 2013–14, which drove a small (but statistically insignificant) rise in the Gini coefficient from 0.337 to 0.343. This is likely to be in part an artificial phenomenon that does not reflect underlying changes in living standards, as high-income individuals moved income from 2012–13 into 2013–14 in response to the cut in the additional rate of income tax in April 2013.
- Income inequality remained lower than before the Great Recession. Between 2007–08 and 2013–14, real household incomes measured before housing

costs rose by 7.3% at the 10th percentile, were roughly unchanged at the median and fell by 2.4% at the 90th percentile. This was the result of large falls in real earnings, while benefit incomes were relatively stable. The falls in inequality were much smaller, however, when measuring incomes after deducting housing costs, as the fall in mortgage interest rates primarily benefited higher-income households.

- As measured by the Gini coefficient, income inequality in 2013–14 was almost the same as in 1990. However, income inequality actually fell across most of the distribution over that period, while the top 1% continued to race away from the rest. The ratio between incomes at the 90th and 10th percentiles fell from 4.4 to 3.8 between 1990 and 2013–14, but the share of income going to the top 1% rose from 5.7% to 8.3%.
- The ‘catch-up’ of pensioners and workless households – accelerated by the large falls in real earnings associated with the recent recession – has acted to reduce overall inequality since 1990. Having been more than 30% poorer than the median non-pensioner in 1990, the median pensioner now has a higher equivalised income than the median non-pensioner (after accounting for housing costs). The ratio between median after-housing-costs incomes for non-pensioners in workless and working households rose from 39% in 1990 to 46% in 2013–14.
- In the years before the recession, inequality was still rising among working households. This was driven by growing inequality in the employment income of such households. Since 2007–08, falls in inequality within this group have not been driven primarily by trends in household employment income, but by the fact that lower-income working households get more support from in-work benefits. In 2013–14, benefits made up nearly 60% of net household income in the bottom decile of the household earnings distribution and around a third in the second decile.
- Recent falls in inequality are likely to prove temporary. Stronger earnings growth and the Conservatives’ planned income tax cuts would do most for incomes towards the top of the distribution, while planned benefit cuts will hit low-income households (both in and out of work) hardest.

Chapter 4 – Income Poverty

The most widely-quoted measure of income poverty in the UK and the rest of the European Union is the proportion of individuals with household incomes less than 60% of the contemporary median. It is a measure of ‘relative poverty’ as the poverty line moves in line with the median from year to year. If median income goes up, then so does the relative poverty line. Essentially, it measures whether poorer households are keeping up with those on middle incomes. Broadly, the main justification for using a relative measure of poverty is that society’s view of what constitutes a minimum acceptable living standard probably moves with the times, as the resources available to that society increase.

On the other hand, we clearly also care about whether the poor are getting better or worse off in absolute terms. When incomes are generally falling, as has been the case recently, a relative poverty measure would still show falling poverty if the poor saw smaller proportionate falls in income than those on middle incomes. Some prefer an 'absolute' measure of poverty, where the poverty line is fixed in real terms, so that poverty goes down only when the absolute material living standards of poorer households improve. When looking over short periods – such as the period since the Great Recession, which is the focus of much of this report – the case for an absolute measure is arguably particularly strong.

It can also be important to look at poverty trends measured both before and after housing costs (BHC and AHC respectively). To some extent, the cost of housing is a choice and it reflects the quality of housing enjoyed; but this might be further from the truth for some relatively poor groups (such as social housing tenants), and the housing benefit income that many low-income individuals receive is there only to cover the costs of housing that they face. Recently, housing cost trends have been very different for low- and high-income groups, so the distinction between BHC and AHC measures has become particularly important.

In recent history, the statistics on income poverty among children have been particularly high profile. The Labour government pursued ambitious targets for child poverty in 2010–11 and 2020–21 – the latter of which became enshrined in law in the 2010 Child Poverty Act. The current government has recently announced that it will repeal this Act and the targets within it, and will emphasise a new suite of measures which it believes will enable a better focus on the root causes of poverty, such as family worklessness. Nevertheless, the income poverty statistics will continue to be produced and are likely to remain leading – though imperfect – indicators of the prevalence of low living standards.

Key findings relating to income poverty from this year's report include:

- In 2013–14, the absolute poverty rate in the UK was 21.6% (13.6 million individuals), measuring incomes after deducting housing costs (AHC). This was a fall of 0.5 percentage points (300,000 individuals) from 2012–13, but the change is not statistically significant. The UK relative poverty rate (again AHC) was 21.0% (13.2 million individuals), unchanged from 2012–13. There was also no significant change in absolute or relative poverty for any of the major demographic groups (children, pensioners and working-age adults without children). Overall, the data suggest that the incomes of low-income households rose slightly in 2013–14 and broadly kept pace with median income.
- Given a number of real cuts to working-age benefits in 2013–14, IFS researchers had projected that poverty rose in 2013–14, particularly among children. The data showing no change may therefore come as a surprise. However, limited weight should be placed on changes measured from one year to the next, which are subject to margins of error. An unchanged measured poverty rate is consistent with an increase or a decrease in reality.

Key factors acting to hold child poverty down in 2013–14 were employment increases, falls in poverty among workless lone-parent families and falls in poverty among children of self-employed parents. There are reasons to think that each of these is likely to partly reflect random variation in the data from one year to the next rather than, or in addition to, real trends.

- The absolute poverty rate measured AHC has been broadly flat overall since 2004–05. This is not true of absolute poverty measured before housing costs (BHC), which fell by 3.2 percentage points (ppt) between 2004–05 and 2013–14. The difference is the result of AHC poverty accounting for variation in housing cost trends across income groups: housing costs have risen for low-income households relative to high-income ones, on average.
- Since 2009–10, the stability of the overall absolute AHC poverty rate masks important and offsetting underlying trends. The recovery in the employment rate has reduced the proportion of individuals in workless families, acting to reduce the overall poverty rate; but there have been increases in poverty rates among working families, caused primarily by falling real earnings. These two factors have been particularly striking for families with children. Favourable parental employment trends have acted to reduce absolute child poverty by more than 1ppt since 2009–10, but increasing rates of poverty among children living with at least one working parent acted to increase child poverty by more than 2ppt over the same period. (Reductions in poverty for workless families with children meant that overall child poverty barely changed.)
- This highlights the importance of family work status as an input into living standards, as emphasised recently by the government in its ‘new approach’ to tackling child poverty; but it also underlines the fact that substantial progress in reducing the prevalence of low living standards will be difficult without improvements in the living standards of working families.
- It seems likely that absolute poverty will have been stable or even fallen slightly in 2014–15, as low and falling inflation helped to preserve the real value of benefits (despite most working-age benefits rising by only 1% in nominal terms) and wages. Looking further ahead, planned benefit cuts over this parliament will hit low-income working-age households hardest, and will therefore tend to put upwards pressure on absolute income poverty – including in-work poverty. Recently-announced planned rises in the minimum wage for those aged 25 and over will help those on the lowest hourly pay, but are smaller in overall magnitude than benefit cuts and are less tightly targeted on low-income households. Wider growth in real earnings and in employment will continue to be important, though it can also make relative poverty trends look less favourable by resulting in income growth for middle-income households.

Chapter 5 – Arrears and Material Deprivation

For some households, their current income may miss other important determinants of living standards or financial difficulties. The short-term unemployed, students and the self-employed (whose incomes tend to be relatively volatile) are amongst those whose living standards we might expect to be less well proxied by their current income, given that their income in other periods may be (or have been) different and that they can save and borrow. Variation in the costs faced by different households can also impact living standards but can be difficult to account for fully in an income-based framework – for example, a greater need for transport in rural areas, formal childcare costs or the costs of disability. Moreover, households who face shocks may run into financial difficulties even if they do not fall into income poverty, particularly if they face inflexible costs.

Since 2004–05, the Family Resources Survey (FRS) data underlying the HBAI series have included some additional indicators that complement income-based poverty measures. First, there is a suite of questions on what goods and services families feel able to afford. If the number of goods that a family says it cannot afford is large enough (where each good is weighted according to the overall share of families who say they can afford it), that family is classified as ‘materially deprived’. Second, a different set of questions asks families whether they are in arrears on any of a number of household bills.

These non-income measures of low living standards or financial difficulties can significantly enrich our understanding of the plight of less well-off households, and can help us to better understand the limitations of current income as a proxy for living standards.

Key findings on arrears and material deprivation from this year’s report include:

- The proportion of individuals whose family is in arrears on household bills rose in the pre-recession years, peaking at 9.9% in 2009–10; but it had fallen back to 8.4% in 2013–14, driven mostly by falling arrears within families with children. Rises in arrears up to 2009–10 were due to higher arrears on gas and electricity bills, and do not seem to be explained by the increase in redundancies during the recession. The reasons for the falls in arrears since 2009–10 are currently less clear.
- Nevertheless, two specific benefit cuts in 2013–14, which effectively gave low-income working-age families new bills to pay, do seem to have increased arrears on those bills. Council tax arrears among working-age recipients of council tax support (CTS) rose by 10 percentage points (ppt) in areas where the highest minimum council tax payments (exceeding 20%) were introduced after the localisation of CTS, but such arrears fell where no minimum payment was introduced. Rent arrears increased by 8ppt for working-age social tenants on housing benefit deemed to be ‘under-occupying’ and hence likely to be subject to the so-called ‘bedroom tax’; there was no statistically

significant change in rent arrears for those not deemed to be under-occupying.

- The proportion of children measured as ‘materially deprived’, based on a set of questions answered by their parents about what they feel they can afford, rose from 22.3% in 2010–11 (when the current set of questions was introduced) to 23.5% in 2013–14. This was driven by rising deprivation rates in working families (particularly lone parents). It came on top of increases in child material deprivation in the late 2000s. These were obscured by falls in relative income poverty in official statistics, which report the number of children who are both materially deprived and in relative income poverty.
- The material deprivation measure provides strong evidence that looking only at current income can be inadequate when thinking about who is in ‘poverty’. Of those with low levels of current income, some groups – including social renters, lone parents and the disabled – seem to be much worse off than others – including owner-occupiers, the self-employed and those with some savings. For example, among families with children, social renters with AHC incomes at around the median have deprivation rates at least as high as those of the lowest-income owner-occupiers.
- The government’s recent announcement on a ‘new approach’ to tackling child poverty emphasised the importance of monitoring the causes of poverty. While it is sensible to consider the causes, it is also important to measure poverty itself as accurately as possible. To that end, indicators of material deprivation should remain as a valuable complement to income-based measures.
- The relationships between income poverty and these measures of low living standards or financial difficulties are far from straightforward, both conceptually and according to the data. For example, in recent years, arrears have fallen while absolute income poverty has been flat; and in the late 2000s, some large falls in income poverty among children were not accompanied by falls in material deprivation.

1. Introduction

The focus of this report is the distribution of household income in the UK. We assess the changes to average incomes, income inequality and poverty that occurred in the latest year of data (2013–14) and put these in historical context using comparable data spanning the last 50 years.

The analysis draws upon the data underlying the latest figures from the Department for Work and Pensions (DWP)'s Households Below Average Income (HBAI) series, published on 25 June 2015. The HBAI series is derived from the Family Resources Survey (FRS), a survey of more than 20,000 households in the UK that asks detailed questions about income from a range of sources.¹ Further details regarding the methodology of HBAI can be found in Appendix A, but a few key points are worth summarising here:

- It uses a household measure of income, i.e. the total income of all individuals living in the same household. A household for these purposes is not the same as a family, which is defined simply as a single adult or couple and any dependent children they have. For instance, young adults living together (other than as a couple) would be classified as in the same household but not the same family.
- Income is rescaled ('equivalised') to take into account the fact that households of different sizes and compositions have different needs.
- Income is measured after deducting income tax, employee and self-employed National Insurance contributions and council tax, and it includes income from state benefits and tax credits.
- Income is measured both before housing costs have been deducted (BHC) and after they have been deducted (AHC).
- All cash figures are presented in 2013–14 prices and all income growth rates are given after accounting for inflation. We adjust for inflation using variants of the Consumer Prices Index. This is different from the adjustment for inflation made by DWP in the official HBAI series, which uses the Retail Prices Index (RPI). We do not follow the official series in using RPI as it is known to systematically overstate inflation. More details on this can be found in Box 2.1 and Appendix A.

Since all the analysis is based on a sample from the population, all estimated statistics are subject to sampling error. Therefore it is important to gauge whether changes are large enough that we can be confident they reflect real changes in the population as a whole, rather than random variation in the sample from one year to another. We therefore frequently test whether estimated

¹ This is supplemented by data from the Family Expenditure Survey (FES) for the years up to and including 1993–94. Incomes are measured in a consistent way across the data sets.

changes are 'statistically significant'. In our analysis, being 'statistically significant' implies that an estimate is statistically significantly different from zero at the standard 5% significance level.

Our analysis of the latest HBAI data begins in Chapter 2 with a look at average living standards and how they have changed over time. Chapter 3 analyses how changes in incomes have differed across the income distribution and how that has varied across different types of households. Chapter 4 examines trends in income poverty, looking at absolute and relative measures of poverty, with a particular focus on how trends have differed for families with and without someone in work. Chapter 5 analyses in detail indicators of deprivation or financial difficulties that are not based on income. Specifically, we examine changes in measures of 'material deprivation' and the propensity of families to be in arrears on their bills.

2. Living Standards

Key findings

- According to the most recent HBAI data, median net household income in the UK grew by 0.8% in 2013–14, after adjusting for inflation using a measure based on the Consumer Prices Index (CPI) that includes all housing costs (as throughout this report). This follows weak growth of 0.4% in 2012–13. This slow (and statistically insignificant) two years of growth meant that median income had almost crept back to its pre-recession (2007–08) level, though was still 2.4% lower than the peak in 2009–10.
- Trends in the overall median mask stark differences between pensioners and non-pensioners. Median pensioner income in 2013–14 was 7.0% above its pre-recession (2007–08) level, while median non-pensioner income was 2.7% below that level.
- The official HBAI statistics still use the discredited Retail Prices Index (RPI) to adjust for inflation. This is known to systematically overstate inflation and hence to understate real income growth. Over a number of years, this can significantly distort our understanding of trends in living standards. For example, using the RPI implies that median income in 2013–14 is still 1.8% below its 2002–03 level, rather than 5.2% above its 2002–03 level when using a variant of CPI inflation that includes all housing costs. DWP is planning to review its use of the RPI once the UK Statistics Authority has responded to last year’s Review of Consumer Price Statistics led by Paul Johnson.
- Income growth at the very top of the income distribution was particularly high in 2013–14, which pushed mean income growth up to 2.6%. This probably significantly overstates the underlying change in mean living standards, as it likely largely reflects policy-induced distortions to the timing of income. The reduction in the additional rate of income tax from 50% to 45% in 2013–14 encouraged some high-income individuals to move income from 2012–13 to 2013–14 in order to pay less tax on it.
- Leaving aside the very-highest-income individuals, income growth in 2013–14 was driven primarily by a recovering labour market, with strong employment growth (though the employment growth measured in HBAI was stronger than suggested by other data sources), even as average earnings among those in work remained almost stagnant in real terms. A large rise in the personal allowance, reducing income tax payments, played a role too. On the other hand, cuts to working-age benefits and tax credits accelerated and acted to reduce income growth.
- The profile of changes in living standards around this recession differs greatly from those surrounding previous ones. The peak-to-trough income fall after 2009–10 was not particularly large in the context of those seen

around the three previous recessions. However, the period of falling income this time around was preceded by years of weak growth and followed by a slow recovery. As a result, median income in 2013–14 (four years after the peak) is back at about the same level as it was three years prior to the peak (2006–07); for previous recessions in the 1970s, 1980s and 1990s, median income four years after the peak was between 13% and 17% higher than seven years earlier.

In this chapter, we analyse average living standards in the UK. We primarily use data from the official Households Below Average Income (HBAI) series, the latest version of which covers the financial year 2013–14. We set trends in living standards in the context of the path of the macroeconomy and government policies (particularly tax and benefit changes that affect household incomes directly and immediately). Our analysis seeks to understand these trends in living standards and to assess how different these trends are for different types of families, such as pensioners or families with children.

Before doing this, it is worth first setting out some key information about how the figures are calculated and presented. A longer explanation of the methodology underpinning the HBAI statistics can be found in Appendix A.

Living standards can be measured either before or after housing costs have been deducted (abbreviated, respectively, as ‘BHC’ and ‘AHC’). Unless stated otherwise, incomes in this chapter are measured on a BHC basis. All household incomes have been ‘equivalised’ to account for variation in household size and composition, and cash amounts are expressed as the equivalent amount for a childless couple. Unless stated otherwise, incomes are measured ‘net’ – that is, after income tax, National Insurance and council tax have been paid and after benefits and tax credits have been received. Throughout this report, some statistics will be presented on a United Kingdom (UK) basis while some (mainly those looking at longer-term trends) will be presented on a Great Britain (GB) basis. This is because Northern Ireland is included in the HBAI data only from 2002–03.

When using income data to compare living standards over time, it is crucial to account for inflation – the same nominal income in two different years will not generally mean the same purchasing power, because of changing prices. All monetary values are expressed in average 2013–14 prices, and so all differences we refer to are after accounting for inflation.

We account for inflation using variants of the Consumer Prices Index (CPI). For comparing BHC measures of income over time, we use a variant of the CPI that includes owner-occupiers’ housing costs (mortgage interest payments, and insurance and ground rent for owner-occupiers); for AHC measures, we use a variant of the CPI that excludes all housing costs (including rent and water costs,

which are part of the standard CPI).² These measures are different from (and more appropriate than) the variants of the Retail Prices Index (RPI) that the Department for Work and Pensions (DWP) is still using to account for inflation in the official statistics. The RPI is known to significantly and systematically overstate inflation due to defects in its formula – particularly since 2010.³ DWP is planning to review its use of the RPI once the UK Statistics Authority has responded to last year’s Review of Consumer Price Statistics⁴ led by Paul Johnson. We discuss the importance of the choice of inflation measure and provide some further information on how our CPI-based measures are constructed in Box 2.1 later in this chapter. After accounting for inflation as described above, all monetary values in this chapter are expressed in average 2013–14 prices.

This chapter proceeds as follows. In Section 2.1, we examine trends in average incomes, putting the latest changes in the context of the Great Recession and subsequent recovery, as well as in longer-term historical perspective. In Section 2.2, we analyse the drivers of these changes, looking in greater detail at the different sources of household income and how these have contributed to income growth (or a lack of it). Section 2.3 discusses the prospects for future growth in living standards and Section 2.4 concludes.

2.1 Trends in UK living standards

In 2013–14, median household income in the UK as measured in HBAI was £453 per week and mean income was £562. As is shown in Table 2.1, the HBAI data suggest that median income grew in real terms by 0.8% between 2012–13 and 2013–14, while mean income grew by 2.6%.

Figure 2.1 shows year-on-year growth in median income since 2003–04 (measured both BHC and AHC). Because incomes are measured using samples of the population from household surveys, they are subject to sampling error. For this reason, in Figure 2.1 we also show the 95% confidence intervals for estimated income growth. From these, we can see that the growth in median income in 2013–14 was not statistically significantly different from zero, as is typical of year-on-year changes; indeed the large falls in income after the recession in 2010–11 and 2011–12 are the only such changes since 2003–04 that

² These variants are not statistics produced by the Office for National Statistics (ONS). The ONS does not currently produce measures of inflation using the CPI methodology that cover the appropriate basket of goods for the measures of incomes in HBAI. We are grateful to Peter Levell for constructing these measures of inflation for use in our analysis. The ‘deflators’ used to account for inflation over time are available online at http://www.ifs.org.uk/uploads/HBAI_inflation.xlsx.

³ See box 3.3 in Office for Budget Responsibility (2015a) for the latest estimates of the difference between CPI and RPI measures of inflation.

⁴ See Johnson (2015) for more details.

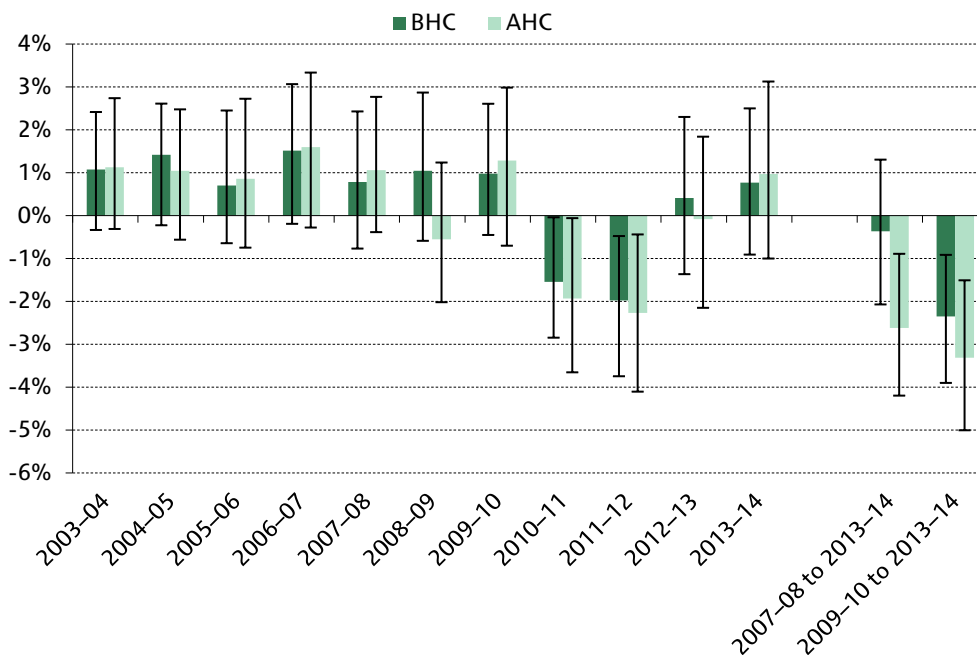
Table 2.1. Average UK household incomes (measured BHC) since 2002–03

	<i>£ per week in 2013–14 prices (equivalents for childless couple)</i>		<i>Growth since previous year</i>	
	Median	Mean	Median	Mean
2002–03	£431	£525	-	-
2003–04	£435	£528	1.1%	0.6%
2004–05	£442	£538	1.4%	1.9%
2005–06	£445	£545	0.7%	1.3%
2006–07	£451	£554	1.5%	1.7%
2007–08	£455	£565	0.8%	1.9%
2008–09	£460	£571	1.0%	1.2%
2009–10	£464	£582	1.0%	1.9%
2010–11	£457	£558	-1.5%	-4.2%
2011–12	£448	£553	-2.0%	-0.8%
2012–13	£450	£548	0.4%	-1.0%
2013–14	£453	£562	0.8%	2.6%

Note: Incomes have been measured before housing costs have been deducted. HBAI data for the whole UK are only available from 2002–03 onwards; therefore growth in UK mean and median income is not available for 2002–03.

Source: Authors’ calculations using the Family Resources Survey, various years.

Figure 2.1. Real median income growth with 95% confidence intervals measured before and after housing costs (UK)



Note: Confidence intervals were calculated by bootstrapping using 500 iterations. This involves recalculating statistics for each of a series of random samples of households drawn with replacement from the original sample, as a way of approximating the distribution of statistics that would be calculated from different possible samples out of the underlying population. See Davison and Hinkley (1997).

Source: Authors’ calculations using the Family Resources Survey, various years.

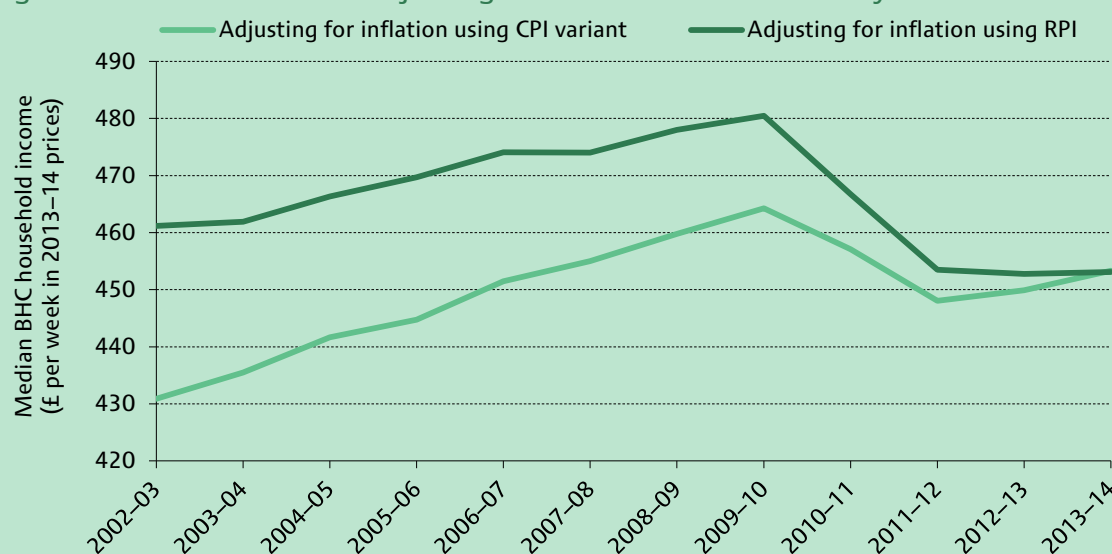
Box 2.1. Measures of inflation and trends in living standards

Throughout this report, we compare incomes over time after accounting for changes in prices using a variant of the Consumer Prices Index (CPI) measure of inflation that incorporates changes in owner-occupiers' housing costs. Unlike RPI-based measures of inflation, the CPI is not known to significantly and systematically overstate inflation. The Review of Consumer Price Statistics commissioned by the UK Statistical Authority (Johnson, 2015) recommended moving away from measures based on the RPI methodology in January 2015. We have modified the standard CPI index in order to capture all housing costs (the standard CPI ignores owner-occupiers' housing costs), in particular adding in mortgage interest payments. An alternative approach would be to use the Office for National Statistics (ONS)'s measure, CPIH. This also includes the price of housing for owner-occupiers, but it does so on a 'rental equivalence' basis (the rental income forgone by living in an owned property rather than renting it out). This is not appropriate for our purposes because the HBAI measure of income does not include the imputed rents in the income of owner-occupiers (though there would be a good case for it doing so) and because the HBAI concept of housing costs for owner-occupiers (for the AHC income measures) is based on mortgage interest payments rather than imputed rents.

One difficulty with using a CPI variant of inflation is that we can only calculate it from 1997–98 onwards. However, research from the Office for Budget Responsibility (Miller, 2011) implies that the amount by which the RPI overstates inflation relative to the CPI for the same basket of goods (the 'formula' effect) averaged 0.5 percentage points (ppt) per year prior to 2010 when changes to the sampling methodology increased the formula effect. When adjusting for inflation prior to 1997–98, we approximate the CPI measure of inflation by using RPI minus 0.5ppt.

DWP's official HBAI statistics continue to use the RPI to adjust for inflation. As Figure 2.2 shows, this choice of inflation measure has an important effect on apparent trends in living standards. Between 2002–03 and 2013–14, median income fell by 1.8% in real terms according to the RPI-based deflator, compared with a rise of 5.2% using the CPI variant.

Figure 2.2. Median income adjusting for inflation as measured by RPI or CPI variant



Source: Authors' calculations using the Family Resources Survey, various years.

were large enough to be statistically significant. Median income measured AHC grew by 1.0% in 2013–14; this was also not statistically significant.⁵

The 0.8% increase in median BHC income in 2013–14 meant that it was essentially the same as (0.4% below) its pre-recession, 2007–08, level. However, because median household income actually continued to grow for a time after the economy contracted, median income in 2013–14 remained 2.4% below its 2009–10 peak (which is statistically significant). Of course, all these comparisons over time are different from those using the official statistics, which use the RPI to adjust for inflation. This is examined in more detail in Box 2.1.

The trends in mean income follow a similar pattern to those for median income. Mean income in 2013–14 was also almost back to (0.6% below) its pre-crisis, 2007–08, level, but still significantly lower (3.6%) than the peak reached in 2009–10. Nevertheless the path of mean income has been more volatile than that of median income. This is for two main reasons.

First, as discussed in previous years' reports,⁶ falls in income after the recession were larger towards the top of the income distribution. This was partly because high-income households are more reliant on earnings from employment as a source of income, on average, and employment income fell faster than benefit income following the recession.

Second, since 2009–10, there have been two changes to the top marginal rate of income tax, applying to individuals with an annual taxable income exceeding £150,000. A 50% additional rate of income tax was introduced in 2010–11, and then reduced to 45% in 2013–14. As well as having direct effects on the incomes of high-income individuals (by changing the amount of tax they are liable to pay), these changes have distorted the timing of when some of the highest-income individuals realise their income, as they seek to lower their tax bills. The cut in 2013–14 means that the observed rises in mean income in that year are likely to overstate the underlying changes in living standards: they will partly reflect the fact that some individuals chose to delay the receipt of income from 2012–13 to 2013–14 in order to pay 45% rather than 50% tax on it. This is discussed further in Section 2.2, but in most of what follows we focus heavily on median income trends, as they are not affected by these policy-induced distortions.

Trends in living standards by demographic group

Recent trends in average income have differed greatly between pensioners and non-pensioners, as highlighted by Figure 2.3. Between 2002–03 and 2013–14, the real median income of pensioners (before housing costs) grew by 21.1% while non-pensioner median income increased by just 1.2%. When comparing the

⁵ The growth in median income between its recent trough in 2011–12 and 2013–14 was also not statistically significant.

⁶ For example, Belfield et al. (2014).

incomes of these groups, it is important to also consider incomes measured after housing costs, as pensioners have substantially lower housing costs than non-pensioners, on average. Measured AHC, while real median income has grown by 24.0% for pensioners since 2002–03, it fell by 1.6% for non-pensioners over the same period. As a result, the median AHC income of pensioners has actually overtaken that of non-pensioners and is now 2% higher than that for non-pensioners. Looking at the period since the recession, median BHC income for pensioners in 2013–14 was 7.0% above its 2007–08 level, while median non-pensioner income remained 2.7% below its level then.

Figure 2.3. Changes in median household income (BHC) for pensioners and non-pensioners (UK)



Source: Authors' calculations using the Family Resources Survey, various years

There are three main reasons for the stronger performance of income for pensioners than for non-pensioners during this period. First, pensioners' incomes are less reliant on the labour market, and the earnings of workers rose relatively slowly pre-recession⁷ and have fallen since the recession. Second, recent discretionary cuts to benefits have been concentrated on working-age rather than pensioner benefits (and the basic state pension has been protected by the so-called 'triple lock'). Third, there has been strong growth in income from occupational pensions across successive cohorts of retirees.⁸ When analysing pensioner income over time, it is important to remember that we are not comparing the same people year on year. Instead, we compare the incomes of pensioners in 2013–14 with those of pensioners in 2002–03 (or any other year). This will clearly be a different set of people. Income growth for pensioners is, in

⁷ According to analysis from the Annual Survey of Hours and Earnings, real (relative to RPIJ) median weekly earnings rose by only 0.3% per annum on average in the five years preceding the recession (April 2003 to April 2008).

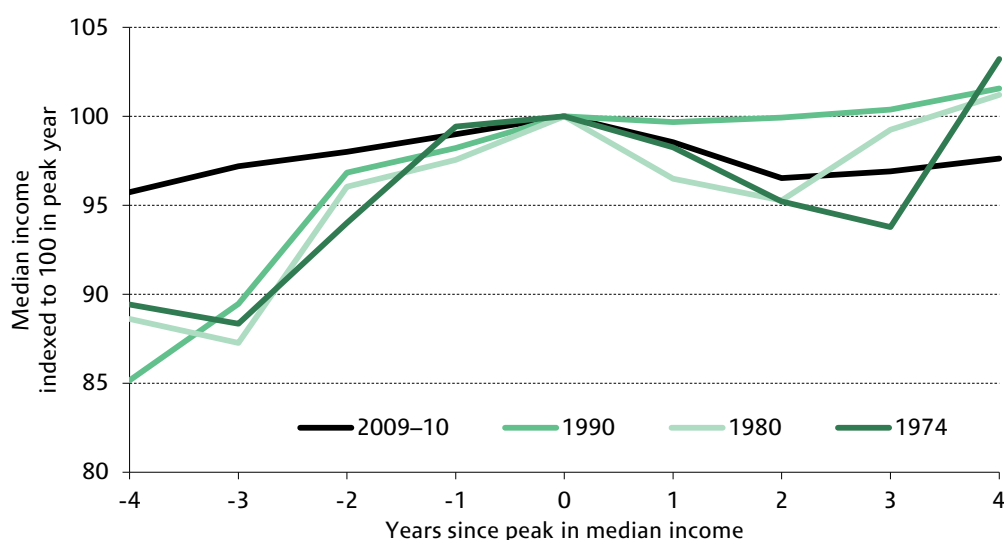
⁸ See Emmerson, Heald and Hood (2014).

part, caused by those who have recently reached pension age having greater personal financial resources than older pensioners.

Comparison with previous recessions

The path of living standards in the wake of the recent recession has differed from those in other periods of falling income in a number of important ways. Figure 2.4 shows how real median income changed before and after the peaks in living standards associated with a number of recessions. These peaks were reached in 1974, 1980, 1990 and 2009–10. We index median income to 100 in the year it reached its peak and examine how income changed in the preceding four years and the subsequent four years. As was shown in Cribb, Hood and Joyce (2015), the severity of the recent peak-to-trough fall in income was not particularly remarkable relative to those in previous recessions. The fall in income between 2009–10 and 2011–12 was smaller than those following the peaks in 1974 and 1980.

Figure 2.4. Comparison of periods of falling median income (GB)



Note: Incomes have been measured before housing costs have been deducted.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

However, the weakness of income growth prior to and following that fall in income was remarkable by historical standards. The relative weakness of the recovery (1.1% growth in median income over two years) has been much remarked upon and is clear from the figure, especially compared with the 1980s recession, where the fall in income of 4.7% between 1980 and 1982 was followed by growth of 6.2% between 1982 and 1984. The recovery following the 1990s was also weak, managing only 0.7% growth between 1991 and 1993, but in the 1990s recession real incomes had fallen only for a single year and only by 0.3%. Additionally, though, Figure 2.4 highlights how much weaker income growth had been in the years *preceding* the falls in income around the recent recession. For the previous three periods of falling income, median income had grown by between 11% and 15% over the four years prior to the falls, compared with less

than 5% in the four years preceding 2009–10. Therefore recent years have been characterised by an unusual combination of weak income growth followed by a recession followed by a historically slow recovery. As a result, median income in 2013–14 (four years after the peak) is back at about the same level as it was three years prior to the peak (2006–07); for previous recessions in the 1970s, 1980s and 1990s, median income four years after the peak was between 13% and 17% higher than seven years earlier.

Comparison with National Accounts measures of living standards

The HBAI statistics are not the only source of information about household living standards. In particular, there are a number of measures that are produced as part of the National Accounts, such as real GDP per head and real household disposable income (RHDI) per head. Table 2.2 shows the changes in average household incomes according to HBAI (both mean and median, BHC, adjusting for inflation using our variant of CPI) alongside changes in GDP, RHDI and household final consumption expenditure (HFCE), all on a per-capita basis.

Table 2.2. Average annual growth in National Accounts measures of living standards

Annual average growth	GDP per head (UK)	RHDI per head (UK)	HFCE per head (UK)	Mean HBAI income (GB)	Median HBAI income (GB)
<i>Long run:</i> 1961 to 2013–14	2.0%	2.2%	2.3%	2.1%	1.9%
<i>Since recession:</i> 2007–08 to 2013–14	–0.5%	–0.4%	–0.8%	–0.1%	–0.1%
<i>Latest year:</i> 2012–13 to 2013–14	1.5%	–0.8%	1.2%	2.6%	0.8%

Note: The annualised growth in each period is calculated by comparing the first year in the given period with the last year of the period.

Source: Authors' calculations using ONS series IHXX, IHXW and IHXZ, and the Family Resources Survey and Family Expenditure Survey, various years.

These National Accounts measures cover subtly different types of income, so we would not necessarily expect them to move in exactly the same way over time. Real GDP per head is the estimated market value of all final goods and services produced in the UK, divided by the UK population. However, we might not expect it to directly track the resources available to households because, for example, the government's fiscal position and the current account balance⁹ will affect how much of total output flows to households. Real household disposable income does attempt to capture the part of national income that flows to the household sector,

⁹ The current account balance is the difference between the value of all exports of goods and services from the UK to other countries and the value of all imported goods and services from abroad to the UK.

and so excludes things such as changes in the financial health of companies and the public sector. Household final consumption expenditure is a measure of spending rather than income. It captures expenditure incurred by or on behalf of households on the consumption of goods and services, and is therefore sensitive to how much of their income households are choosing to save rather than spend.

Table 2.2 sets out how these measures compare over the long run, since the recession and over the latest year of HBAI data. The average annualised growth rates over the long run (from 1961, when the HBAI series started, up to the latest data in 2013–14) are all similar,¹⁰ although small differences in growth rates can still lead to quite big cumulative differences over long periods of time. RHDl per capita grew by a total of 210% between 1961 and 2013–14, while mean HBAI income grew by 195%. We should also note that the National Accounts measures are each adjusted for inflation over time using their own deflators (which are not the same as the CPI variants used in this report) and this can contribute to differences in trends between the series.¹¹

In 2013–14, the National Accounts measures record lower growth than mean HBAI income but, as discussed, mean income trends in this year were in any case somewhat distorted by changes in top tax rates. More interesting are the broader trends since the recession. The measure of average living standards that shows the biggest falls over this period was household consumption expenditure, which fell by an average of 0.8% per year since 2007–08, around twice as fast as the RHDl measure of household income. This reflects a sharp fall in consumption between 2007–08 and 2009–10 and barely any recovery since, and means households are saving a higher proportion of their incomes than prior to the financial crisis.

As discussed further in Cribb, Hood and Joyce (2015), a particularly unusual feature of this recession was the large fall in non-durable (day-to-day) expenditures. A plausible interpretation of all this is that people judge their income prospects to have been persistently or permanently damaged by the crisis – and hence that their previously-planned levels of spending now look too high.

2.2 Average income and its components

To start to understand the causes of changing living standards, Table 2.3 breaks down household income into its component sources and examines how these

¹⁰ It should be noted that this analysis is different in two important ways from the similar and related analysis we undertook in last year's report (Belfield et al., 2014). First, the National Accounts measures have been revised, changing them to be in line with the new National Accounting standards, ESA 2010. Second, because we are now deflating HBAI incomes using a CPI variant rather than RPI, real income growth is higher than was reported in the previous analysis.

¹¹ GDP is deflated using the GDP deflator, RHDl is deflated using the 'final consumption expenditure by households and NPISH deflator' and HFCE is deflated using the CPI (these are ONS series L8GG, YBFS and D7BT respectively).

Table 2.3. Change in income sources and contributions to income growth, 2007–08 to 2013–14

	Gross earnings	Gross self-employment income	Benefits to pensioner families	Benefits and tax credits to working-age families	Gross income from savings, investments and private pensions	Other income	Direct taxes and other deductions from income	Total income	Mean HBAI income
Share of income (2013–14)	84.6%	11.6%	9.0%	10.4%	14.7%	2.6%	–32.9%	100.0%	
2007–08 to 2013–14									
Growth of income source	–4.8%	–4.6%	8.5%	4.8%	3.3%	1.9%	–6.2%	–0.9%	–0.6%
Contribution to total income growth	–4.2ppt	–0.6ppt	0.7ppt	0.5ppt	0.5ppt	0.0ppt	2.2ppt	–0.9ppt	
<i>Of which:</i>									
2007–08 to 2009–10									
Growth of income source	0.7%	4.0%	11.7%	13.7%	–4.3%	9.7%	0.1%	3.0%	3.1%
Contribution to total income growth	0.6ppt	0.5ppt	1.0ppt	1.3ppt	–0.6ppt	0.2ppt	0.0ppt	3.0ppt	
2009–10 to 2011–12									
Growth of income source	–4.4%	–13.8%	–4.5%	–3.0%	–3.6%	–11.2%	–5.1%	–5.3%	–5.0%
Contribution to total income growth	–3.8ppt	–1.7ppt	–0.4ppt	–0.3ppt	–0.5ppt	–0.3ppt	1.7ppt	–5.3ppt	
2011–12 to 2013–14									
Growth of income source	–1.1%	6.4%	1.7%	–5.0%	12.1%	4.6%	–1.3%	1.5%	1.5%
Contribution to total income growth	–1.0ppt	0.7ppt	0.2ppt	–0.6ppt	1.6ppt	0.1ppt	0.4ppt	1.5ppt	

Note: All columns except the last relate to a subsample of households in HBAI, which excludes those with negative incomes. All incomes have been equivalised and are measured at the household level and before housing costs have been deducted.

Source: Authors' calculations using the Family Resources Survey, various years.

components have changed, over the last two years and since the recession began.¹²

We analyse separately each component of gross 'private' income, as well as taxes paid and benefits received. As a result, the components of income before taxes are deducted sum to over 100%. Gross earnings are the largest component, constituting 85% of mean net income; gross self-employment income adds 12% and income from state benefits and tax credits makes up 19%. Partly offsetting this are taxes and other payments.¹³

As already discussed, in 2013–14 mean net household income was only 0.6% below its pre-recession (2007–08) level after accounting for inflation. However, falls in earnings mean that the composition of income changed notably over this period: gross earnings comprised 88.1% of total net income in 2007–08 and only 84.6% by 2013–14. The falls in gross earnings and gross self-employment income together contributed a 4.8ppt reduction in mean income over the period. Offsetting this were increases in benefit income (which contributed 1.2ppt to income growth) and falls in direct taxes and other deductions (which together contributed a 2.2ppt increase in mean income). A substantial proportion of these increases were a result of 'automatic stabilisers' – as earnings fall, tax payments fall and benefit receipts rise automatically.¹⁴ Discretionary policy choices also played a role: large increases in the income tax personal allowance contributed to the increases in income through changes in direct tax payments, while cuts to benefits and tax credits will have acted to reduce the increases in benefit receipts resulting from the automatic stabilisers.

These trends are the product of three distinct sub-periods. Between 2007–08 and 2009–10, household incomes continued to grow; between 2009–10 and 2011–12, they fell sharply; and between 2011–12 and 2013–14, they have begun a very slow recovery.

The growth in average incomes between 2007–08 and 2009–10 was driven by real growth in benefit and tax credit income and the relative stability of real earnings. In contrast, between 2009–10 and 2011–12, earnings and self-employment income fell markedly, together contributing a 5.5ppt reduction in

¹² Here we exclude households whose components of income sum to a negative number. This is because, in the HBAI methodology, such households have their total income set to zero, and hence their components of income do not sum to the total. The exclusion of these households explains the small difference in total income growth between 2007–08 and 2013–14 between the change in total income calculated by summing the components (–0.9%) and the total change in mean income reported in the right-most column of Table 2.3 (–0.6%).

¹³ All income sources are measured at the household level and have been equivalised, to be consistent with the total HBAI income measure. We have defined 'benefits to pensioner families' as benefits received by households with at least one pensioner in. This will include some benefits that can also be received by working-age people (for example, housing benefit) and will include some benefits actually received by working-age individuals who live with pensioners.

¹⁴ Note that changes in indirect taxes (most importantly the increases in the main rate of VAT) do not show up in the changes in income. Instead, increases in indirect taxes increase inflation and therefore reduce real incomes through the deflator rather than through lower nominal incomes.

income. This fall in employment income was the result of falling earnings among those in work; the employment rate (in the HBAI data) actually increased by 0.9ppt between 2009–10 and 2011–12, while the mean earnings of employees fell by 6.4% (in HBAI) over the same period.

Average incomes began to recover slowly between 2011–12 and 2013–14. This was due in large part to a slowdown in falls in employment income and a partial recovery in income from self-employment. Trends in employment and earnings are discussed in more detail below. Benefits (including state pensions) and tax credits are the next largest components of income after income from employment.¹⁵ In the most recent period (between 2011–12 and 2013–14), we start to see evidence of the pattern of benefit cuts implemented by the coalition government as part of the post-recession fiscal consolidation. These cuts were concentrated on working-age benefit claimants, with pensioners largely protected, and the pattern of changes in benefits income reflects this. Changes to benefits are discussed further in Chapter 4.

The other component of income that made a considerable contribution to growth between 2011–12 and 2013–14 was gross income from savings, investments and private pensions. This was due to a 12.1% increase in 2013–14, which contributed 1.6ppt to mean income growth in 2013–14 alone. This increase was driven largely by the very richest individuals: excluding the top 1%, these sources of income grew by just 3.1%. Again this largely reflects the artificial shifting of income from 2012–13 to 2013–14 in order to benefit more from the reduction in the additional rate of income tax in April 2013. Investment income is particularly mobile as individuals can often choose when they draw dividends, particularly from firms that they own.¹⁶

Employment income

As employment income constitutes the majority of household income, an understanding of income trends requires one to examine labour market trends in detail. Here we look at trends in the employment rate and the earnings of the employed, and compare the HBAI data with alternative data sources.

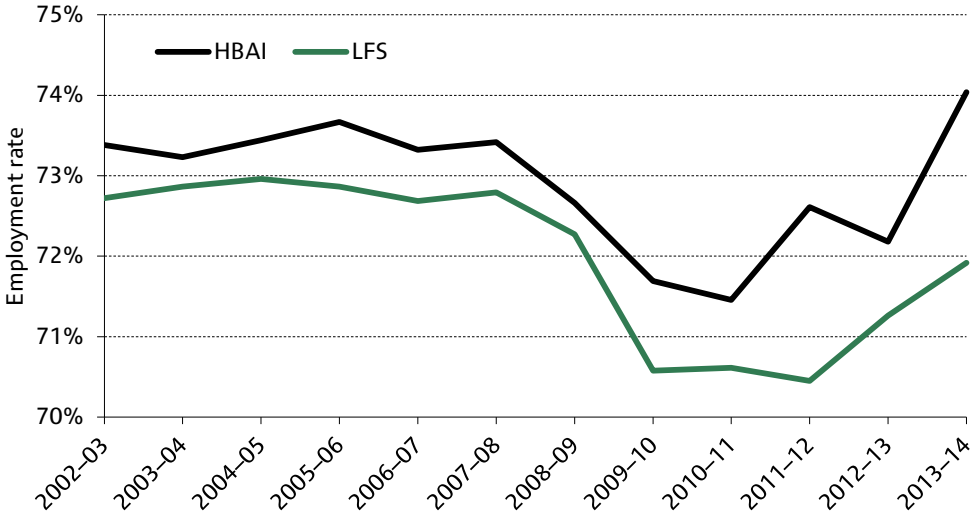
As shown in Figures 2.5 and 2.6, although the sharpest falls in real earnings took place between 2009–10 and 2011–12, the period between 2011–12 and 2013–14 continued the pattern of robust employment growth but weak earnings: the

¹⁵ In survey data, there is always an issue of under-reporting of benefit income. Appendix B documents this, comparing the benefits receipts captured in HBAI with administrative records on benefits spending. The fraction of benefits spending captured in HBAI has stayed quite stable recently, although the fraction of disability living allowance recorded fell in 2013–14. This may help to explain the significant rise in AHC poverty among disabled families reported in DWP's HBAI publication. Note also that the proportion of pensioners in the population as a whole is increasing over time, which will act to increase the proportion of benefits going to pensioners. On a year-to-year basis, though, the impact of this will be minor.

¹⁶ For more details on these responses, see HM Revenue and Customs (2012) and Browne and Phillips (2015).

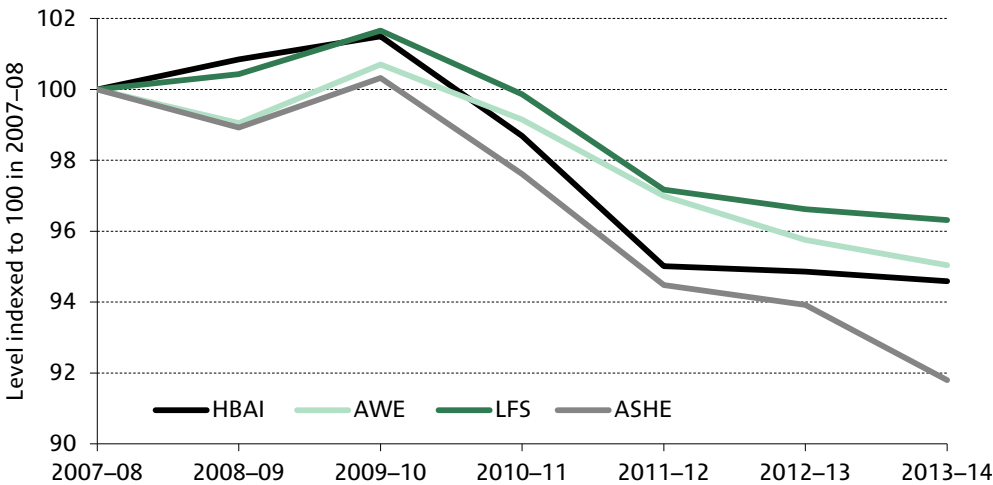
employment rate in the HBAI data rose by 1.4ppt over these two years, whereas real mean earnings of employees fell by 0.4%. Both numbers are broadly in line with corresponding measures in the Labour Force Survey (LFS).¹⁷

Figure 2.5. Employment rate (16- to 64-year-olds) in HBAI and LFS data (UK)



Source: Authors’ calculations using the Family Resources Survey and Labour Force Survey.

Figure 2.6. Comparison of mean real earnings measures (UK)



Note: ASHE results adjusted for methodological changes in 2011. ASHE results indexed to April 2008. HBAI data exclude those affected by the top incomes adjustment.

Source: Authors’ calculations using Family Resources Survey, Annual Survey of Hours and Earnings, Average Weekly Earnings (total pay) index (ONS series K54U) and Labour Force Survey data.

¹⁷ Between 2011–12 and 2013–14, mean weekly earnings in the Average Weekly Earnings (AWE) series fell by 2.0% and the Annual Survey of Hours and Earnings (ASHE) recorded a larger fall of 2.8% (although this was between 2012Q2 and 2014Q2 rather than comparing financial years).

However, if we focus on year-on-year changes, the employment rates as measured by HBAI data and the LFS are less consistent. In 2012–13, the HBAI data record a fall in employment while the LFS records an increase of 0.8ppt. This discrepancy is unwound in 2013–14 (with particularly fast employment growth in the HBAI data), so changes over the two years taken together are similar. The large increase in the employment rate in HBAI in 2013–14 is a likely reason why median income growth according to HBAI in 2013–14 was slightly above that projected by Cribb, Hood and Joyce (2015), whose projection was based on the employment trends recorded in the LFS. This underlines the fact that one should not put too much emphasis on a single year of data.

As explored in detail by Cribb and Joyce (2015), there have been considerable differences in labour market trends across different groups. The authors show that falls in median earnings have been significantly larger for younger age groups, men and – so far – the private sector, although recently earnings for young adults and in the private sector have outperformed those of older adults and the public sector. Men and young adults have also seen less favourable trends in employment rates.

2.3 Prospects for living standards

The comprehensive data on household incomes from HBAI are released with a lag of over a year, so we are currently only able to analyse changes in income up to the financial year 2013–14. However, we do have a range of other data and analysis, which provide some indication about the path of living standards in 2014–15 and beyond.

In 2014–15, as real GDP growth reached 2.7%,¹⁸ the employment rate of 16- to 64-year-olds continued to increase strongly, by 1.2 percentage points to 73.1%,¹⁹ and the earnings of employees grew slightly in real terms, by 0.4% according to the Average Weekly Earnings series. This was helped by a rapid fall in inflation, driven by food and fuel prices, which also meant that most working-age benefits were stable in real terms despite a policy to increase them by only 1% in nominal terms – this was previously expected to be a real cut, but CPI inflation in 2014–15 turned out to be 1.0%. Meanwhile, the basic state pension was increased by 2.5% in nominal terms, as determined by the ‘triple lock’, well above the rate of inflation.

Overall, then, we would expect to see a continued, and probably accelerated, pick-up in income growth when the 2014–15 HBAI data are released. In March 2015, some of the present authors produced projections based on the information available at the time, which suggested median *nominal* income growth of 2.5% in

¹⁸ Real GDP figures are from the UK Economics Accounts (ONS series YBEZ). Data downloaded 9 June 2015. ONS data for GDP can be subject to revision.

¹⁹ The employment rate is the official measure for 16- to 64-year-olds based on the Labour Force Survey (ONS series LF24), comparing the average rates in 2013–14 and 2014–15.

2014–15, implying *real* (CPI-adjusted) median income growth of 1.5%.²⁰

Although new data have since become available, including the actual HBAI data for 2013–14, those projections remain a reasonable guide.

Looking further ahead to 2015–16 and beyond, we are reliant on forecasts rather than out-turn data. In July 2015, the Office for Budget Responsibility (OBR) forecasted CPI-adjusted real earnings growth of 1.9% in 2015–16 (partly supported by low inflation), alongside some further growth in the proportion of the population employed. The OBR expects real earnings growth to continue thereafter, averaging 2.3% per year between 2016–17 and 2020–21. This is likely to be critical if we are to see significant and sustained growth in living standards once more – particularly as employment growth has natural limits, especially with an ageing population. Over the medium and long term, real earnings growth will have to be underpinned by productivity growth, which has been so lacking over the past few years.

2.4 Conclusion

The last two years of HBAI data, for 2012–13 and 2013–14, suggest that real median income has been rising slowly since 2011–12. At £453 per week in 2013–14, it was almost back at its pre-recession (2007–08) level, though still 2.4% below its 2009–10 peak.

Leaving aside the very top of the income distribution, where income changes in 2013–14 were distorted by income-shifting in response to changes in the additional rate of income tax, increases in living standards in 2013–14 were driven mainly by rising levels of employment in the working-age population (while the real earnings levels of employees remained roughly stagnant). Nevertheless, because real earnings levels still have a long way to go to recover the ground they lost in the aftermath of the late 2000s recession, the incomes of the non-pensioner population remain considerably behind where they were before the recession: in 2013–14, the median income of non-pensioners remained 2.7% below its level in 2007–08.

The prospects for further income growth in the next one or two releases of HBAI data look good, because of continued growth in employment and low inflation – which is boosting both real wages and the real value of benefits (since many of these were fixed in advance in nominal terms). Beyond that, there remains huge uncertainty, and it is difficult to overemphasise the importance of resumed productivity growth if we are to see a return to sustained and significant increases in living standards over the medium and long term.

²⁰ Cribb, Hood and Joyce, 2015.

3. Inequality

Key findings

- Income inequality in the UK barely changed across almost all of the distribution in 2013–14. For example, real incomes grew by 1.4%, 0.8% and 1.5% at the 20th, 50th and 80th percentiles respectively (none of which is statistically significantly different from zero).
- There was a larger increase in incomes at the very top of the distribution in 2013–14, which drove a small (but statistically insignificant) rise in the Gini coefficient from 0.337 to 0.343. This is likely to be in part an artificial phenomenon that does not reflect underlying changes in living standards, as high-income individuals moved income from 2012–13 into 2013–14 in response to the cut in the additional rate of income tax in April 2013.
- Income inequality remained lower than before the Great Recession. Between 2007–08 and 2013–14, real household incomes measured before housing costs rose by 7.3% at the 10th percentile, were roughly unchanged at the median and fell by 2.4% at the 90th percentile. This was the result of large falls in real earnings, while benefit incomes were relatively stable. The falls in inequality were much smaller, however, when measuring incomes after deducting housing costs, as the fall in mortgage interest rates primarily benefited higher-income households.
- As measured by the Gini coefficient, income inequality in 2013–14 was almost the same as in 1990. However, income inequality actually fell across most of the distribution over that period, while the top 1% continued to race away from the rest. The ratio between incomes at the 90th and 10th percentiles fell from 4.4 to 3.8 between 1990 and 2013–14, but the share of income going to the top 1% rose from 5.7% to 8.3%.
- The ‘catch-up’ of pensioners and workless households – accelerated by the large falls in real earnings associated with the recent recession – has acted to reduce overall inequality since 1990. Having been more than 30% poorer than the median non-pensioner in 1990, the median pensioner now has a higher equivalised income than the median non-pensioner (after accounting for housing costs). The ratio between median after-housing-costs incomes for non-pensioners in workless and working households rose from 39% in 1990 to 46% in 2013–14.
- In the years before the recession, inequality was still rising among working households. This was driven by growing inequality in the employment income of such households. Since 2007–08, falls in inequality within this group have not been driven primarily by trends in household employment income, but by the fact that lower-income working households get more support from in-work benefits. In 2013–14, benefits made up nearly 60% of net household income in the bottom decile of the household earnings distribution and around a third in the second decile.

- Recent falls in inequality are likely to prove temporary. Stronger earnings growth and the Conservatives' planned income tax cuts would do most for incomes towards the top of the distribution, while planned benefit cuts will hit low-income households (both in and out of work) hardest.

In Chapter 2, we examined trends in the average living standards of UK households, particularly since 2007–08, before the recession struck. In this chapter, we turn our attention to income inequality – how evenly or otherwise income is distributed across the UK household population, and how and why that distribution has been changing over time.

Our analysis uses a relative notion of inequality: if all incomes changed by the same proportional amount, we would conclude that income inequality had remained the same. This implies that a larger *absolute* increase in the incomes of higher-income individuals need not increase inequality. Even having settled on a relative notion of inequality, there are many different measures of inequality, each of which effectively gives different weights to different parts of the distribution. For this reason, we look not only at summary measures of inequality such as the Gini coefficient, but also at the changes in income occurring in each part of the income distribution, in order to provide the fullest possible account of what has been happening.

A limitation of the Households Below Average Incomes (HBAI) data is that, as is typical of household surveys, they are not a robust source of detailed information on the distribution of income among the very richest individuals.²¹ For this reason, much of our analysis focuses on the bottom 99% of the income distribution, rather than the much-discussed top 1%. We do, however, highlight the substantial differences between trends in inequality across the vast majority of the population and trends in inequality between a small group right at the top and the rest.

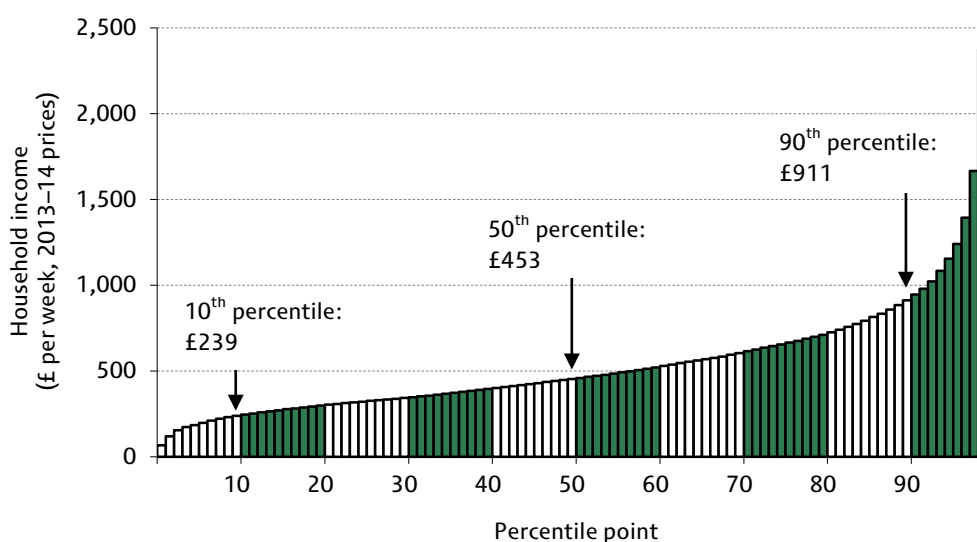
The chapter proceeds as follows. Section 3.1 looks at income inequality across the whole population, documenting changes in the most recent year of data (2013–14) and since the eve of the recession (2007–08), before putting those trends in their long-run context. Section 3.2 begins with an exploration of how changes in the incomes of pensioners and workless households relative to the rest of the population have affected these trends in overall inequality. We then focus on inequality among working households. Section 3.3 provides a brief discussion of the likely direction of future changes in inequality. Section 3.4 concludes.

²¹ The HBAI methodology does include an adjustment designed to get average incomes (but not the distribution of income) within approximately the top 1% of the income distribution right, by using information from personal tax records (see Appendix A).

3.1 Income inequality across the whole population

Figure 3.1 shows net equivalised household income at each percentile point of the UK income distribution in 2013–14. This provides a comprehensive picture of the current level of income inequality in the UK. For example, around 10% of individuals have a household income that is less than half of median income (income at the 10th percentile is around half of that at the median) and around 10% of individuals have a household income that is more than twice median income (income at the 90th percentile is around twice that at the median). The figure also shows the significant inequality within the top 10% of the income distribution. While income at the 90th percentile is twice that at the median, income at the 98th percentile is nearly four times median income, and income at the 99th percentile is more than five times median income. In addition, there is huge inequality *within* the top 1%, which Figure 3.1 (and the HBAI data) does not capture.

Figure 3.1. Weekly net household income at each percentile point in 2013–14 (UK)



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted.

Source: Authors' calculations using the Family Resources Survey, 2013–14.

To give a sense of monetary amounts, Table 3.1 shows the annual income of example households at the 10th, 50th (median), 90th and 99th percentiles. This helps to illustrate how small the group of 'super-rich' individuals that sometimes dominates discussions of inequality is – even at the 99th percentile, annual incomes (while high) are arguably a long way short of what would usually be considered 'super-rich'.

The most comprehensive way to understand changes in income inequality is to compare incomes at each percentile point over time. Figure 3.2 provides this comparison for the most recent year of data (2012–13 to 2013–14), with the 95% confidence interval for our estimates of the changes indicated by the shaded

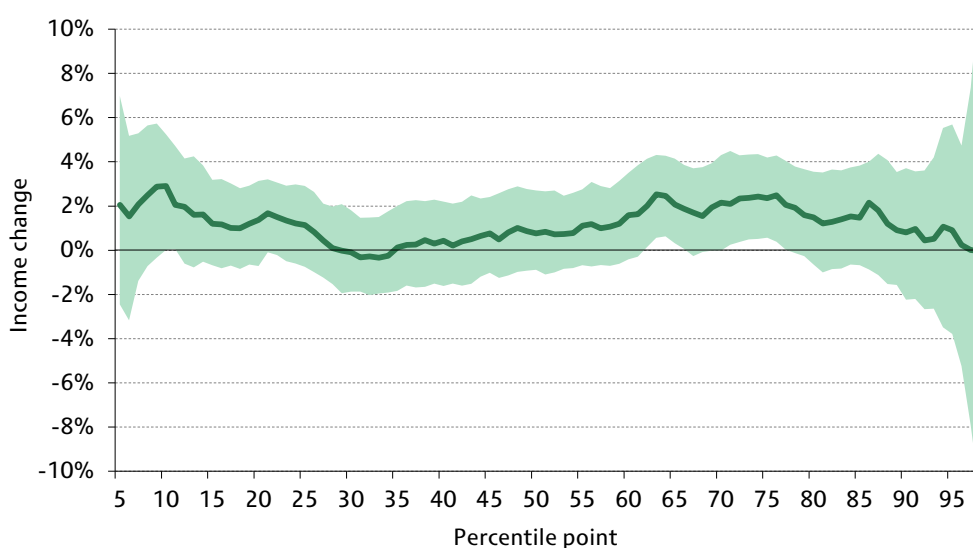
Table 3.1. Annual net household income at different percentile points of the 2013–14 distribution

Percentile	Single individual	Couple with no children	Couple with two children under 14
10 th	£8,300	£12,400	£17,400
50 th	£15,800	£23,600	£33,000
90 th	£31,700	£47,400	£66,300
99 th	£82,900	£123,700	£173,200

Note: Figures rounded to the nearest £100.

Source: Authors' calculations using the Family Resources Survey, 2013–14.

Figure 3.2. Real income growth by percentile point in 2013–14 (UK)



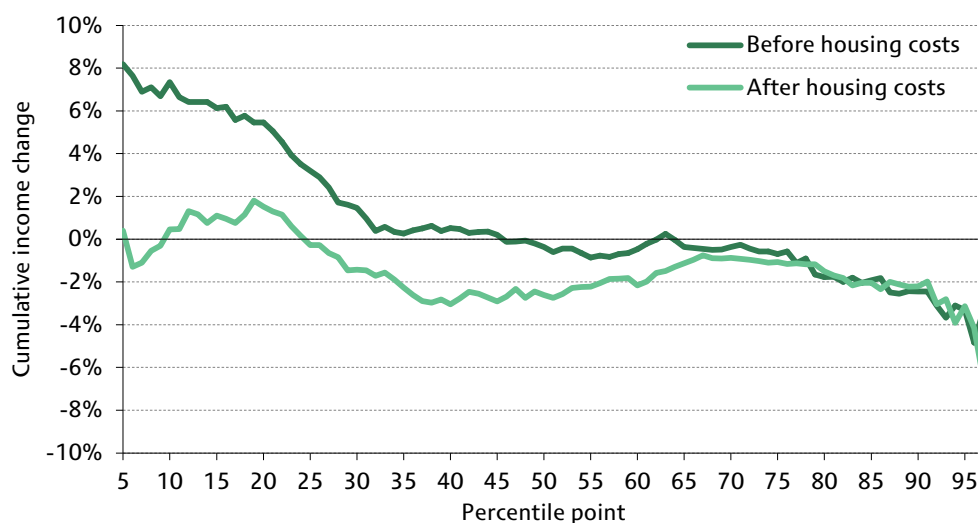
Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Percentiles 1–4 and 99 are excluded because of large statistical uncertainty.

Source: Authors' calculations using the Family Resources Survey, 2012–13 and 2013–14.

area. It shows a somewhat complex picture – income growth looks slightly stronger for those at the bottom and in the upper-middle of the distribution than for those in the lower-middle and at the top. For example, real incomes grew by 1.4% at the 20th and 1.5% at the 80th percentile, but by 0.8% at the 50th percentile (the median). However, it is important not to put too much weight on changes observed in one year of data; as the figure shows, at virtually every point of the distribution the year-on-year changes in income were not statistically significantly different from zero.

When we look at changes over the six years since the eve of the Great Recession (2007–08 to 2013–14), a clearer picture emerges. Figure 3.3 shows the cumulative change in income over that period at each percentile point of the distribution, both before and after housing costs are deducted (BHC and AHC). Inequality in BHC incomes fell substantially between 2007–08 and 2013–14: incomes rose by 7.3% at the 10th percentile, were roughly unchanged at the median and fell by 2.4% at the 90th percentile. This fall in inequality largely

Figure 3.3. Real income growth by percentile point, 2007–08 to 2013–14 (UK)



Note: Incomes have been measured net of taxes and benefits. Percentiles 1–4 and 99 are excluded because of large statistical uncertainty.

Source: Authors' calculations using the Family Resources Survey, 2007–08 and 2013–14.

reflects different trends in earnings and benefits. Between 2007–08 and 2009–10, there were large real increases in entitlements to some of the major benefits (as shown by Table 4.1), which acted to boost incomes at the bottom of the distribution. On the other hand, significant falls in real earnings between 2009–10 and 2011–12 affected higher-income households the most.

However, Figure 3.3 also shows that if incomes are measured after housing costs, the falls in income inequality are nowhere near as large. AHC incomes were roughly unchanged at the 10th percentile, compared with falls of 2.6% at the median and 2.2% at the 90th percentile. This difference reflects the fact that changes in housing costs since 2007–08 have varied dramatically across different households, as owner-occupiers have benefited from sharp falls in mortgage interest rates.²² Since low-income households are less likely to be owner-occupiers, they have seen much smaller falls in average housing costs, and hence have 'caught up' with higher-income households to a lesser extent on an AHC basis.

The importance of accounting for different changes in housing costs across the income distribution when documenting changes in inequality illustrates a wider point. When looking at changes in income inequality over time, it can be important to account for the fact that low- and high-income households may face different rates of inflation – because they consume different baskets of goods and services – as well as seeing different changes in cash incomes. Between 2007–08 and 2013–14, low-income households faced higher inflation on average, mostly because they benefited less from falling mortgage interest rates, but also because they spend a larger share of their income on food and energy (the prices of which

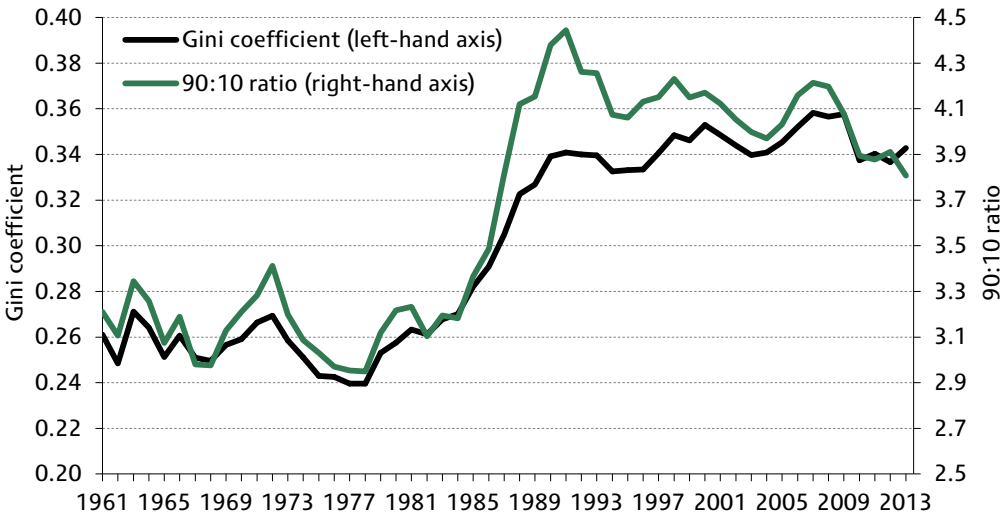
²² See Belfield et al. (2014) and Belfield, Chandler and Joyce (2015) for more details.

increased sharply between 2007–08 and 2009–10). Cribb, Hood and Joyce (2015) show that when this is taken into account, changes in real incomes since 2007–08 look similar across most of the distribution.

Inequality over the long run

The most convenient way to look at changes in inequality over a number of decades is to track summary measures of inequality. When including figures from before 2002–03, we look at incomes in Great Britain (GB) only, since Northern Ireland was only included in the data from that date onwards.²³ To build a comprehensive picture, Figure 3.4 shows the evolution of two different measures of inequality since 1961 (when our consistent data series began). The first is the 90:10 ratio, which is simply the ratio between incomes at the 90th and 10th percentiles. Hence it essentially measures the inequality between someone close to the top and someone close to the bottom of the distribution. The second measure is the Gini coefficient, which condenses the entire income distribution into a single number ranging between 0 and 1, with higher numbers corresponding to greater inequality. Figure 3.5 shows the share of household income held by the highest-income 1% of individuals. This just measures the extent to which income is concentrated at the very top.

Figure 3.4. The Gini coefficient and 90:10 ratio (GB, BHC)

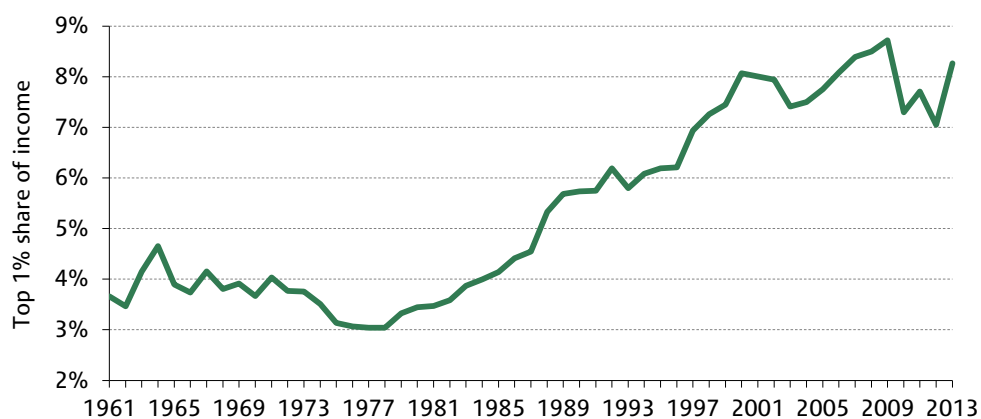


Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors’ calculations using the Family Expenditure Survey and Family Resources Survey, various years.

²³ The fact that Northern Ireland represents only a small fraction of the UK population (around 3%) and the similarity in economic trends between Northern Ireland and Great Britain mean that the difference between GB and UK figures is likely to be small.

Figure 3.5. The top 1% share (GB, BHC)



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

All three of these measures show inequality falling between 2007–08 and 2013–14, as one would expect given the pattern displayed in Figure 3.3. The 90:10 ratio has fallen from 4.2 to 3.8, the Gini coefficient from 0.358 to 0.343, and the top 1% share from 8.4% to 8.3%. However, Figure 3.4 also shows an increase in the Gini coefficient in 2013–14 (from 0.337 to 0.343), despite the relatively unchanged distribution shown in Figure 3.2. This increase was driven by the sharp rise in the top 1% share (from 7.1% to 8.3%). As always, it is important not to weight a single year of data too heavily. The increase in the Gini coefficient was not statistically significant. Moreover, the increase in the top 1% share reflects, at least in part, high-income individuals moving some of their income from 2012–13 to 2013–14, in order to face an additional marginal rate of income tax of 45% rather than 50%.²⁴

Looking over the long run, the three measures of inequality show similar trends in the period up to 1990. They all indicate that income inequality was roughly unchanged through the 1960s and the 1970s, before rising significantly through the 1980s. Since then, however, they give different impressions of trends in inequality. The Gini coefficient has been roughly constant, rising slightly from 0.339 in 1990 to 0.358 in 2007–08, before falling back to around its 1990 level. The 90:10 ratio fell, from a peak of 4.4 in 1991 to 3.8 in 2013–14. Meanwhile, the top 1% share continued to rise, from 5.7% in 1990 to a peak of 8.7% in 2009–10. Taken together, these trends indicate that the last 25 years have seen income inequality fall across most of the distribution, but the top 1% of individuals have taken an increasing share of total household income. The common perception that inequality is rising may be based on the 'racing away' of a small group at the

²⁴ Similarly, this income-shifting may also be the reason for the dip in the top 1% share in 2012–13. Chapter 2 of this report and Cribb, Joyce and Phillips (2012) provide a fuller discussion of the impact of behavioural responses to changes in income tax rates on incomes at the top of the distribution.

very top of the pile, rather than on trends in inequality across the vast majority of households. However, we do show in the next section that inequality has looked less flat since 1990 if we focus just on non-pensioners in working households.

3.2 Pensioners, working households and workless households

In this section, we examine how varying trends in the household incomes of different groups have affected changes in income inequality across the UK population as a whole. In doing so, we seek to address two questions. First, what explains the slowdown in inequality growth after the 1980s? Second, is the fall in inequality since the Great Recession explained solely by the increase in the relative incomes of pensioners and workless households, or does it also reflect changes in the distribution of income within working households?

To answer these questions, we divide the population into three mutually exclusive and mutually exhaustive subgroups: pensioners, non-pensioners in a household where someone is in work, and non-pensioners in a household with no one in work.

The relative incomes of pensioners, working households and workless households

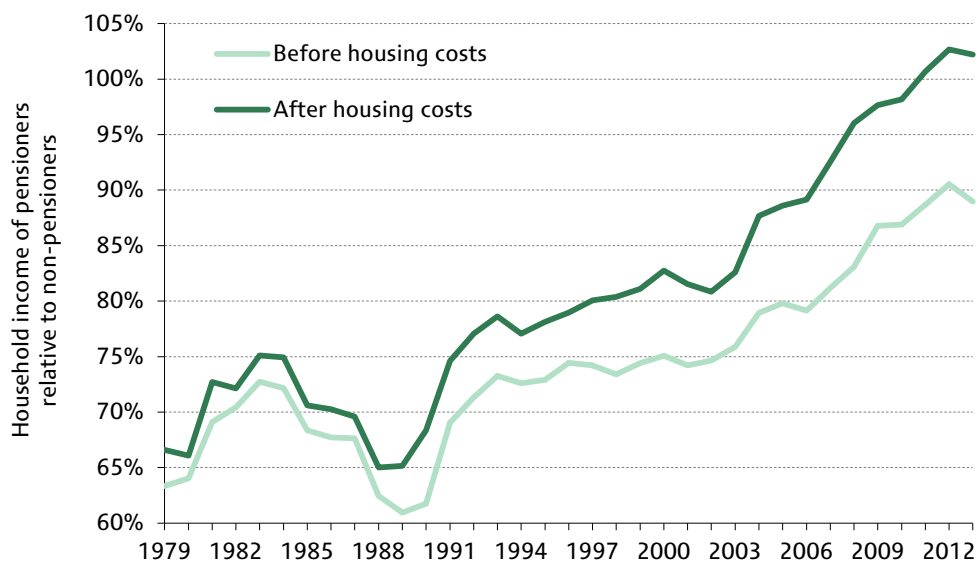
Figure 3.6 shows the median income of pensioners as a percentage of median income for the rest of the population, both before and after housing costs are deducted. The relative incomes of pensioners were around the same in 1990 as back in 1979, but since 1990 the relative incomes of pensioners have been on a steep and almost continual upwards trend.²⁵ Before housing costs are deducted, the income of the median pensioner rose from 62% of that of the median non-pensioner to 89% by 2013–14. After the lower housing costs of pensioners are taken into account, the median pensioner now has a higher equivalised household income than the median non-pensioner.

Figure 3.7 focuses on the non-pensioner population, charting median income for those in workless households as a percentage of median income for those in working households (where at least one person is in work). Although the change in their relative incomes is less dramatic than the ‘catch-up’ of pensioners, 1990 is again something of a turning point. Before housing costs, median income for those in workless households as a share of median income for those in working households fell from 49% in 1979 to a low of 42% in 1990. It then rose to 50% by the mid 1990s, remaining around that level until 2007–08. Since 2007–08, falling real earnings have led to a further rise, to 57% by 2013–14. The trends in relative incomes after housing costs exhibit a similar pattern, with a fall from 48% in

²⁵ Chapter 5 of Cribb et al. (2013) provides a detailed explanation of the reasons behind this trend. In short, it was driven by rising private pension income and increases in state support.

1979 to 39% in 1990, followed by a rise to 43% in 2007–08 and to 46% by 2013–14.

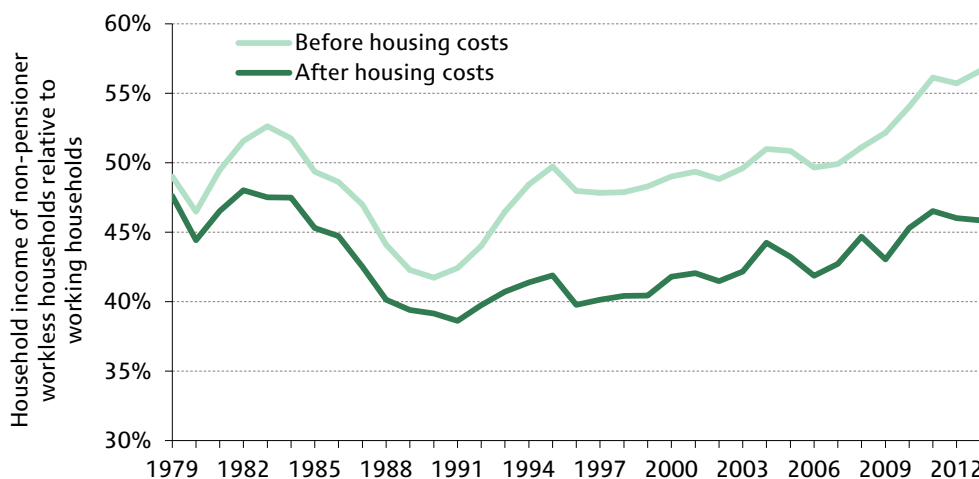
Figure 3.6. Median equivalised household income of pensioners relative to non-pensioners since 1979 (GB)



Note: Incomes have been measured net of taxes and benefits. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

Figure 3.7. Median equivalised household income of non-pensioners in workless households relative to those in working households since 1979 (GB)



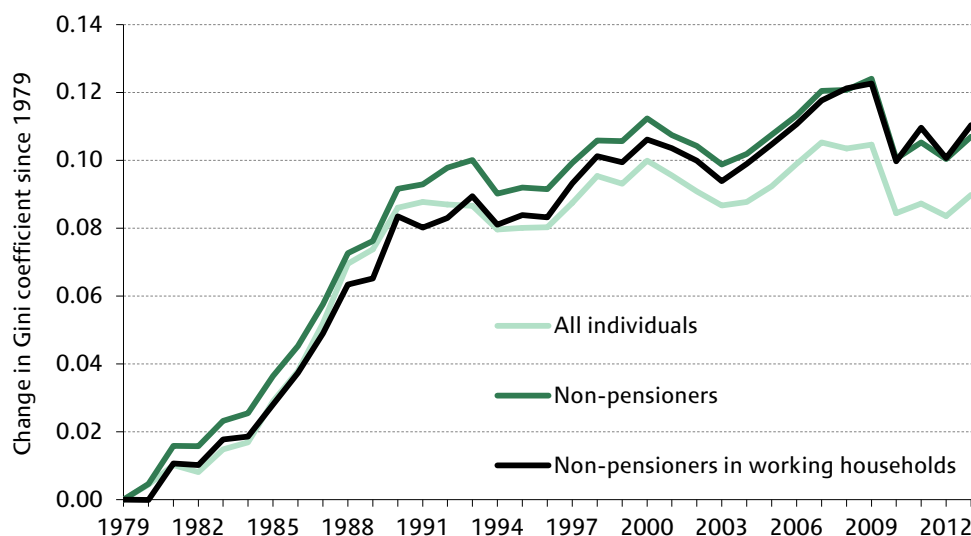
Note: Incomes have been measured net of taxes and benefits. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

Inequality among non-pensioners

In order to examine the impact that these trends in relative incomes have had on overall income inequality, Figure 3.8 shows the *change* in the Gini coefficient since 1979 for three different groups: the population as a whole, non-pensioners and non-pensioners in working households.

Figure 3.8. Changes in the Gini coefficient since 1979 (GB, BHC)



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

For the population as a whole, the picture is the same as given by Figure 3.4 – a large increase in income inequality during the 1980s and little change thereafter. However, if one looks just at the non-pensioner population, the rise in inequality since 1990 is much larger. While the Gini coefficient for the population as a whole was only 0.4 percentage points higher in 2013–14 than in 1990, the Gini coefficient for non-pensioners was 1.5 percentage points higher. If we restrict our focus to inequality among non-pensioners in working households, the increase in the Gini coefficient since 1990 is 2.7 percentage points.

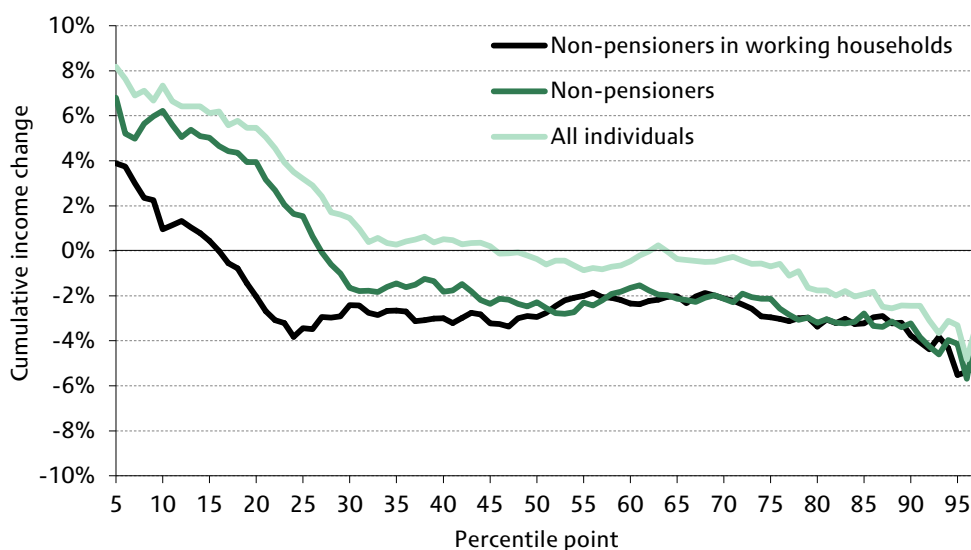
Looking in more detail at working-age adults, inequality has continued to rise (albeit gently) across much of the working-age spectrum. The Gini coefficient for the household incomes of adults in their 20s, 30s and 40s (but not those in their 50s) was higher in 2013–14 than in 1990, although this increase largely reflects a widening gap between the very top and the rest.

The relatively stable level of income inequality since 1990 is the result of two counteracting trends – a continued (albeit slower) increase in inequality among non-pensioners in working households, offset by lower inequality between pensioners and non-pensioners and between working and workless households. The fact that falling inequality across age groups (particularly between

pensioners and others) has masked slight increases in inequality among working-age adults of similar ages may be important. It is possible that the latter reflect a continuing rise in the degree of inequality in the lifetime incomes of successive cohorts.

Figure 3.9 looks at income inequality within the same three groups, but focuses on changes in real incomes since the eve of the Great Recession (2007–08 to 2013–14). It shows the cumulative change at each point of the income distribution for the population as a whole, non-pensioners and non-pensioners in working households. Note that individuals will not be at the same percentile point of the three distributions; the purpose of showing the three percentile charts on the same figure is to facilitate a comparison of trends in inequality for each group.

Figure 3.9. Real income growth by percentile point for different groups, 2007–08 to 2013–14 (UK, BHC)



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Percentiles 1–4 and 99 are excluded because of large statistical uncertainty.

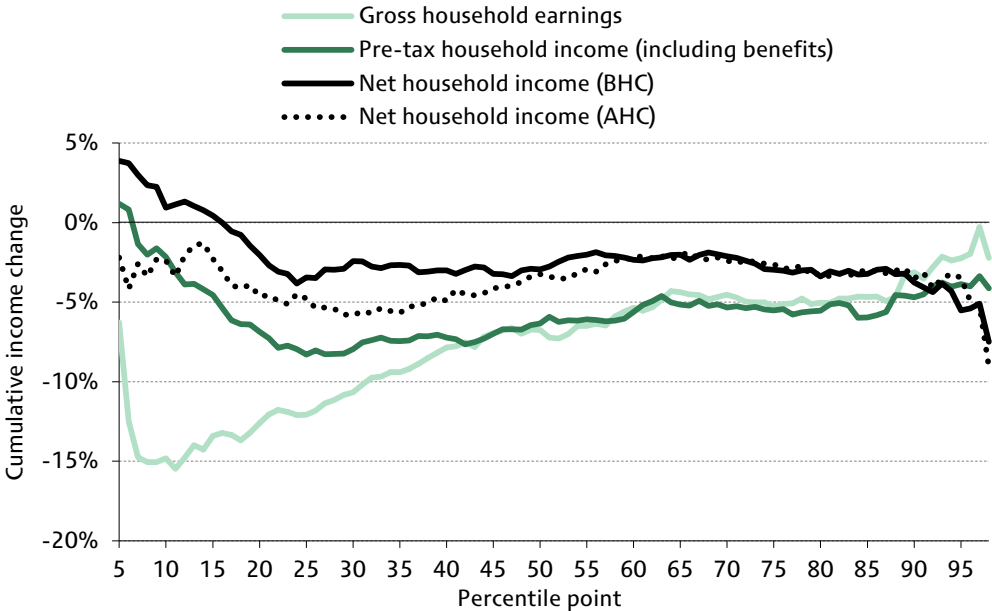
Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, 2007–08 and 2013–14.

By comparing inequality for the whole non-pensioner population and for just those in working households, one can see the impact of the 'catch-up' of workless households. The increase in benefits relative to earnings led to much stronger growth in incomes towards the bottom of the distribution, reducing inequality between lower- and middle-income households. But Figure 3.9 also shows that the period from 2007–08 to 2013–14 saw a reduction in inequality even among individuals whose main source of household income is likely to be earnings. Among non-pensioners in working households, incomes rose by 0.9% at the 10th percentile but fell by 2.9% at the median and 3.8% at the 90th percentile.

Why has inequality among working households fallen since 2007–08?

There are two obvious possible explanations for the recent fall in income inequality among non-pensioners in working households. First, the earnings of working households may themselves have become more equally distributed. Second, the tax and benefit system may have acted to reduce inequality in the net incomes of these individuals, despite an increase in the inequality of their household earnings. Figure 3.10 shows that the latter is the true explanation. Focusing solely on non-pensioners in working households, it shows the change at each percentile point in the distributions of gross household earnings (including gross self-employment income), pre-tax household income (including benefits) and net (post-tax) household income (all equalised as normal).²⁶

Figure 3.10. Household earnings, pre-tax incomes and net incomes for non-pensioners in working households, by percentile point, 2007–08 to 2013–14 (UK)



Note: Percentiles 1–4 and 99 are excluded because of large statistical uncertainty.
 Source: Authors’ calculations using the Family Resources Survey, 2007–08 and 2013–14.

The change in the distribution of gross household earnings between 2007–08 and 2013–14 was clearly inequality-increasing (apart from at the very bottom of the distribution). Household earnings fell by a cumulative 14.8% at the 10th percentile, compared with a 6.7% fall at the median and a 3.1% fall at the 90th percentile. This was partly driven by large falls in self-employment income towards the bottom of the distribution. This helps to explain the difference between the inequality-increasing pattern in household earnings (including self-

²⁶ Again, the same individuals are not necessarily found at the same percentile point of each of the distributions. However, the extent of re-ranking within this subgroup of the population is likely to be limited.

employment income) shown in Figure 3.10 and the broadly proportional, or even slightly inequality-reducing, falls in the earnings of individual employees documented in other research.²⁷

For the higher-income half of non-pensioners in working households, the change in pre-tax household income is very similar to the change in gross household earnings, since earnings are the predominant source of income. However, towards the bottom of the distribution, falls in total pre-tax income were significantly smaller than falls in earnings. While gross household earnings fell by 14.8% at the 10th percentile and 12.6% at the 20th percentile, pre-tax household incomes fell by just 2.2% and 6.9% respectively. This reflects two things. First, the benefits low-income working households were already receiving did not tend to fall to the same extent as their earnings (or at all). Second, falls in real earnings increased the benefit entitlements of low-income working households, because most of those entitlements are income-related. The size of the gap between changes in gross household earnings and incomes reflects how important benefit income is to these households. In 2013–14, benefits made up nearly 60% of net household income in the bottom decile of the household earnings distribution and around a third in the second decile, but less than 5% across the top half of the distribution. The changing role of in-work benefits in supporting the incomes of low-income working households is explored in more detail in Chapter 4.

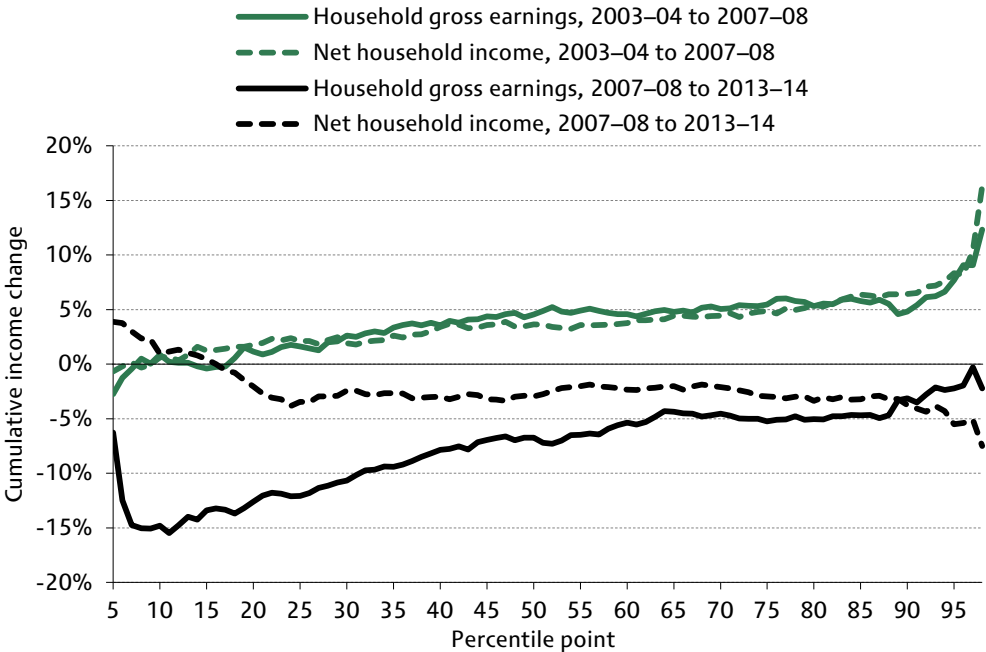
It is worth remembering that those low-income households whose incomes were most supported by in-work benefits (the lowest-earning ones) also tended to benefit the least from falls in mortgage interest costs (as they are less likely to be owner-occupiers). As a result, income inequality among working households changed much less on an after-housing-costs basis, as shown by the dotted line on Figure 3.10.

It is important to recognise that this difference between changes in the distributions of household earnings and household incomes largely reflects the role the tax and benefit system plays during a recession (or, more generally, when benefits and earnings are changing at very different speeds), rather than its existence per se. Figure 3.11 shows the cumulative change from 2003–04 to 2007–08 in gross household earnings and net household incomes across the distribution – again for non-pensioners in working households – alongside the cumulative changes from 2007–08 to 2013–14 from Figure 3.10.²⁸ Despite the fact that something very similar to the current system of in-work benefits and tax credits was in place from 2003–04, the changes in gross household earnings and net household income were almost identical across the distribution of working households in the pre-recession years. It is only when there was a large shock to earnings – but not benefit rates – that changes in earnings inequality among working households became so different from changes in income inequality.

²⁷ For example, Cribb and Joyce (2015).

²⁸ Data quality concerns mean we are unable to look at gross household earnings before 2003–04.

Figure 3.11. Household earnings and net incomes for non-pensioners in working households, by percentile point, 2003–04 to 2013–14 (UK)



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Percentiles 1–4 and 99 are excluded because of large statistical uncertainty. Source: Authors’ calculations using the Family Resources Survey, 2003–04, 2007–08 and 2013–14.

3.3 Prospects for inequality

Although the latest HBAI data provide information only up to and including 2013–14, it is possible to say something about trends in inequality beyond that point. For 2014–15, we can combine other data sources on trends in earnings with known tax and benefit changes to arrive at a relatively comprehensive picture of the likely changes in incomes across the distribution. Real earnings finally began to rise again in 2014–15, while most working-age benefits rose slightly less than inflation. As a result, Cribb, Hood and Joyce (2015) projected a slight increase in inequality, with stronger growth in incomes towards the top of the distribution.

Beyond 2014–15, there is clearly greater uncertainty, but it seems likely that income inequality will continue to rise. If the recovery in real earnings continues to strengthen (as the Office for Budget Responsibility forecasts), the incomes of those in working households will grow faster than the incomes of those in workless households, increasing inequality between the bottom and the middle of the distribution. We can say less about prospects for inequality between middle- and higher-income households, as this largely depends on the distribution of gains from future real earnings growth. The effective increase in the minimum wage (via the so-called ‘National Living Wage’) for those aged 25

and over announced at the recent Summer Budget, together with the aim for it to reach 60% of median hourly pay by 2020,²⁹ will have important effects in raising pay towards the bottom of the earnings distribution. However, many low individual hourly earners do not have particularly low family incomes (for example, because they have a working partner), so this is unlikely to be powerful in reducing inequality in household income.

Tax and benefit changes are likely to act to increase inequality over the course of the current parliament. The gains from the Conservative plans to increase the income tax personal allowance to £12,500 and the higher-rate threshold to £50,000 by 2020 would be concentrated in the top half of the income distribution, with those in the 9th income decile (between the 80th and 90th percentiles) gaining the most as a proportion of income.³⁰ The benefit cuts announced at the recent Summer Budget will tend to hit lower-income working-age households hardest over the course of this parliament, with significant cuts both for out-of-work working-age households and for low-income working households. These are also larger in overall scale than planned increases in the minimum wage over this parliament.³¹

However, there is reason to think that the increase in inequality might be smaller after housing costs are deducted. If interest rates begin to rise, the housing costs of owner-occupiers (mortgage interest costs) would increase. Since owner-occupiers have higher incomes on average than the population as a whole, housing costs would probably then rise faster towards the top of the income distribution, partially mitigating the increase in income inequality before housing costs. More generally, it is possible that the next few years may see changes in incomes and prices that are a reversal of those seen since 2007–08. Where previously low-income households saw stronger income growth but also faced higher inflation, continued falls in fuel and food prices (in conjunction with rising mortgage interest rates) could see them facing lower inflation, alongside weaker nominal income growth.

3.4 Conclusion

After rising sharply during the 1980s, overall income inequality grew only slightly over the two decades before the Great Recession. This was the net result of two counteracting trends. The incomes of pensioners grew faster than the incomes of non-pensioners, and the incomes of workless households grew faster than those of working households, reducing inequality. But this was more than

²⁹ The OBR expects this to mean that the minimum wage in 2020 would be 13% higher than it would have been if it had simply risen in line with average hourly pay (Office for Budget Responsibility, 2015b).

³⁰ See figure 2.2 of Adam et al. (2015).

³¹ Hood, 2015.

outweighed by increases in income inequality between working households, particularly between the very top and the rest.

The years since the Great Recession have seen large falls in income inequality across most of the distribution, particularly before housing costs are deducted. The large falls in real earnings that characterised the recent recession accelerated the 'catch-up' of pensioners and workless households. Having risen from 68% of non-pensioner median income in 1990 to 93% by 2007–08, median pensioner income was above median non-pensioner income in 2013–14 (all after housing costs). Similarly, albeit less dramatically, median income for non-pensioners in workless households rose from 43% to 46% of median income for non-pensioners in working households between 2007–08 and 2013–14, compared with 39% in 1990.

Crucially, the reduction in inequality resulting from the relative increase in the incomes of these groups was not offset by continued increases in inequality between working households. Instead, inequality fell, with low-income working households seeing smaller falls (or even small increases) in their net incomes. This was because in-work benefits supported the incomes of low-income working households, something we explore in detail in Chapter 4.

Recent falls in inequality look likely to prove temporary. Stronger earnings growth and the Conservatives' planned tax cuts would do most for incomes towards the top of the distribution, while planned benefit cuts will hit low-income households (both in and out of work) hardest. Significant planned real rises in the minimum wage for those aged 25 and over are likely to have important effects in boosting the earnings of those with the lowest hourly pay; but they are smaller in overall magnitude than the benefit cuts that are planned, and much less tightly targeted on those with low household incomes.

4. Income Poverty

Key findings

- In 2013–14, the absolute poverty rate in the UK was 21.6% (13.6 million individuals), measuring incomes after deducting housing costs (AHC). This was a fall of 0.5 percentage points (300,000 individuals) from 2012–13, but the change is not statistically significant. The UK relative poverty rate (again AHC) was 21.0% (13.2 million individuals), unchanged from 2012–13. There was also no significant change in absolute or relative poverty for any of the major demographic groups (children, pensioners and working-age adults without children). Overall, the data suggest that the incomes of low-income households rose slightly in 2013–14 and broadly kept pace with median income.
- Given a number of real cuts to working-age benefits in 2013–14, IFS researchers had projected that poverty rose in 2013–14, particularly among children. The data showing no change may therefore come as a surprise. However, limited weight should be placed on changes measured from one year to the next, which are subject to margins of error. An unchanged measured poverty rate is consistent with an increase or a decrease in reality. Key factors acting to hold child poverty down in 2013–14 were employment increases, falls in poverty among workless lone-parent families and falls in poverty among children of self-employed parents. There are reasons to think that each of these is likely to partly reflect random variation in the data from one year to the next rather than, or in addition to, real trends.
- The absolute poverty rate measured AHC has been broadly flat overall since 2004–05. This is not true of absolute poverty measured before housing costs (BHC), which fell by 3.2 percentage points (ppt) between 2004–05 and 2013–14. The difference is the result of AHC poverty accounting for variation in housing cost trends across income groups: housing costs have risen for low-income households relative to high-income ones, on average.
- Since 2009–10, the stability of the overall absolute AHC poverty rate masks important and offsetting underlying trends. The recovery in the employment rate has reduced the proportion of individuals in workless families, acting to reduce the overall poverty rate; but there have been increases in poverty rates among working families, caused primarily by falling real earnings. These two factors have been particularly striking for families with children. Favourable parental employment trends have acted to reduce absolute child poverty by more than 1ppt since 2009–10, but increasing rates of poverty among children living with at least one working parent acted to increase child poverty by more than 2ppt over the same period. (Reductions in poverty for workless families with children meant that overall child poverty barely changed.)

- This highlights the importance of family work status as an input into living standards, as emphasised recently by the government in its ‘new approach’ to tackling child poverty; but it also underlines the fact that substantial progress in reducing the prevalence of low living standards will be difficult without improvements in the living standards of working families.
- It seems likely that absolute poverty will have been stable or even fallen slightly in 2014–15, as low and falling inflation helped to preserve the real value of benefits (despite most working-age benefits rising by only 1% in nominal terms) and wages. Looking further ahead, planned benefit cuts over this parliament will hit low-income working-age households hardest, and will therefore tend to put upwards pressure on absolute income poverty – including in-work poverty. Recently-announced planned rises in the minimum wage for those aged 25 and over will help those on the lowest hourly pay, but are smaller in overall magnitude than benefit cuts and are less tightly targeted on low-income households. Wider growth in real earnings and in employment will continue to be important, though it can also make relative poverty trends look less favourable by resulting in income growth for middle-income households.

Whereas the previous two chapters have analysed trends in average living standards and inequality across the UK as a whole, this and the next chapter concentrate on those towards the bottom of the distribution. This chapter focuses on explaining recent trends in income poverty, how and why these trends have differed across groups and how labour market trends and the benefit system have combined to affect the incomes of those in and around poverty. Chapter 5 looks at non-income measures of poverty or financial difficulties.

There are two commonly-used ways to measure income-based poverty. The ‘absolute poverty’ rate measures the proportion of individuals whose household income falls below a poverty line that is fixed in real terms over time. The precise real level of this line is inevitably arbitrary, but when discussing poverty statistics we follow the Department for Work and Pensions (DWP)’s official statistics in defining this line as 60% of 2010–11 median income. As this poverty line is fixed in real terms over time, it has to be uprated in line with inflation. As discussed in Chapter 2, in this report we do this using measures of inflation based on the Consumer Prices Index (CPI), whereas the official statistics continue to use inflation measures based on the now-discredited Retail Prices Index (RPI). Consequently, our reported poverty rates differ from those in the official statistics, but as they are based on a better measure of inflation, they provide a more accurate picture of trends in the real incomes of low-income families. Inflation measured by the CPI has been consistently lower than that measured by the RPI, so in our analysis the absolute poverty line is uprated more slowly, and hence measured increases in absolute poverty are smaller (or falls greater), than in the official statistics. The ‘relative poverty’ rate measures the proportion of

individuals whose household income is less than 60% of the median income in the current year.³²

Until recently, the measures defined above were explicitly targeted (for children) as a result of the legally-binding Child Poverty Act passed by the outgoing Labour government in 2010. The current Conservative government has now announced plans to bring forward legislation to replace this Act and the targets within it.³³ Hence, the legal status, and probably the political status, of these measures will be less totemic in the coming years than in the recent past. Nevertheless, the statistics will continue to be produced as part of the official HBAI series, and both absolute and relative measures of low income remain standard indicators of poverty internationally.³⁴

Absolute and relative measures of poverty measure very different concepts. A fall in the absolute poverty rate implies that the incomes of low-income households have risen in real terms, whereas a fall in the relative poverty rate means that the incomes of low-income households have risen *relative* to those of middle-income households. The difference in practice is particularly stark when real median income is changing quickly, as changes in the relative and absolute poverty lines are then very different. This was the case between 2009–10 and 2011–12, when real median income fell rapidly while the incomes of poorer households were more stable, causing substantial falls in relative poverty but not absolute poverty. The measures provide complementary information and are both relevant. Our judgement is that absolute poverty is often of primary interest when looking at movements over short periods, while relative poverty is more often relevant when looking over longer periods. This is because society's views about what constitutes a minimum acceptable living standard might not be sensitive in real time to year-to-year volatility in median income, but they undoubtedly evolve over long periods of time as the resources available to society as a whole change.

Both of these measures of poverty can be calculated using incomes measured before or after housing costs (BHC or AHC). Appendix A provides a detailed discussion about the treatment of housing costs when analysing living standards, but in this chapter we focus on AHC poverty (with BHC figures given in Appendix C). This is largely because in recent years there have been considerable swings in average housing costs – accounted for by BHC measures through the inflation measure – driven primarily by falls in housing costs for mortgage-paying owner-

³² As the poverty line is calculated in each year, we do not need to uprate the poverty line according to prices. However, there may still be small differences between our measures of poverty and the official statistics due to the way we account for inflation within each financial year. As incomes are recorded at different points throughout the financial year, and the price level changes continuously between these points, we deflate all incomes to the average financial year prices. We now perform this within-year deflation using the variants of CPI inflation previously discussed as opposed to the variants of RPI inflation used in the official statistics. However, these differences will be inconsequential to the overall trends discussed in this chapter.

³³ See <https://www.gov.uk/government/news/government-to-strengthen-child-poverty-measure>.

³⁴ See EAPN Social Inclusion Working Group (2009) for more details.

occupiers, as a result of falls in interest rates. These falls in interest rates are less relevant for analysis of poverty rates as those towards the bottom of the income distribution are less likely to own their home. Measuring poverty after each household's actual housing costs have been deducted accounts for the fact that different income groups have seen different changes in housing costs.³⁵ This focus on AHC poverty is in contrast to many commonly-cited poverty statistics and the targets in the Child Poverty Act 2010.

To give a sense of monetary amounts, Table C.1 in Appendix C shows the weekly net household income that different example family types would need in order to avoid being classified as in poverty (i.e. the poverty lines) under the different definitions of poverty.

The remainder of this chapter proceeds as follows. Section 4.1 analyses and explains the recent trends in absolute and relative poverty. Section 4.2 looks at the relationship between poverty and family work status – analysis which is now perhaps particularly pertinent given that the government has announced that it will track the number of children living in workless households as part of a suite of measures.³⁶ Section 4.3 examines how and why the incomes of those in low-earning working households have been changing, looking at their earnings and their in-work benefits. Section 4.4 considers the prospects for poverty in the years ahead. Section 4.5 concludes.

4.1 Trends in income poverty

In 2013–14, the absolute poverty rate in the UK was 21.6% (13.6 million individuals), measuring incomes after deducting housing costs. This was a fall of 0.5ppt (300,000 individuals) from 2012–13, though the change is not statistically significant. The UK relative poverty rate was 21.0% (13.2 million individuals), unchanged from 2012–13. So overall the data suggest very little change in 2013–14, with the real incomes of low-income households tending – if anything – to rise slightly and at a similar pace to median income.

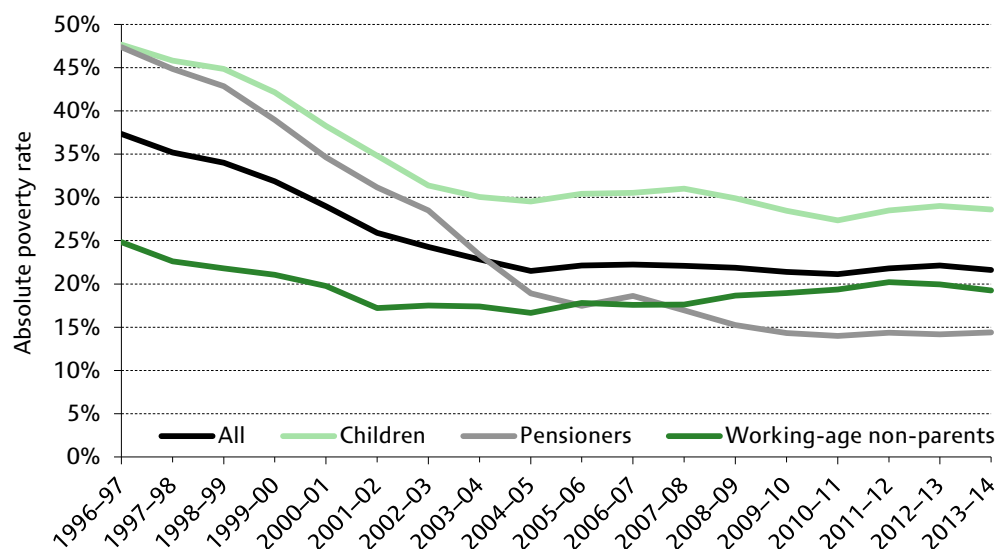
Figure 4.1 shows trends in absolute AHC poverty since 1996–97. Following large falls in absolute poverty from the mid 1990s to the early 2000s, poverty has been broadly flat since 2004–05. Over the long run, we would typically expect absolute poverty to fall as real incomes rise. However, this was not happening even in the immediate pre-recession years, due to the slowdown in earnings growth starting in the early 2000s (see Chapter 2) and a slowdown in discretionary benefit increases from 2004–05.³⁷ Conversely, absolute poverty did not rise during the

³⁵ Using incomes measured BHC, changes in housing costs are accounted for only through the measure of inflation used to compare incomes in real terms over time. Because this is a measure of average inflation, it effectively ignores the fact that some households see different changes in prices to others. In the case of housing costs it effectively assumes that all households' housing costs change in line with average housing costs.

³⁶ See <https://www.gov.uk/government/news/government-to-strengthen-child-poverty-measure>.

³⁷ See Joyce (2015).

Figure 4.1. Absolute poverty rates (AHC), by family type



Note: Figures are presented for GB up until 2001–02 and for the whole of the UK from 2002–03 onwards. The absolute poverty line is defined as 60% of median income in 2010–11.

Source: Authors' calculations using the Family Resources Survey, various years.

recession as incomes at the bottom of the distribution were supported by relatively stable benefit incomes.

It is worth noting that this recent trend is quite different from that observed BHC (see Figure C.1 in Appendix C). Between 2004–05 and 2013–14, the BHC absolute poverty rate fell by 3.2ppt. As discussed in detail in last year's report,³⁸ the less favourable trend when measured AHC is the result of reductions in mortgage interest rates since 2007–08 reducing housing costs much less for low-income groups (who are less likely than average to own a home) than for high-income groups.

Figure 4.1 also gives absolute poverty rates for each family type. In 2013–14 the absolute AHC poverty rate ranged from 28.6% (3.8 million) among children to 19.3% (4.6 million) among working-age adults without dependent children and 14.4% (1.7 million) among pensioners. The fact that pensioners are less likely to be poor than the working-age childless, and only half as likely to be poor as children, reflects a long-running and remarkable turnaround in pensioners' relative fortunes, discussed and analysed in detail elsewhere.³⁹ In the latest year of data (2013–14), just as for the overall absolute poverty rate, none of the changes in poverty for the family types shown in the figure was statistically significant.

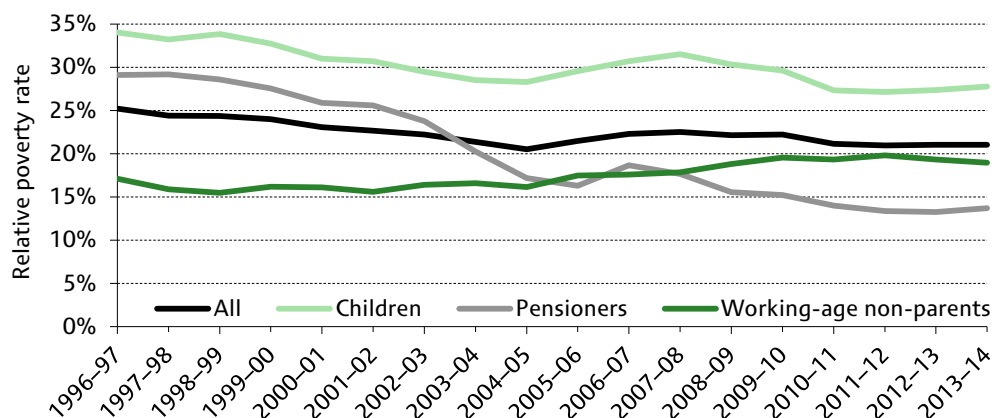
Figure 4.2 shows recent trends in relative poverty. Because median income, and hence the poverty line, grew slightly in the pre-recession years and then fell sharply just after the recession, relative poverty rates have moved around more

³⁸ Belfield et al., 2014.

³⁹ For example, chapter 5 of Cribb et al. (2013).

than absolute poverty rates over the past decade or so. Overall, relative poverty increased by 1.7ppt between 2004–05 and 2009–10 when there was (albeit slow) growth in median income while the real incomes of low-income households changed little. Much of this increase was reversed when median income fell during the recession. In 2013–14, relative poverty was unchanged from 2012–13 and 1.2ppt lower than in 2009–10. Relative child poverty in 2013–14 was 0.4ppt higher than in 2012–13 (which is not a statistically significant change), but 1.9ppt lower than in 2009–10.

Figure 4.2. Relative poverty rates (AHC), by family type



Note: Figures are presented for GB up until 2001–02 and for the whole of the UK from 2002–03 onwards.

Source: Authors' calculations using the Family Resources Survey, various years.

The fact that there is no clear sign of an increase in poverty (absolute or relative) for non-pensioners in 2013–14 may look somewhat surprising in the context of a number of real working-age benefit cuts in that year – and projections by IFS researchers, published earlier this year, which suggested a rise in poverty, driven by those cuts.⁴⁰

Table 4.1 shows growth in nominal entitlements to state support for some example family types, excluding housing benefit and council tax support (which depend on detailed combinations of circumstances). It highlights some real increases to benefits during the recession between 2007–08 and 2009–10; a significant real increase in the child element of child tax credit in April 2011; and the fact that inflation fell rapidly in late 2012 and early 2013, meaning that the 5.2% nominal rise in many benefits in April 2012 was actually a substantial real increase.⁴¹ Looking at 2013–14, the 1% uprating of most working-age benefits, and other discretionary real cuts such as a nominal freeze in child benefit and elements of working tax credit, are also clearly evident. The entitlement of a workless couple with three children grew by only 0.9% in nominal terms. For a

⁴⁰ Cribb, Hood and Joyce, 2015.

⁴¹ Note also that benefit receipt will pick up some rises in housing benefit that were simply triggered by rises in rents, leaving recipients no better off overall.

lone parent with one child working part time, this growth was just 0.6%. Meanwhile, CPI inflation between 2012–13 and 2013–14 was 2.2%. In addition, many families receiving housing benefit and council tax support saw real cuts to those entitlements. The nominal value of pensioners' means-tested benefits also grew more slowly than inflation, but faster than those for working-age family types, while the basic state pension actually increased slightly in real terms.

Year-on-year changes in these benefit entitlements have previously been shown to correlate very strongly with poverty trends, at least for families with children⁴² – which is not surprising, as the majority of household income for those around the poverty line comes from state benefits. Nonetheless, absolute poverty in the HBAI data actually fell slightly in 2013–14. In the next short subsection, we briefly discuss further the discrepancy between poverty trends measured by HBAI between 2012–13 and 2013–14 and those projected by IFS researchers.

Comparing changes in poverty in 2013–14 with projections by IFS researchers

The changes in both absolute and relative income poverty according to the HBAI data between 2012–13 and 2013–14 are somewhat different from – and in particular, more favourable than – those projected by IFS researchers in February 2015 (which were for BHC poverty only). For brevity, we focus here just on the absolute poverty numbers. Cribb, Hood and Joyce (2015) projected that absolute BHC poverty would rise in 2013–14 by 0.4ppt overall and by 1.1ppt for children. This compares with small (and statistically insignificant) falls in absolute BHC poverty in the HBAI data, of 0.6ppt overall and 0.9ppt for children.⁴³

When seeking to understand discrepancies between the data and the projections, the first thing to emphasise is that the statistics are subject to a margin of error and are based on different samples of the household population each year. Year-on-year changes are rarely statistically significantly different from zero. Conversely, an unchanged poverty rate in the data could easily mean an increase or decrease in reality. The projections of trends in poverty in 2013–14 were produced by effectively modelling what happened to the incomes of the households sampled by HBAI in 2012–13, given known changes to tax and benefit policy and trends in employment and earnings recorded by the Labour Force Survey.

⁴² Joyce, 2015.

⁴³ Note that the projections in Cribb, Hood and Joyce (2015) used the RPIJ to uprate the absolute poverty line over time, whereas here we use a variant of the CPI. This means that the poverty lines are slightly different in each case, but it will make a negligible difference to the changes recorded in 2013–14 – the two indices both recorded a 2.2% rate of inflation in 2013–14.

Table 4.1. Growth in nominal entitlements to state support for example family types (%)

	Couple, 3 children, no work	Lone parent, 1 child, no work	Lone parent, 1 child, part-time work	Single person on jobseeker's allowance	Basic state pension (single)	Single pensioner entitled to means- tested benefits	Couple pensioner entitled to means- tested benefits	CPI (BHC)	CPI (AHC)	Relative poverty line (BHC)	Relative poverty line (AHC)
Total change (%)											
1996–97 to 2013–14	142.1	93.2	109.7	49.7	80.1	122.6	117.0	44.3	42.0	85.6	84.8
2007–08 to 2013–14	29.8	25.6	21.4	21.2	26.2	21.4	21.7	16.3	20.5	15.9	17.3
Annualised growth rates (%)											
1996–97 to 2004–05	6.9	4.5	5.8	1.9	3.4	6.3	5.9	1.6	1.2	4.5	4.5
2004–05 to 2007–08	3.1	2.7	3.2	2.1	3.1	4.0	4.0	3.0	2.2	4.0	3.4
2007–08	3.6	3.3	3.7	3.0	3.6	4.2	4.3	3.3	2.1	4.1	3.2
2008–09	7.0	5.4	6.2	2.3	3.9	4.8	4.6	2.7	3.8	3.8	3.2
2009–10	6.4	6.1	5.5	6.3	5.0	4.6	4.7	0.0	2.3	1.0	3.6
2010–11	2.2	2.0	1.9	1.8	2.5	1.9	1.9	3.6	3.6	2.0	1.6
2011–12	6.1	5.0	4.1	3.1	4.6	2.8	3.1	4.2	4.4	2.1	2.0
2012–13	4.3	4.1	1.7	5.2	5.2	3.8	3.8	2.6	2.6	3.1	2.5
2013–14	0.9	0.8	0.6	1.0	2.5	1.8	1.9	2.2	2.3	3.0	3.3
2014–15	1.0	1.0	1.0	1.0	2.7	2.0	2.0	1.0%	0.9%	n/a	n/a
2015–16	1.0	0.9	1.0	1.0	2.5	1.9	1.9	n/a	n/a	n/a	n/a

Note: The table shows annual changes in maximum entitlements to benefits for various family types with no private income (except the working lone parent, who is assumed to earn an amount that is below the personal income tax allowance and the primary threshold for National Insurance contributions), ignoring housing benefit and council tax benefit/support and the value of free school meals for families with children. 'CPI (BHC)' and 'CPI (AHC)' are not available for 2015–16 because forecasts for these measures of inflation do not exist. For further details, contact the authors.

Source: Authors' calculations.

Hence the projections could be ‘wrong’ simply because there are random differences between the households sampled by HBAI in 2012–13 and 2013–14. This is a general limitation of household survey data rather than a specific criticism of HBAI (or the projections).

Looking at some of the details of what the data show in 2013–14, there are a few notable features. First, as was shown in Figure 2.5, the increase in employment in the Family Resources Survey data underlying HBAI was larger than that seen in the Labour Force Survey (and therefore larger than that used in the projections). This may simply be unwinding a discrepancy that occurred in 2012–13, when the employment rate fell according to the HBAI data but rose according to the LFS. The LFS would typically be considered the more reliable source of information on employment rates, primarily because of its larger sample size. The decompositions presented in Tables C.2 to C.5 in Appendix C show that changes in family employment patterns in 2013–14 acted to reduce absolute poverty, both overall and for children specifically. These effects may well have been smaller if HBAI had recorded the same employment trends as the LFS.

Another couple of points are particularly relevant for child poverty (see Tables C.3 and C.5 in Appendix C). Falling poverty among children of workless lone parents and self-employed couples acted to reduce absolute child poverty (both BHC and AHC) by a total of about 1ppt between 2012–13 and 2013–14. The apparent reduction in poverty in workless lone-parent families looks like it may be due to random sampling variation. These families get a large majority of their income from state benefits. Of the benefits that they are entitled to, none of the rates increased in real terms, and almost all of them – including child tax credit, child benefit, jobseeker’s allowance and income support – fell in real terms in 2013–14; but the HBAI data record a real rise in their average benefit income of 5% and a fall in their absolute poverty rate.

The projections in Cribb, Hood and Joyce (2015) simply assumed that self-employment incomes grew in line with average employee earnings, due to the lack of alternative data sources on trends in self-employment incomes. It is difficult to tell whether the recorded reduction in poverty among children of self-employed parents in 2013–14 reflects a real phenomenon. It is possible that the HBAI data have picked up an important trend here, but self-employment income can be volatile and it is effectively measured with a lag.⁴⁴ It would certainly not be wise to place much weight on year-to-year changes in it.

The main conclusion from all this is one that we emphasise in this report each year. The HBAI data – and projections of future releases of HBAI data – are most reliable as guides to broad trends measured over a number of years. It is rare that we can draw confident conclusions from trends measured over a single year.

⁴⁴ Income is reported for the last available accounting period, and then updated in line with average employee earnings growth between the accounting period and the relevant survey year according to the Average Weekly Earnings index.

4.2 Family work status and poverty (working-age only)

In this section, we seek to shed light on the broad trends in poverty seen in recent years. Focusing on working-age families, we examine how changes in poverty are the product of labour market trends and the changing relationship between work status and poverty. Some of this analysis is of particular relevance given the Conservative government's announcement, shortly before this report was finalised, that it will introduce legislation to track the proportion of children living in workless households (and long-term workless households) as part of a new suite of measures. We reflect on this at the end of the section.

In Figure 2.5, we showed recent trends in the individual employment rate, which is perhaps the most commonly cited of all labour market statistics. However, it can be important to make the distinction between workless individuals and workless families or households – particularly when looking at poverty, as it is workless families who tend to have the lowest incomes. Previous work by Gregg and Wadsworth (2008) has shown that, between 1977 and 2006, there was little discernible underlying trend in the individual employment rate (movements were explained primarily by swings in the economic cycle), but nevertheless the proportion of households without anyone in work doubled. In this section, we look at more recent trends in worklessness among working-age families (rather than households)⁴⁵ and how they relate to changes in poverty.

Table 4.2 starts by showing how the proportion of individuals in the UK living in a workless family has changed since 2002–03 (excluding families containing a pensioner). The proportion living in a family with no one in work increased during the recession, from 17.1% in 2007–08 to 18.5% in 2009–10. This increase was notably more concentrated amongst families without dependent children (an increase of 2.7ppt) than amongst those with children (0.3ppt). By 2013–14, though, this increase had been unwound, with particularly large falls in worklessness among families with children between 2009–10 and 2013–14.

The recent falls in the prevalence of workless families if anything look slightly larger than we would expect from trends in individual employment alone. The working-age employment rate fell from 72.8% in 2007–08 to 70.6% in 2009–10 and rose to 71.9% by 2013–14 – still below its pre-crisis level; meanwhile, the proportion of individuals in a workless family (among working-age families) was essentially back at its pre-crisis level. A likely contributing factor is strong rises in lone-parent employment, partly as a result of the extension of job-search requirements to more non-working lone parents.⁴⁶

⁴⁵ We focus on the work patterns of *families* rather than *households*, as the existence of multi-family households would otherwise make some of the analysis below harder to interpret. Trends among workless households and families are very similar. For more details on the household measure, see Office for National Statistics (2014).

⁴⁶ Avram, Brewer and Salvatori, 2013.

Table 4.2. Proportion of individuals in a workless family, by family type

	Workless (%)	One in work, one out of work (%)	All in work (%)
All working-age families			
2002–03	17.1	18.2	64.7
2007–08	17.1	18.4	64.5
2009–10	18.5	18.4	63.1
2013–14	16.9	17.6	65.5
Families with children			
2002–03	15.2	23.8	61.0
2007–08	15.3	24.2	60.4
2009–10	15.6	23.6	60.8
2013–14	13.7	23.3	63.1
Working-age non-parents			
2002–03	19.2	11.8	69.0
2007–08	19.1	11.8	69.1
2009–10	21.8	12.5	65.7
2013–14	20.6	11.0	68.3

Source: Authors' calculations using the Family Resources Survey, various years.

Overall, family worklessness in 2013–14 remained higher than before the recession within childless families, but lower than before the recession within families with children. Much of this is probably to do with the relative ages of parents and non-parents, as employment trends have differed by age (as discussed further below).

Table 4.3. Decomposition of change in family worklessness rate between 2009–10 and 2013–14, by family type

	Memo: % in workless family in 2007–08	Proportion in workless family (%)		Proportion of working-age population (%)		Compositional effect (ppt)	Incidence effect (ppt)
		2009–10	2013–14	2009–10	2013–14		
Single adults							
No children	30.5	36.0	33.4	21.2	22.1	0.2	–0.6
With children	47.9	47.5	43.4	10.1	9.9	–0.1	–0.4
Couples							
No children	9.9	9.9	9.1	25.1	24.5	0.0	–0.2
With children	7.7	8.5	6.9	43.6	43.5	0.0	–0.6
All	17.1	18.5	16.9	100	100	0.2	–1.7

Note: Compositional and incidence effects may not sum to totals due to rounding.

Source: Authors' calculations using the Family Resources Survey, various years.

Table 4.4. Decomposition of change in family worklessness rate between 2009–10 and 2013–14, by age

	Memo: % in workless family in 2007–08	Proportion in workless family (%)		Proportion of working-age population (%)		Compositional effect (ppt)	Incidence effect (ppt)
		2009–10	2013–14	2009–10	2013–14		
Single adults							
30 and under	36.4	42.6	38.5	14.6	14.7	0.0	–0.6
31 to 49	33.3	35.4	32.1	12.2	11.7	–0.1	–0.4
50 plus	42.9	41.9	40.6	4.5	5.7	0.3	–0.1
Couples							
30 and under	8.3	10.3	9.4	8.4	8.1	0.0	–0.1
31 to 49	5.5	6.3	4.5	40.2	38.5	0.2	–0.7
50 plus	14.8	13.2	12.8	20.1	21.4	–0.1	–0.1
All	17.1	18.5	16.9	100	100	0.4	–1.9

Note: Age is determined by the age of the oldest adult in the family. Compositional and incidence effects may not sum to totals due to rounding.

Source: Authors' calculations using the Family Resources Survey, various years.

Table 4.3 provides a little more detail. It groups working-age families according to the number of adults as well as by whether or not they have dependent children. It also decomposes the fall in family worklessness since 2009–10 into the components explained by changes within family types ('incidence effects') and changes in the relative proportions of individuals living in each family type ('compositional effects').

The table shows that rates of family worklessness have fallen since 2009–10 within both single-adult and couple families, with and without children. It also shows that single adults without children are the only group whose worklessness rate in 2013–14 remained above pre-recession (2007–08) levels, while in contrast lone parents did not even see a rise in worklessness during the recession between 2007–08 and 2009–10. Finally, the table confirms that the fall in overall family worklessness since 2009–10 has been driven entirely by changes within these family types (incidence effects) rather than by demographic shifts captured in the compositional effects.

Table 4.4 performs the same analysis but looking instead at demographic groups determined by the age of the oldest member of the family. The ageing population has, if anything, pushed worklessness rates up, so again it is within-group changes, as captured by the incidence effects, which explain falls in worklessness since 2009–10 – most significantly within 31- to 49-year-old couple families and young single adults. However, families headed by young adults remained the only group with a higher family worklessness rate than before the recession in 2007–08.

How do changes in family worklessness map onto the actual changes in poverty in working-age families seen over the past few years? In the previous section, we

showed that absolute AHC poverty has been broadly flat of late. However, the decomposition presented in Table 4.5 shows that, in the case of child poverty, this masks important and offsetting factors. The number of children living in workless families fell from 18.3% in 2009–10 to 16.3% in 2013–14 and this has acted to reduce child poverty by more than 1ppt since 2009–10.⁴⁷ In addition, the poverty rate in workless lone-parent families was lower in 2013–14 than in 2009–10 (Table 4.1 showed that they saw some real benefit increases in 2011–12 and 2012–13). Almost perfectly offsetting these effects have been increases in rates of poverty among working families with children, particularly in couples with one full-time earner. The child poverty rate in working families rose from 18.8% in 2009–10 to 21.5% in 2013–14, which has acted to increase the child poverty rate by at least 2ppt since 2009–10. It is worth noting that, for some of the working family types in the table, these rising poverty risks have just meant a return to the kind of poverty rates seen before the recession in 2007–08. That is because their poverty rates fell between 2007–08 and 2009–10, when real pay was still relatively stable and before any cuts to in-work benefits.

Table 4.5. Decomposition of the change in absolute AHC child poverty between 2009–10 and 2013–14, by family type and work status

	Memo: child poverty rate (%) in 2007–08	Child poverty rate (%)		Proportion of child population (%)		Compositional effect (ppt)	Incidence effect (ppt)
		2009–10	2013–14	2009–10	2013–14		
Lone parents							
Full-time	20.1	17.0	20.7	5.7	6.0	0.0	0.2
Part-time	35.3	23.7	33.1	6.1	7.0	0.0	0.6
Workless	75.2	69.0	59.2	11.4	10.6	–0.3	–1.1
Couples							
Self-employed	30.9	28.6	28.9	11.6	12.2	0.0	0.0
Both full-time	5.7	4.6	5.2	15.8	17.0	–0.3	0.1
One full-time, one part-time	8.1	7.1	9.0	20.8	20.9	0.0	0.4
One full-time, one not working	31.0	26.9	34.5	16.9	16.3	0.0	1.3
One or two part-time	62.4	61.6	57.5	4.7	4.3	–0.1	–0.2
Workless	78.1	75.3	76.5	6.9	5.7	–0.6	0.1
All	31.0	28.5	28.6	100	100	–1.3	1.4

Note: The child poverty rate is calculated as the proportion of children living in a household with an income after housing costs of less than 60% of the 2010–11 median income. Compositional and incidence effects may not sum to totals due to rounding.

Source: Authors' calculations using the Family Resources Survey, various years.

⁴⁷ The sum of the compositional effects in Table 4.5 is –1.3ppt. This includes the impact of a small increase in the relative prevalence of lone-parent families, which would actually have acted to increase child poverty; so it is fair to say that changes in family work status alone (holding family type constant) would have acted to reduce child poverty by at least 1.3ppt.

Table 4.6. Decomposition of the change in absolute AHC working-age non-parent poverty between 2009–10 and 2013–14, by family type and work status

	Memo: working-age non-parent poverty rate (%) in 2007–08	Working-age non-parent poverty rate (%)		Proportion of working-age non-parent population (%)		Compositional effect (ppt)	Incidence effect (ppt)
		2009–10	2013–14	2009–10	2013–14		
Single adults							
Full-time	9.2	9.8	11.6	23.6	25.3	–0.1	0.4
Part-time	28.0	27.2	28.1	5.7	6.2	0.0	0.1
Workless	51.2	51.1	51.7	16.5	15.8	–0.2	0.1
Couples							
Self-employed	16.8	16.0	17.5	7.2	8.2	0.0	0.1
Both full-time	2.6	2.0	1.8	21.2	20.8	0.1	0.0
One full-time, one part-time	5.2	5.1	4.7	8.1	7.9	0.0	0.0
One full-time, one not working	14.0	18.2	17.0	8.5	7.4	0.0	–0.1
One or two part-time	27.5	22.0	25.2	3.9	3.4	0.0	0.1
Workless	43.0	42.5	43.3	5.3	4.8	–0.1	0.0
All	17.6	19.0	19.3	100	100	–0.4	0.7

Note: The working-age non-parent poverty rate is calculated as the proportion of working-age non-parents living in a household with an income after housing costs of less than 60% of the 2010–11 median income. Compositional and incidence effects may not sum to totals due to rounding.

Source: Authors' calculations using the Family Resources Survey, various years.

Table 4.6 presents the same analysis for poverty among working-age adults without children. It shows a similar qualitative story, though with movements that are considerably smaller in magnitude: since 2009–10, employment trends – particularly falls in the number of workless families – have acted to reduce poverty (by 0.4ppt in total), while rises in poverty rates among working families have acted to increase it.

In summary, employment trends have been playing an important role in reducing poverty in recent years. This is particularly true of the reduction in the proportion of individuals living in workless families, and particularly for families with children. These positive impacts on poverty are, however, masked by rises in rates of poverty among working families, meaning that the overall figures show very little change. To a large extent, this reflects the wider features of the labour market since the recession: remarkably robust employment on the one hand, but very weak earnings trends for those in work on the other.

The government has recently announced that it will introduce legislation to track the proportion of children living in workless households, as well as measures of educational attainment, as part of what it describes as a new approach to tracking poverty and children's life chances.⁴⁸ The analysis here underlines that family worklessness certainly is a sensible thing to track if one wants to reduce the prevalence of low living standards. Workless families are far more likely to be in poverty, and reductions in the number of such families recently have played an important role in keeping poverty down. The analysis also highlights, though, that in-work absolute (AHC) poverty has risen between 2009–10 and 2013–14. Hence, trends in the risk of poverty among those families who are in work will continue to be very important too. If the aim is to track key causes of low living standards, the earnings of working families (and their determinants) would be another sensible thing to look at.

In the next section, we explore in more detail how trends in both earnings and in-work benefits have been affecting the incomes of low-earning working families.

4.3 Earnings and benefits for low-earning working families

We now seek to understand better the recent increases in absolute poverty among working families highlighted in the previous section, looking explicitly at the key components of net income for low-earning families. In particular, because low-earning families on average get a significant proportion of their income from in-work benefits, we look to disentangle the roles of earnings and benefits changes for this group. As in the previous section, all the analysis here is restricted to individuals below the state pension age.

At the core of this section is a series of comparisons of different outcomes for families with different levels of earnings. We measure family earnings here by taking gross (pre-tax) income from employee earnings and self-employment and, in the case of couples, adding this up across both adults. For ease of exposition, we call this measure 'gross family earnings'. We focus on family-level earnings because that is more relevant than individual earnings for the measures of income and poverty used in this report. It means that, for the purposes of this analysis, a one-earner family is treated as equivalent to a two-earner couple with the same total amount of pre-tax earnings. In reality, there may be systematic differences between those one-earner and two-earner families, including the total amount of income tax and National Insurance they pay and potentially their childcare and travel-to-work costs.

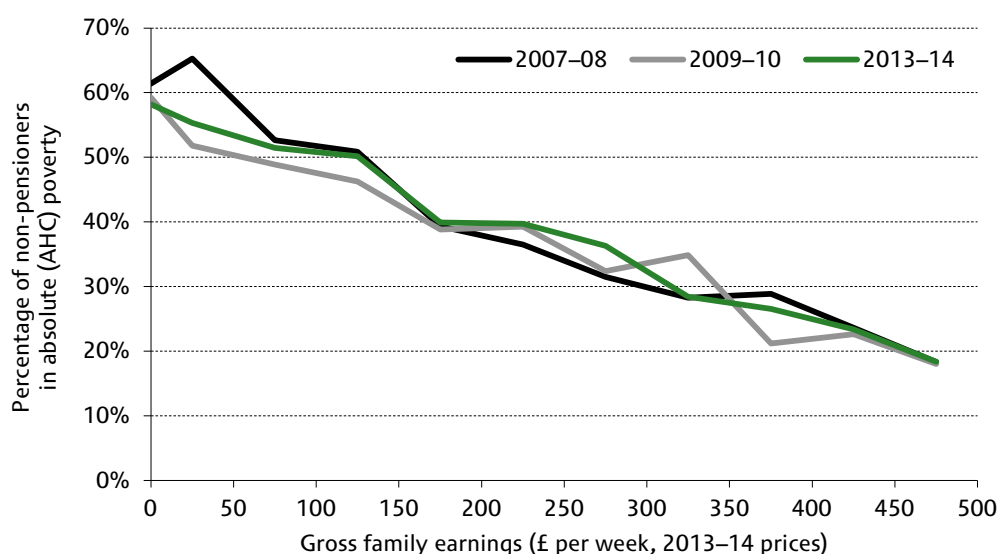
Note also that, for ease of interpretation, we do not equalise these family earnings (unlike the household income measures used hitherto in this report). Because we are interested here in poverty, we focus upon the lower end of the

⁴⁸ See <https://www.gov.uk/government/news/government-to-strengthen-child-poverty-measure>.

gross family earnings distribution – up to £500 per week in 2013–14 prices. We group working families into £50 bands of gross earnings. We should be more careful in drawing strong conclusions about trends at the very bottom of the distribution, because there are relatively few families at the very lowest earnings levels.

Figure 4.3 shows the absolute (AHC) poverty rates of non-pensioners living in families with different levels of earnings, in 2007–08, 2009–10 and 2013–14. This highlights a few things. First, poverty risk unsurprisingly declines with the level of family earnings, and it does so in a fairly smooth way over this range of earnings. Second, at a given level of low family earnings, there are nevertheless substantial proportions of families both in poverty and not in poverty. This reflects important variation in other circumstances across families, such as the number of dependent children (accounted for through equivalisation when calculating poverty status) and, given the AHC measure, housing costs. Third, there has been little discernible change since the recession in the poverty risk faced by low-earning working families *with a given level of earnings*.

Figure 4.3. Absolute poverty rate (AHC) for non-pensioner families with different levels of gross family earnings



Note: Each point refers to the proportion of non-pensioners who are in absolute (AHC) poverty for those who live in families with a gross employment income in each £50 band of employment income, with the exception of the point at £0, which contains those with zero or negative family employment income.

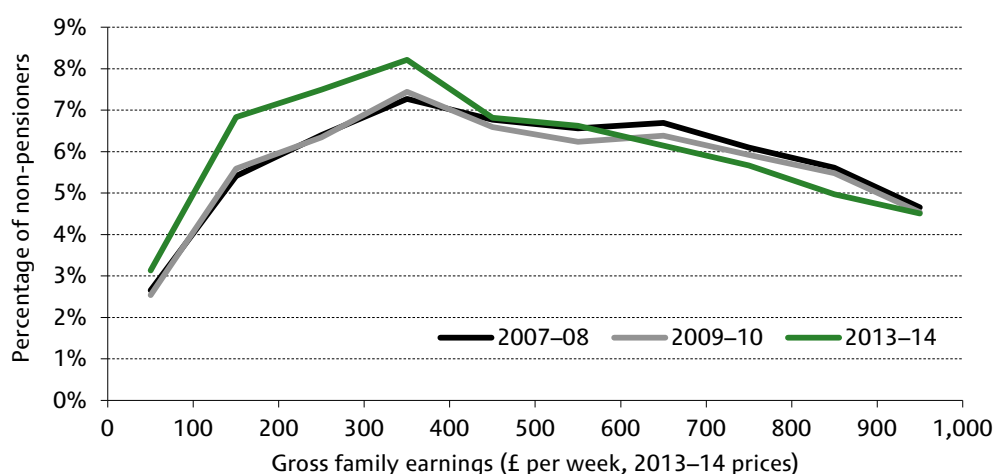
Source: Authors' calculations using the Family Resources Survey, various years

This suggests that the dominant explanation for the rise in in-work poverty seen since 2009–10 has been falling earnings: as Figure 4.4 confirms explicitly, a greater proportion of families now have low levels of earnings and, as a result, higher risks of poverty. There has been a particularly large increase in the prevalence of families with less than £400 per week of gross earnings (which is

around two-thirds of median family earnings⁴⁹ in 2013–14). The proportion of people living in working families that earn less than £400 per week before tax increased from 22% in 2007–08 and 2009–10 to 26% in 2013–14.

Table 4.7 provides a summary of movements in family earnings levels within the bottom half of the earnings distribution (ignoring ‘zeros’, i.e. looking at in-work families only). Between 2007–08 and 2013–14, real family earnings fell by 13% at the 10th percentile, 12% at the 20th percentile and 9% at the median. Most of these falls occurred after 2009–10.

Figure 4.4. Proportion of non-pensioners living in families with different levels of gross family earnings



Note: Each point refers to the proportion of non-pensioners who live in families with a gross employment income in each £100 band. The proportion who live in families with zero (or negative) employment income, and those with earnings of £1,000 or greater, are not reported in this graph.

Source: Authors' calculations using the Family Resources Survey, various years.

Table 4.7. Changes in gross family employment income for non-pensioners

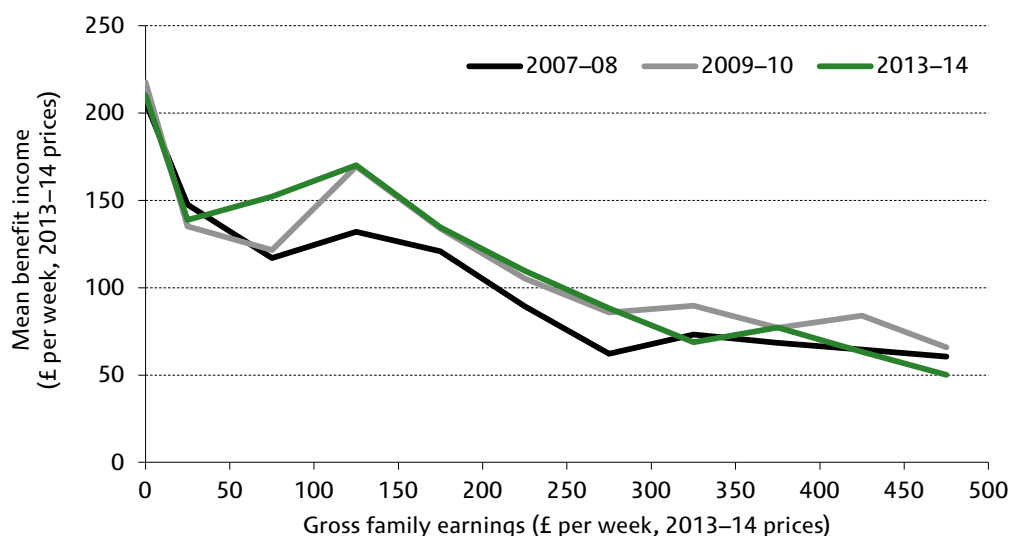
	<i>Percentile of gross family earnings distribution (£ per week, 2013–14 prices)</i>		
	10th percentile	20th percentile	50th percentile
2007–08	203	327	688
2009–10	197	323	687
2013–14	176	289	629
Change from:			
2007–08 to 2009–10	–3.1%	–1.0%	–0.1%
2009–10 to 2013–14	–10.6%	–10.7%	–8.6%
2007–08 to 2013–14	–13.4%	–11.6%	–8.6%

Note: Excludes non-working families.

Source: Authors' calculations using the Family Resources Survey, various years.

⁴⁹ Excluding families with no earnings.

Figure 4.5. Mean benefit and tax credit income for families with different levels of gross family earnings



Note: Each point refers to the mean level of benefit and tax credit income of non-pensioners who live in families with a gross employment income in each £50 band of employment income, with the exception of the point at £0, which contains those with zero or negative family employment income. Council tax benefit is excluded from the calculations due to the introduction of localised council tax support in 2013-14.

Source: Authors' calculations using the Family Resources Survey, various years.

What about the role of in-work benefits and tax credits for low-earning working families? These have been becoming increasingly important features of the welfare system, particularly because of the growth of tax credits since the late 1990s and, more recently, the growing number of working claimants of housing benefit. Hence they are likely to be far more important for understanding income trends around the most recent recession than around any previous one.

Figure 4.5 shows average levels of benefit and tax credit receipt at different levels of family earnings, for the same three recent years as before. It reveals a number of things. First, levels of benefit receipt for low-earning families tend to decline as earnings grow, because the vast majority of working-age benefits spending is means-tested. This means that in-work benefits can partially insure working families against falls in earnings. Second, the amounts of benefit income received by working families with low earnings are significant. In 2013-14, average benefit income for families earning between £100 and £150 per week was £170. Even for families earning between £250 and £300 per week, average benefit income was around £88. This highlights clearly the point made in Chapter 3 when looking at changes in inequality among working families: those with lower incomes tend to get larger shares of their total income from benefits – hence, when earnings fall, they are affected proportionately less, and so income inequality between working households will tend to fall.

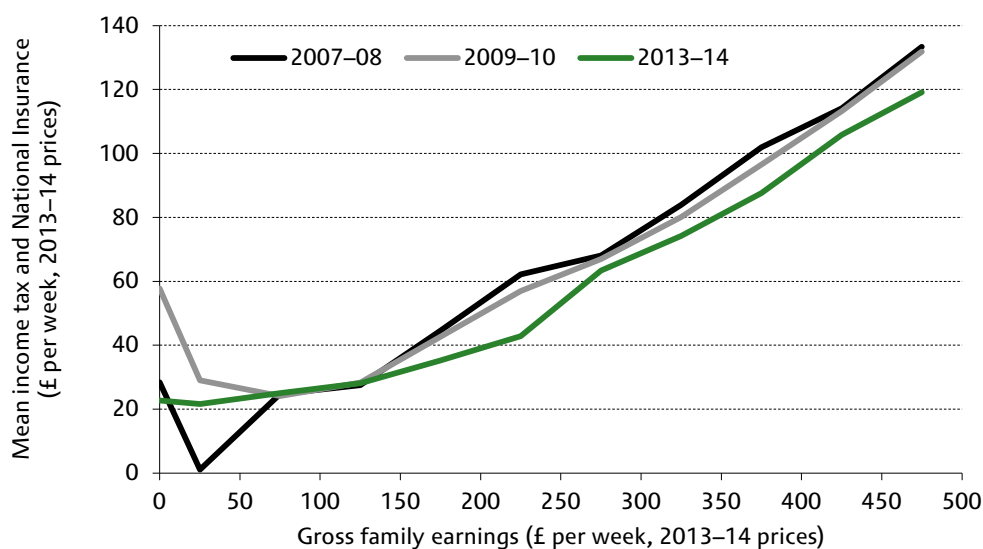
Third, compared with before the recession in 2007-08, average levels of benefit receipt at given earnings levels were actually a little higher in real terms in 2013-14 over the range of family earnings between about £50 and £300 per week. This

was driven by changes during the recession, between 2007–08 and 2009–10, when real benefit levels tended to increase. Since then, there has been little change in average benefit receipts at specific earnings levels. This might come as a surprise, given that a number of discretionary cuts to benefits had been implemented by 2013–14 as part of the post-recession fiscal consolidation. Explanations include a significant real increase in the child element of child tax credit in April 2011, and the fact that inflation fell rapidly in late 2012 and early 2013, meaning that the 5.2% nominal rise in most benefits in April 2012 was actually a substantial real increase (see Table 4.1).⁵⁰

This relative stability in real benefit incomes for low-earning working families is consistent with the lack of movement in absolute poverty rates at given earnings levels shown in Figure 4.3. It further highlights that falling earnings have been the key reason for rising absolute poverty since 2009–10.

Although not as important as benefits quantitatively, falls in taxes paid on earnings – likely driven by increases in the income tax personal allowance since 2010–11 – have also helped to support the incomes of low-earning families (as well as, to an even greater extent, the incomes of much higher-earning families, hence the large cost to the exchequer of the increases in the personal allowance). This is shown by Figure 4.6 (note the smaller scale). There is a pattern of lower taxes being paid on a given level of family earnings in 2013–14 than in 2009–10, at least for those with earnings of more than about £150 per week.

Figure 4.6. Mean income tax and National Insurance payments for families with different levels of gross family earnings



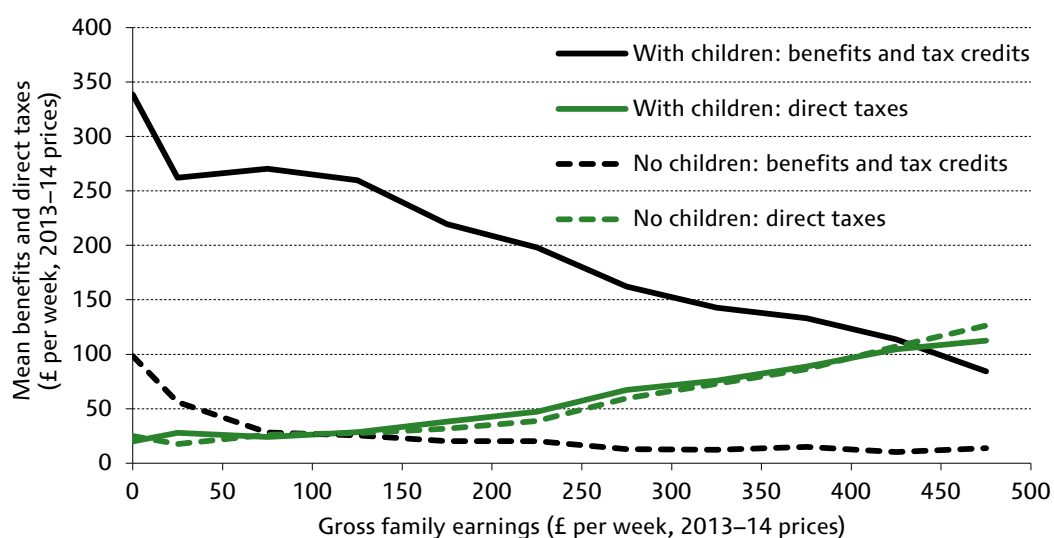
Note: Each point refers to the mean level of income tax and National Insurance payments by non-pensioners who live in families with a gross employment income in each £50 band of employment income, with the exception of the point at £0, which contains those with zero or negative family employment income.

Source: Authors' calculations using the Family Resources Survey, various years.

⁵⁰ Note also that benefit receipt will pick up some rises in housing benefit that are simply triggered by rises in rents, leaving recipients no better off overall.

Finally, it is important to note that the role of the tax and benefit system can vary hugely depending on family circumstances. Most obvious, perhaps, is the difference in benefit entitlements between families with and without children. Figure 4.7 illustrates this. For example, in 2013–14, families with children earning between £100 and £150 per week received an average of £260 per week in benefits and tax credits (i.e. the majority of their total income). This compares with £26 per week for working-age families without children in the same earnings range. To a large extent, this is driven by child tax credit and child benefit. Of course, families with children have not only higher benefit entitlements than families without children on the same level of (unequalised) earnings, but also higher costs – indeed, that is one of the obvious rationales for their higher benefit entitlements, and it is accounted for when measuring poverty by equivalising their incomes.

Figure 4.7. Mean benefits and direct taxes with different levels of gross family earnings, for families with and without children, in 2013–14



Note: Each point refers to the mean level of benefit income and direct taxes (income tax and National Insurance) for non-pensioners who live in families with a gross employment income in each £50 band, with the exception of the point at £0, which contains those with zero or negative family employment income. The data are also split by whether the family has a child. Council tax benefit is excluded from the calculations due to the introduction of localised council tax support in 2013–14.

Source: Authors' calculations using the Family Resources Survey, various years.

In summary, benefits and tax credits are a very important source of income supporting the incomes of low-income working families, as well as those who are in workless households. This is particularly true for families with children. However, increases in absolute poverty since the recession among working families (as shown in Section 4.2) have not been driven primarily by in-work benefits policy, but instead by falls in real earnings.

4.4 Prospects for income poverty

In 2014–15, which the next release of HBAI data will cover, most working-age benefits were again increased in cash terms by 1%. As discussed in Chapter 2, this was originally expected to mean a real fall in those benefit rates. However, falling food and fuel prices have since suppressed inflation: in 2014–15, headline CPI inflation averaged 1%, meaning that working-age benefit rates roughly maintained their value in real terms; and as shown in Table 4.1, pensioner benefit rates actually rose in real terms. Meanwhile, the employment rate continued to rise, nominal mean earnings of employees (according to the Average Weekly Earnings index) rose by 1.4%, and the minimum wage rose by 3.0% in October 2014.

It therefore seems likely that absolute poverty will have been stable, or if anything fallen slightly, in 2014–15. The outlook for relative poverty looks slightly less favourable, as the labour market recovery probably meant further real growth in median income. Using information available as of February 2015, Cribb, Hood and Joyce (2015) projected an increase in real median income, a small fall in overall absolute poverty of 0.4ppts⁵¹ and essentially no change in relative poverty (all BHC).

On the other hand, as discussed in Section 4.1, with survey data, which take a sample from the population, trends measured in any one year of data can easily confound expectations. One potential reason why poverty trends looked more favourable than expected in 2013–14 is that the HBAI data are subject to sampling error. For example, average benefit receipt among workless lone parents rose substantially in real terms in 2013–14 in HBAI, even though none of the benefit rates relevant to this group rose in real terms (and almost all were in fact cut). If it turns out that the 2013–14 data painted an overly positive picture for the incomes of low-income households, then measured trends in 2014–15 would be likely to look worse than in reality. It is the broader trends measured over a number of years to which these data provide the most reliable guide.

Looking further ahead, planned benefit cuts over this parliament will hit low-income working-age households hardest, and will therefore tend to put upwards pressure on absolute income poverty – including in-work poverty. Overall, those cuts are also larger in scale than the gains to those with low hourly wages from the ‘National Living Wage’ policy announced by the government in the recent Budget (see Section 3.3) – and losses from benefit cuts are more focused on low-income households than gains from a higher minimum wage, because means-tested benefit entitlements are calculated based on family income.⁵² Further

⁵¹ The absolute poverty projections (and those for median income) in Cribb, Hood and Joyce (2015) used the RPIJ to adjust for inflation, not a CPI-based index as used in this report (though the two currently give very similar measures of inflation). This does not affect the measurement of relative poverty.

⁵² Hood, 2015.

increases in employment and real earnings may be important in helping to mitigate this, though they may also make relative poverty trends look less favourable by resulting in income growth for middle-income households.

Poverty trends may continue to be more favourable for pensioners than for other groups. Pensioners are, for the most part, not being affected by benefit cuts and are experiencing rising levels of employment and private pension income. In light of these factors, projections by IFS researchers suggested that absolute poverty for those aged 65 and over is likely to decline slowly from 2014 onwards.⁵³

4.5 Conclusion

Using the latest release of HBAI data, 13.6 million individuals (21.6% of the population) in the UK were classified as being in absolute income poverty in 2013–14, with income measured after deducting housing costs (AHC). This represents a small fall since 2012–13, of about 300,000 individuals (0.5ppt). That may come as something of a surprise given real cuts to working-age benefits in that year, which had caused IFS researchers to project a rise in poverty in 2013–14. We have highlighted some reasons why, as ever, limited weight should be placed on one year of data.

Instead, it is the broader trends measured over a number of years which are most reliable and which paint the clearest picture. Looking at those, stability in overall rates of absolute poverty over the past few years masks two offsetting factors, which essentially reflect the wider story of the labour market since the recession: robust employment and weak earnings.

First, our analysis shows that rising employment, and in particular falling numbers of workless families, have been important factors in preventing absolute poverty rates from rising. This is particularly true for families with children: we estimate that employment trends acted to reduce absolute (AHC) child poverty by 1.3ppts between 2009–10 and 2013–14. The extent to which there remains scope for further large increases in employment could be an important determinant of poverty trends in the coming years.

Second, however, rates of income poverty among working families have been rising. These families – and particularly those with children – get substantial shares of their income from in-work benefits and tax credits, but rises in in-work poverty since 2009–10 have been driven primarily by falling real earnings. The proportion of non-pensioners living in a family that is in work but earning less than £400 per week (before tax) increased from 22% in both 2007–08 and 2009–10 to 26% in 2013–14. If more normal rates of real earnings growth return over the next few years, as forecasted by the Office for Budget Responsibility, we are likely to see more favourable trends in in-work poverty rates; and the recently-announced ‘National Living Wage’ policy, which looks set to mean a minimum

⁵³ Emmerson, Heald and Hood, 2014.

wage about 13% higher in 2020 than it would be if it rose simply in line with average hourly wages, will benefit many low-earning families. However, cuts to in-work benefits and tax credits over this parliament are likely to be larger in scale, on aggregate, than the gains to low earners from that higher minimum wage; and they are also more focused on low-income families than the gains from a higher minimum wage (which are focused on low-wage individuals).

Shortly before this report was finalised, the government announced that it would be abolishing the 2020 targets for absolute and relative income poverty among children, and instead will focus on a range of measures – including household worklessness and educational attainment – which it argues will allow for better targeting of the root causes of poverty or poor life chances. It was certainly a risk, as IFS researchers pointed out many times, that having relatively imminent targets for income poverty skewed incentives towards policies that have predictable and immediate impacts on incomes (such as tax and benefit changes) rather than other things which might be more powerful or cost effective at improving lives in the long term. There also seemed little value in retaining targets when it looked increasingly inconceivable that they could be met.

The HBAI statistics on income poverty will continue to be produced, but this does look like a significant change in emphasis regarding how the government intends to tackle child poverty. Essentially, the government does not want to target the proportion of children living in households with low income explicitly, but it wants to track measures that it believes to determine poverty in the long run. Whilst the devil will be in the detail, and in the policies that are actually used to bring about the desired improvements, the approach of focusing on a broad range of inputs into life chances and causes of poverty is sensible – as long as clear conceptual distinctions are made between low living standards per se, their causes and their consequences. It is also encouraging that the idea floated in a previous consultation to combine disparate indicators into a single ‘multidimensional’ index appears to have been dropped, as was urged by IFS researchers.⁵⁴

The analysis in this chapter has underlined that family worklessness certainly is a sensible thing to track if one wants to reduce the prevalence of low living standards. Workless families are far more likely to be in poverty, and reductions in the number of such families recently have played an important role in keeping poverty down. We have also highlighted, though, that in-work poverty has risen since 2009–10. Hence, trends in the risk of poverty among those families who are in work will continue to be very important too. Many of the same kinds of policies that might reduce family worklessness could also be effective in reducing the prevalence of low earnings among those in work (for example, education policy). Nevertheless, if the aim is to track key causes of low living standards, the earnings of working families (and their determinants) would be another sensible thing to look at.

⁵⁴ See Browne et al. (2013).

Finally, while tracking the *causes* of low living standards is sensible, it is important to also have the best possible *measures* of low living standards themselves. There are useful ways of complementing income-based measures in order to achieve that, and this is one of the subjects of the next chapter.

5. Arrears and Material Deprivation

Key findings

- The proportion of individuals whose family is in arrears on household bills rose in the pre-recession years, peaking at 9.9% in 2009–10; but it had fallen back to 8.4% in 2013–14, driven mostly by falling arrears within families with children. Rises in arrears up to 2009–10 were due to higher arrears on gas and electricity bills, and do not seem to be explained by the increase in redundancies during the recession. The reasons for the falls in arrears since 2009–10 are currently less clear.
- Nevertheless, two specific benefit cuts in 2013–14, which effectively gave low-income working-age families new bills to pay, do seem to have increased arrears on those bills. Council tax arrears among working-age recipients of council tax support (CTS) rose by 10 percentage points (ppt) in areas where the highest minimum council tax payments (exceeding 20%) were introduced after the localisation of CTS, but such arrears fell where no minimum payment was introduced. Rent arrears increased by 8ppt for working-age social tenants on housing benefit deemed to be ‘under-occupying’ and hence likely to be subject to the so-called ‘bedroom tax’; there was no statistically significant change in rent arrears for those not deemed to be under-occupying.
- The proportion of children measured as ‘materially deprived’, based on a set of questions answered by their parents about what they feel they can afford, rose from 22.3% in 2010–11 (when the current set of questions was introduced) to 23.5% in 2013–14. This was driven by rising deprivation rates in working families (particularly lone parents). It came on top of increases in child material deprivation in the late 2000s. These were obscured by falls in relative income poverty in official statistics, which report the number of children who are both materially deprived and in relative income poverty.
- The material deprivation measure provides strong evidence that looking only at current income can be inadequate when thinking about who is in ‘poverty’. Of those with low levels of current income, some groups – including social renters, lone parents and the disabled – seem to be much worse off than others – including owner-occupiers, the self-employed and those with some savings. For example, among families with children, social renters with AHC incomes at around the median have deprivation rates at least as high as those of the lowest-income owner-occupiers.
- The government’s recent announcement on a ‘new approach’ to tackling child poverty emphasised the importance of monitoring the causes of poverty. While it is sensible to consider the causes, it is also important to measure poverty itself as accurately as possible. To that end, indicators of material deprivation should remain as a valuable complement to income-based measures.

- The relationships between income poverty and these measures of low living standards or financial difficulties are far from straightforward, both conceptually and according to the data. For example, in recent years, arrears have fallen while absolute income poverty has been flat; and in the late 2000s, some large falls in income poverty among children were not accompanied by falls in material deprivation.

Most of the statistics that are used to measure the living standards of less well-off households are income-based – that is, individuals are assessed as being in poverty if they live in a household with a low level of income, where ‘low’ can be defined in a number of different ways. However, for some households, a snapshot measure of income may miss other important determinants of living standards or financial difficulties.

The short-term unemployed, students and the self-employed (whose incomes tend to be relatively volatile) are amongst those whose living standards we might expect to be less well proxied by their current income, given that their income in other periods may be (or have been) different and that they can save and borrow. Variation in the costs faced by different households can also impact living standards but can be difficult to account for fully in an income-based framework: for example, a greater need for transport in rural areas, formal childcare costs, or the costs of disability. Moreover, households who face shocks may run into financial difficulties even if they do not fall into income poverty, particularly if they face inflexible costs.

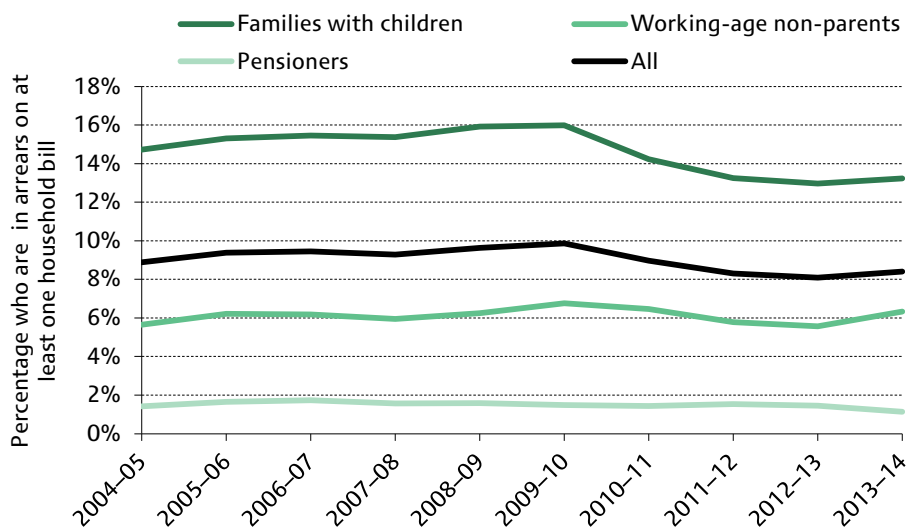
Since 2004–05, the Family Resources Survey (FRS) data have included some additional indicators that complement income-based poverty measures. First, there is a suite of questions on what goods and services families feel able to afford. If the number of goods that a family says it cannot afford is large enough (where each good is weighted according to the overall share of families who say they can afford it), that family is classified as ‘materially deprived’. Second, a different set of questions asks families whether they are in arrears on any of a number of household bills. This chapter complements the analysis of income-based measures of poverty in Chapter 4 with analysis of the recent trends in these non-income measures of low living standards or financial difficulties.

In Section 5.1, we look at trends in arrears on household bills, including whether specific cuts to benefits have had effects on the proportion of families who are in arrears on their council tax or rent. Section 5.2 looks at trends in material deprivation, and in particular at the rise in child material deprivation since the mid-2000s. Section 5.3 provides a broader discussion of the relationship between material deprivation and income, including analysis of what the data tell us about families’ priorities. Section 5.4 concludes.

5.1 Trends in arrears on household bills

The FRS asks families if they are behind on any of the following household bills: electricity, gas, other fuels, council tax (or rates in Northern Ireland), insurance policies, telephone, television rentals and other hire-purchase schemes.⁵⁵ Figure 5.1 sets out the proportion of individuals whose families are behind on at least one of those bills. Being in arrears is clearly much less prevalent than being in income poverty.

Figure 5.1. Percentage of individuals whose family is in arrears on a least one bill



Note: Percentage in arrears on at least one bill is calculated as a percentage of those who respond to questions on arrears. The bills used to calculate this are: electricity, gas, other fuels, council tax (or rates in Northern Ireland), insurance policies, telephone, television rentals and other hire-purchase schemes. Arrears on rent or mortgage are not included as questions on this have only been asked since 2012-13.

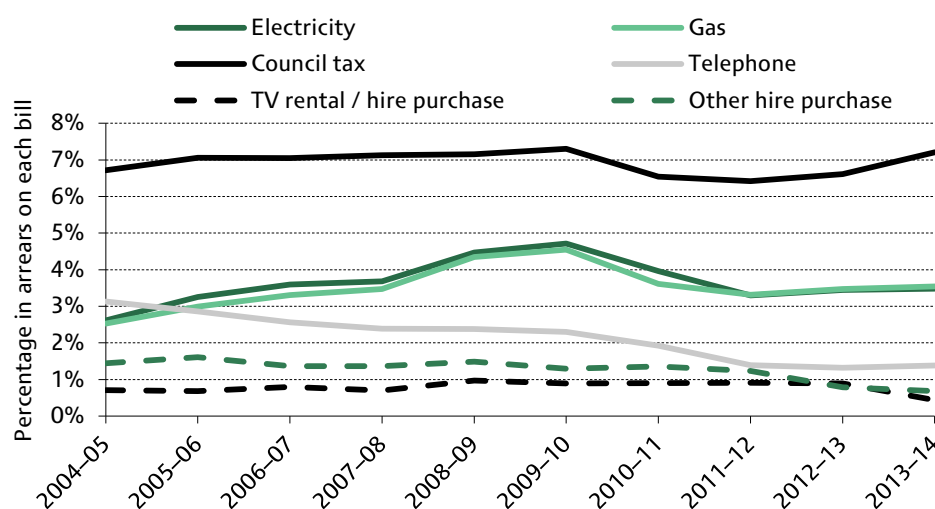
Source: Authors' calculations using the Family Resources Survey, various years.

In 2013-14, the rate of arrears (8.4%) was around one-third of the AHC absolute poverty rate (21.6%). One reason for this is that the proportion of pensioners who are in arrears is very low (at 1.1% in 2013-14), both compared with the absolute income poverty rate for pensioners (14.4% AHC) and compared with the rate of arrears for other family types. Non-pensioner families have much higher rates of arrears, particularly families with children. The probability of arrears also increases with the number of children and is higher for lone-parent families (not shown).

⁵⁵ Since 2012-13, the FRS has also included questions on being in arrears on rent and mortgage arrears. Because this means we have only two years of data on those arrears, we do not include them in our analysis here, although rent arrears for some renters are examined in Section 5.1. Overall, in 2013-14, 2.8% of individuals lived in families who were behind on their rent or mortgage, up slightly from 2.4% in 2012-13.

Turning to the evolution of rates of arrears over time, the pattern is one of a gentle upwards trend over the mid to late 2000s, followed by falls since 2009–10 (in particular between 2009–10 and 2011–12). In 2013–14, the 8.4% rate of arrears is statistically significantly below the recent peak of 9.9% in 2009–10. Indeed, it is lower than in all the years prior to the recession for which data are available from 2004–05 (although the 2013–14 level is not statistically different from the 2004–05 level). This is driven primarily by families with children, for whom the 2013–14 level is statistically significantly below the 2009–10 and 2004–05 levels. A similar qualitative pattern is evident for working-age adults without children, although the fall in arrears between 2009–10 and 2012–13 was smaller and the rise in 2013–14 was faster: the proportion of working-age adults without dependent children in arrears in 2013–14 was 6.3%, only just below the peak of 6.8% in 2009–10.

Figure 5.2. Percentage of non-pensioners in arrears on specific bills



Note: The other bills included in the FRS since 2004–05 are being behind on ‘other’ fuel bills and insurance bills. These are excluded due to their very low (less than 0.3%) and stable level. Arrears on rent or mortgage are not included, as questions on this have only been asked since 2012–13. Source: Authors’ calculations using the Family Resources Survey, various years.

Restricting our attention to non-pensioners, who account for the vast majority of arrears, Figure 5.2 splits out the trends in arrears on six specific bills.⁵⁶ It shows that:

- Rises in arrears before the recession were driven predominantly by increased arrears on gas and electricity bills. This may reflect some large rises in gas and electricity prices over that period. Sub-indices of the CPI show that there were two years of particularly rapid inflation in gas and electricity prices: 2006–07, where prices rose by 36.5% for gas and 25.0% for electricity, and

⁵⁶ The two that we exclude from this analysis are being in arrears on ‘other’ fuel and insurance bills. This is because of their very low and stable levels.

2008–09, with increases of 30.6% and 20.7% respectively. Since 2008–09, inflation in gas and electricity prices has been much lower.⁵⁷

- Between 2009–10 and 2011–12, there were falls in the prevalence of all of the most common types of arrears: council tax, electricity, gas and telephone bills. This suggests that the explanation may lie in something more general that was happening around that time.
- Finally, since 2011–12, there has generally been less movement in arrears – with the exception of council tax arrears, which have risen back to their previous peak (the next subsection looks in detail at a potential cause of this – cuts to council tax support in 2013–14).

Some (albeit imperfect) comparisons with other data sources help to verify these trends. Council tax collection rates in England rose from 97.1% in 2009–10 to 97.4% in 2012–13, before falling to 97.0% in 2013–14,⁵⁸ mirroring the fall and then rise in council tax arrears observed in HBAI. Ofgem does not publish consistent records of the number of energy customers in arrears back beyond 2012–13, but the number of households on a repayment plan for electricity debt (which may act as an imperfect proxy for the number actually in arrears⁵⁹) fell from almost 1.2 million in 2009Q2 to under 0.8 million in 2011Q4, before rising again to around 1.0 million in 2013 – again, trends that look similar to those in electricity arrears in HBAI. Repayments on gas debts also exhibit a fall followed by a rise, although the changes were smaller and the series is more volatile.⁶⁰

The fall in arrears since 2009–10, and in particular between 2009–10 and 2011–12, may look somewhat surprising. This is a period in which average incomes fell significantly (see Chapter 2) and the proportion of households with low absolute income levels was broadly stable (see Chapter 4); and, as Figure 5.3 shows, there is a clear relationship across the population between income levels and the likelihood of being in arrears.

There are, however, good reasons to expect the likelihood of arrears to be related to factors other than just the level of income. For example, households with low but stable incomes may be able to plan their expenditures accordingly and not run into difficulties keeping up with bills. Instead, we might expect arrears to be more related to sharp unexpected changes in incomes or costs that leave households needing to make sudden adjustments to their budgeting strategies to

⁵⁷ Source: CPI sub-index D7DT for electricity prices and sub-index D7DU for gas prices.

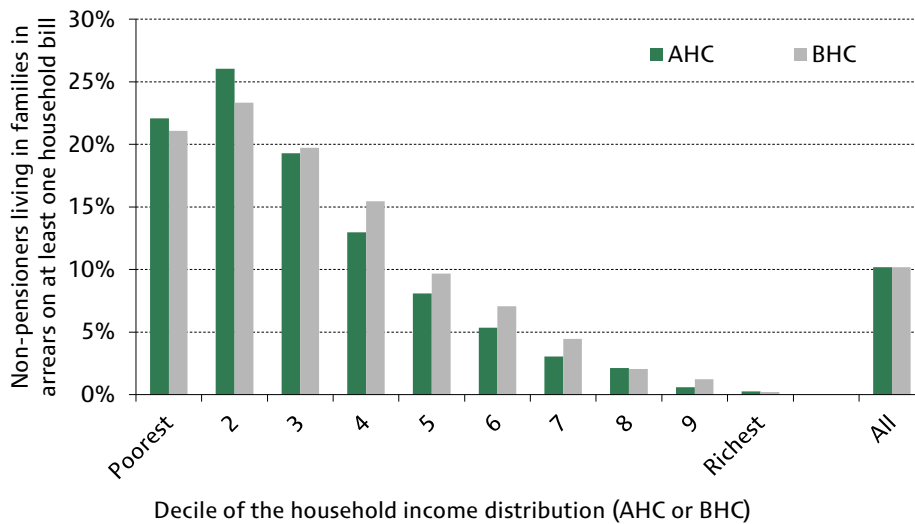
⁵⁸ See <https://www.gov.uk/government/statistics/collection-rates-for-council-tax-and-non-domestic-rates-in-england-2013-to-2014>.

⁵⁹ It is less likely to capture very recent changes in arrears (those who have not started repaying their debt).

⁶⁰ <https://www.ofgem.gov.uk/publications-and-updates/domestic-suppliers-social-obligations-2013-annual-report>.

avoid financial difficulties. As noted in last year's report,⁶¹ factors such as a recent unexpected redundancy might therefore be stronger predictors of arrears than a low level of income per se. Given that there was a large spike in redundancy rates in 2009, followed by a sharp fall back to roughly pre-recession levels (see Figure 5.4), this might look like one potential contributing factor behind the fall in arrears since 2009–10.

Figure 5.3. Percentage of non-pensioners whose family is in arrears on at least one household bill, by decile of household income distribution, 2013–14



Note: Percentage in arrears on at least one bill is calculated as a percentage of those who respond to questions on arrears. See note to Figure 5.1 for details on bills included.

Source: Authors' calculations using the Family Resources Survey, various years.

Figure 5.4. Percentage of employees made redundant per quarter, 2004Q2 to 2014Q1



Source: Labour Force Survey Redundancy Statistics, 2004 to 2014.

⁶¹ Belfield et al., 2014.

We can assess whether patterns of redundancy seem sufficient to be playing a role in the observed recent fall in arrears using a simple decomposition of the change in arrears. To ensure sufficient sample sizes, we pool together the years 2008–09 and 2009–10, and 2012–13 and 2013–14, and compare those two-year periods. Table 5.1 presents a decomposition of the same kind as those presented for poverty in Chapter 4. Here we group non-pensioners according to the number of adults in the family in work and, importantly in this context, whether any non-workers in the family were employed within the past six months (which will pick up some redundancies – in addition, of course, to other reasons for work exits, including planned and voluntary exits).

Table 5.1. Decomposing changes in non-pensioners in arrears on household bills, 2008–10 to 2012–14

	% in a family in arrears		% of non-pensioner population		Compositional effect (ppt)	Incidence effect (ppt)
	2008–09 and 2009–10	2012–13 and 2013–14	2008–09 and 2009–10	2012–13 and 2013–14		
No adults in work						
At least one adult exited job in last 6 months	29.6	23.0	2.2	1.7	–0.1	–0.1
All adults out of work for at least 6 months	27.1	25.6	15.8	15.9	0.0	–0.2
One in, one out of work						
Non-worker exited job in last 6 months	15.2	13.9	2.5	2.0	0.0	0.0
Non-worker out of work for at least 6 months	13.1	11.4	15.9	15.6	0.0	–0.3
All adults in work	7.0	5.4	63.6	64.8	–0.1	–1.0
All	11.7	9.9	100	100	–0.1	–1.6

Note: Work status measures are calculated at the family level. Data are pooled together for 2008–09 and 2009–10 and for 2012–13 and 2013–14. Compositional and incidence effects may not sum to totals due to rounding.

Source: Authors' calculations using the Family Resources Survey, various years.

The prevalence of families with non-working adults who were recently working did indeed fall between 2008–09 to 2009–10 and 2012–13 to 2013–14, as we might expect given the fall in redundancies over the same period. However, the decomposition suggests that these changes were simply too small in magnitude to explain much of the fall in arrears. Instead, a large majority of the overall change was due to a fall in arrears among the largest group in the table: those in families where all adults are in work.

In summary, the FRS data suggest that arrears and low income are different not only conceptually but also in practice. The cause of the fall in the prevalence of arrears on household bills since 2009–10 remains unclear. It would be useful for further research to look at this, ideally using longitudinal data (following the same households over time) to get a better handle on why fewer households fell

into arrears or why more households escaped arrears. In the next subsection, we are able to pin down more precisely the likely causes of particular kinds of arrears by studying the impacts of specific benefit cuts.

Specific benefit reforms and arrears

The latest FRS data for 2013–14 allow us to examine the impacts on arrears of two specific benefit reforms that were introduced in that year. This helps us to understand the effects of those reforms per se, but is also interesting because it provides examples of how low-income families cope with negative shocks to their income.

Support for council tax in England

Prior to April 2013, council tax benefit (CTB) reimbursed low-income families in full for their council tax, subject to a means test that gradually withdrew that rebate as incomes rose. Although levels of council tax are set by local authorities (LAs), the rules governing CTB were set nationally. From April 2013, CTB was abolished and LAs in England were told to design their own council tax support (CTS) schemes. LAs were given an additional grant that was 10% less than forecasts for the amount that would have been spent on CTB in that area, though they could choose to spend as much or as little of their overall budget as they liked on CTS. Pensioner families had to be protected from any cuts, which meant that the amount of central government funding provided for (unprotected) working-age CTB claimants was effectively cut by around 18% (though again LAs could choose to cut actual funding for those claimants by more or less than that, with budgetary consequences elsewhere).

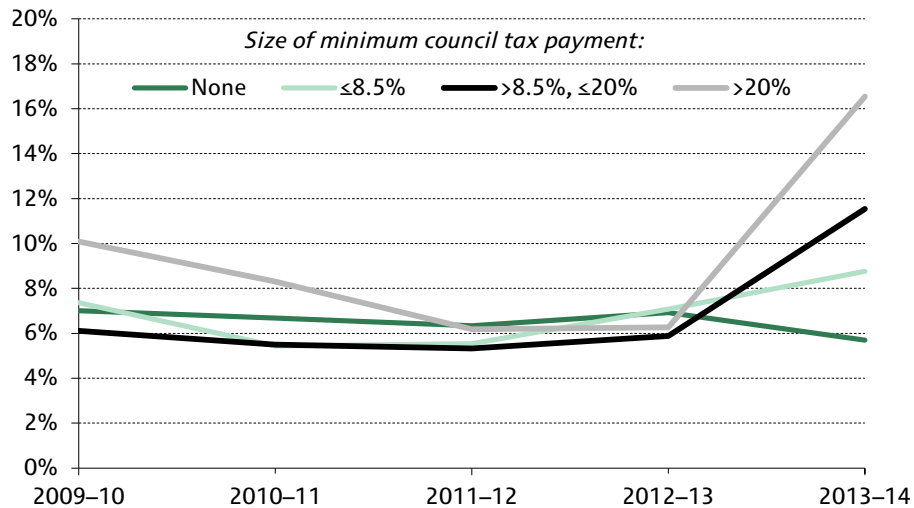
The devolved governments of Scotland, Wales and Northern Ireland all chose to maintain the existing CTB system, absorbing the funding cut elsewhere in their budgets. Meanwhile, more than 80% of English LAs introduced CTS schemes less generous than CTB. The major type of cut, which 70% of English LAs introduced, was via the introduction of ‘minimum council tax payments’: a percentage of council tax that must be paid regardless of income, though many LAs did choose to exempt specific groups, such as the disabled or those with young children. Overall, Adam et al. (2014) estimated that 1.4 million households in England who could previously have been fully rebated became liable to pay some council tax (though some of those households would not have taken up their entitlement to council tax support anyway). LAs were given a financial incentive to keep the minimum payment no higher than 8.5% in the first year, and about half of the LAs that introduced a minimum payment did set it no higher than 8.5% in 2013–14.⁶²

Introducing a minimum payment could lead to some families falling into council tax arrears. Figure 5.5 investigates this. It plots the percentage of working-age families in receipt of CTB/CTS who report being in arrears on their council tax bill. This is drawn separately for families living in four different groups of English

⁶² See Adam et al. (2014) for an overview of LAs’ scheme choices.

LAs, defined according to the size of the minimum council tax payment introduced in April 2013. Because LA boundaries changed substantially in 2009–10, our analysis does not go back further than that. Note that LAs could choose to exempt certain groups from the changes, which means that some of those living in LAs that introduced minimum payments would not in fact have been affected by the reforms. This means that, if anything, by comparing trends across the four groups we will tend to understate any effects of the changes on arrears.

Figure 5.5. Percentage of working-age families receiving council tax support who have council tax debts, by size of minimum council tax payment applying in local authority from April 2013



Note: A working-age family for these purposes is defined as a family where no one is aged 60 or above (since the female state pension age, on which exemption from this policy is based, was 60 in 2009–10).

Source: Authors' calculations using the Family Resources Survey, various years, and local authorities' council tax support scheme characteristics documented at <http://www.ifs.org.uk/publications/7005>.

Immediately before the reforms in 2012–13, levels of arrears were very similar across each of the four groups. If anything, the trend over the previous few years had been for council tax arrears to fall more in LAs that subsequently introduced higher minimum payments.⁶³ In 2013–14, when the reforms kicked in, the opposite occurred: there was a clear tendency for those in areas introducing bigger minimum payments to experience a relative rise in the propensity to be in council tax arrears. Moving from the LAs with the lowest (zero) to the highest minimum payments in 2013–14, the proportion in council tax arrears fell by 1 percentage point (ppt), grew by 2ppt, grew by 6ppt and grew by 10ppt respectively in that year. The increases in arrears in LAs that introduced the two highest categories of minimum payments were statistically significantly different from the fall in arrears in LAs that did not introduce minimum payments. This

⁶³ The fact that trends in arrears may not have been identical across the four groups before the reforms is not particularly surprising. Adam et al. (2014) showed that scheme choices were not random – LAs with certain characteristics (including poorer LAs) were more likely to introduce minimum payments than others.

provides convincing evidence that the reforms caused an increase in council tax arrears. Similar effects seem to be evident both for families with dependent children and for those without (not shown).

This adds to evidence from related research, which showed that a similar relationship holds when looking at aggregate council tax collection rates across LAs⁶⁴ and when looking at the number of people visiting Citizens Advice bureaux with queries about council tax debts.⁶⁵

The 'bedroom tax'

Prior to April 2013, social housing tenants could have their rent fully reimbursed via housing benefit, subject to a means test. From April 2013, working-age social tenant families had their housing benefit cut if they were deemed to be 'under-occupying' their properties, under a particular set of rules about what constitutes under-occupation based largely on the number of bedrooms in the property and the number, sexes and ages of any dependent children. Families with one more bedroom than they were deemed to need could now have only 86%, rather than 100%, of their rent reimbursed. Families with at least two more bedrooms than they were deemed to need had their subsidy rate cut to 75%. In total, just over 500,000 families in Great Britain, or about 11% of social tenants, were affected.⁶⁶

By 2014–15, Scotland had effectively abolished this so-called 'bedroom tax' (primarily through the use of 'discretionary housing payments' by local authorities) but potential effects of the reform in Scotland in 2013–14 are still of interest. Northern Ireland has not implemented the policy. We therefore focus on Great Britain in the analysis below.

This policy has parallels with the council tax support reforms analysed above in that it requires some families to pay a part of a household bill (in this case, rent) for which they would previously have been fully rebated. In this case, any effects on rent arrears are interesting both because they might reflect how low-income families are coping with this change and because they may have consequences for the rental income of social housing providers (local authorities and housing associations).

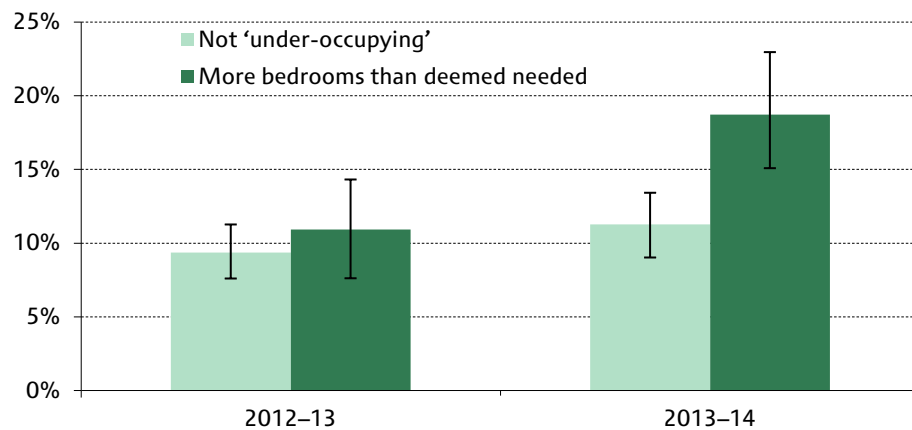
Data on rent arrears have been available in the FRS since 2012–13 – just in time to provide us with a snapshot of rent arrears both before and after the 'bedroom tax' came into effect. Figure 5.6 shows the proportion of working-age social tenant families receiving housing benefit who reported being in rent arrears, in both 2012–13 and 2013–14. It does this for two groups of tenants: those who, under the post-April-2013 rules, would not and would be considered to be under-occupying. In April 2013, the first group would have been unaffected by the housing benefit reforms; the second group would in most cases have

⁶⁴ <http://www.jrf.org.uk/blog/2014/07/council-tax-arrears-rise-fastest-where-support-cut-most>.

⁶⁵ Adam et al., 2014.

⁶⁶ Clarke et al., 2014.

Figure 5.6. Percentage of working-age social tenant families on housing benefit in rent arrears, by 'under-occupation' status (Great Britain)



Notes: A working-age family for these purposes is defined as a family where no one is aged 61 or above (since the female state pension age, on which exemption from this policy is based, was 61 at the beginning of 2012-13). Error bars mark 95% confidence intervals.

Source: Authors' calculations using the Family Resources Survey, 2012-13 and 2013-14.

experienced a housing benefit cut equal to 14% or (in a minority of cases) 25% of their rent.

A minority of the second group will have been exempted from the policy due to characteristics that it is difficult or impossible for us to account for with these data, including those in some types of supported accommodation, those with a foster carer or children with certain severe disabilities in the household, and those with an absent member of the armed forces serving away from home. This probably explains why the size of this group in the FRS data, at about 625,000 families, is about 100,000 larger than the Department for Work and Pensions (DWP)'s administrative records indicate were affected by the policy in August 2013.⁶⁷ It would tend to mean that we understate any impacts of the reform on arrears, as we include some people who did not in fact face a housing benefit cut in our 'under-occupying' group.

Before the reforms, in 2012-13, the two groups of tenants had similar levels of rent arrears (and the difference in rates of rent arrears was not statistically significant). Between 2012-13 and 2013-14, a statistically significant gap opened up between the two groups: there was little or no change in rent arrears for the group not 'under-occupying', but a statistically significant increase from 11% to 19% for the 'under-occupying' group. Hence, although a precise quantitative estimate of the effect of the policy would require a fuller analysis with additional data, the figure is certainly suggestive of an effect (particularly given that some of the 'under-occupying' families in Figure 5.6 would not in fact have been subject to the policy, as discussed above). It is also broadly in line with evidence from a

⁶⁷ Clarke et al., 2014.

survey of tenants as part of an independent evaluation of this policy for DWP.⁶⁸ This suggested that 29% of those affected had not been in arrears before the policy came in but were in arrears six months afterwards; this compared with 7% among those not affected.⁶⁹

In summary, analysis of specific benefit cuts introduced in April 2013 suggests that giving low-income people new bills to pay can cause significant numbers of those people to fall into arrears on that bill.

5.2 Trends in material deprivation

As well as recording whether households are in arrears on particular bills, the HBAI data also record whether households say they can afford particular items. This information is used to calculate two indices of material deprivation used in the official HBAI publication – one for children and one for pensioners (those aged over 65).

In order to measure child material deprivation, the adults in the family are asked whether they can afford certain items, such as a warm winter coat for each child or an annual holiday.⁷⁰ For pensioners, the set of items is different and the set of responses deemed to indicate being deprived of a good (as opposed to not wanting or needing it) is wider, including health and social constraints as well as monetary ones.⁷¹ Hence it is not meaningful to compare material deprivation rates for children and pensioners. In both cases, the individual items are weighted according to the percentage of people who say they can afford them: the more people who say they can afford an item, the more weight that item is given in calculating people's overall material deprivation 'score'. Families are categorised as materially deprived if their score exceeds a certain threshold.⁷²

The government publishes two statistics based on these material deprivation data – the proportion of pensioners who are materially deprived, and the proportion of children who are both materially deprived and have a household income below 70% of the median. Table 5.2 shows (in millions and as a percentage of the relevant population) the trends in these measures since they

⁶⁸ Clarke et al., 2014.

⁶⁹ The magnitude of this effect on arrears is larger than that suggested by Figure 5.6. It is unclear why, as both come from surveys of tenants. The DWP survey, however, was not nationally representative, which would lead us – all else equal – to prefer the FRS data presented here.

⁷⁰ Section 5.3 includes some analysis at the level of individual items.

⁷¹ The additional reasons for deprivation are 'My health/disability prevents me', 'It is too much trouble / too tiring', 'There is no one to do this with or help me' and 'Other'. In addition, the 'cannot afford' response to child material deprivation questions is replaced with two separate reasons: 'I do not have the money for this' and 'This is not a priority for me on my current income'.

⁷² More details and discussion of the measurement of material deprivation can be found in chapter 6 of Cribb, Joyce and Phillips (2012).

became available, alongside the changes in child material deprivation alone (not published by the government). Child material deprivation cannot be compared before and after 2010–11, due to a change in the measure (indicated by the dashed line).⁷³

The combined low income and material deprivation measure published by the government fell across the late 2000s, and was almost unchanged between 2010–11 and 2013–14, at around 13%. However, this reflects the pattern of relative income poverty (see Chapter 4) and masks increases in deprivation – child material deprivation has actually been rising for most of the period since the mid 2000s. From a low of 24.4% in 2006–07, it increased to 26.7% by 2010–11 (having peaked at 27.6% in 2009–10) under the old measure. After the introduction of the new measure, it has continued to rise, from 22.3% in 2010–11 to 23.5% in 2013–14.

It is regrettable that this increase is not apparent from government statistics, as the trend in material deprivation is clearly of interest. We suggest that the government at least publishes rates of child material deprivation separately, alongside the combined material deprivation and relative low income indicator.

Table 5.2. Trends in child and pensioner material deprivation

	Children (combined indicator)		Children		Pensioners	
	%	Million	%	Million	%	Million
2004–05	17.1	2.2	25.8	3.3	-	-
2005–06	16.3	2.1	24.9	3.2	-	-
2006–07	15.8	2.0	24.4	3.2	-	-
2007–08	17.3	2.2	25.8	3.4	-	-
2008–09	17.5	2.3	27.5	3.6	-	-
2009–10	16.4	2.2	27.6	3.6	9.6	0.9
2010–11 (old items)	15.0	2.0	26.7	3.5	8.7	0.9
2010–11 (new items)	13.1	1.7	22.3	3.0		
2011–12	12.4	1.6	22.0	2.9	8.1	0.8
2012–13	13.4	1.8	24.1	3.2	8.4	0.9
2013–14	13.0	1.7	23.5	3.1	9.1	1.0

Note: The combined indicator records whether a child is both materially deprived and has a household income below 70% of the median. A new set of items used to calculate child material deprivation scores was introduced in 2010–11, creating a discontinuity in the series, as marked by the dashed line. See chapter 6 of Cribb, Joyce and Phillips (2012) for further details.

Source: Authors' calculations using the Family Resources Survey, various years.

⁷³ A new suite of material deprivation questions was introduced in 2010–11, in an attempt to remain as relevant as possible as consumption patterns evolve. The old and new questions were retained in parallel in 2010–11, which reveals that the change caused a discontinuity in the series, reducing rates of measured deprivation.

Pensioner material deprivation fell from 9.6% in 2009–10 to 8.1% in 2011–12, before rising to 9.1% by 2013–14. The increase over the last two years of data is (just) statistically significant. If this recent trend proves to be sustained, then it would certainly be worthy of investigation. However, we focus on child material deprivation in the remainder of this section.

The rise in child material deprivation since the mid 2000s

In this subsection, we look in more detail at the rise in child material deprivation since 2006–07, examining which kinds of families with children have driven this change, and the extent to which these trends correspond to changes in incomes over the same period. Throughout, the change in the items used to calculate material deprivation in 2010–11 means that we have to analyse the trends separately for two subperiods: 2006–07 to 2010–11 and 2010–11 to 2013–14.

A decomposition of the increase in child material deprivation by family type and work status, given in Table 5.3, shows it has been driven primarily by rising rates of deprivation within working families. In fact, since 2010–11, all of the in-work family types in the table have seen rises in child material deprivation, and these alone more than explain the total rise (with some offsetting factors acting to reduce deprivation). While children without working parents remain much more likely to be deprived, 58% of materially deprived children now live in a family where at least one parent works, compared with 49% in 2010–11.

Table 5.4 compares these changes in material deprivation rates within different family types with the corresponding changes in absolute income poverty rates, both before and after housing costs. Looking first at the period from 2006–07 to 2010–11, the table shows that trends in material deprivation were much less favourable than those in income poverty. For example, the absolute poverty rate among children of non-working lone parents fell by over 25ppt before housing costs (from 59.4% to 33.1%) and by nearly 15ppt after housing costs (from 76.7% to 62.4%). However, the material deprivation rate for children in this group remained at 69.6% in 2010–11, down only 2.2ppt (a statistically insignificant fall) on its 2006–07 level. For some other groups, material deprivation rose despite lower absolute poverty rates.

From 2010–11 to 2013–14, changes in absolute poverty and material deprivation were more consistent. Broadly speaking, income poverty and material deprivation rose among children in working families but fell among children in workless families. Overall, and among working families, changes in absolute AHC income poverty and material deprivation rates were of similar magnitudes.

In summary, in recent years, changes in income poverty and material deprivation tell the same story – the number of children with low absolute living standards has increased, driven by trends for children in working families. However, trends in material deprivation suggest these recent increases came on top of a growth in the prevalence of low living standards through the latter half of the 2000s, in contrast to the impression given by falling rates of income poverty over that period. Providing an explanation for that discrepancy would be a valuable

Table 5.3. Decomposition of rise in child material deprivation since 2006–07, by family type and work status

	Material deprivation rate (%)		Fraction of child population (%)		Compositional effect (ppt)	Incidence effect (ppt)
	2006–07	2010–11	2006–07	2010–11		
<i>2006–07 to 2010–11 (old items)</i>						
Lone parent, working	32.5	32.8	11.6	11.9	0.0	0.0
Lone parent, non-working	71.8	69.6	12.1	11.6	–0.3	–0.3
Couple, both working	7.1	8.4	46.6	47.1	–0.1	0.6
Couple, one working	21.6	26.8	24.6	23.4	0.0	1.2
Couple, neither working	66.5	74.2	5.0	6.0	0.4	0.4
All	24.4	26.7	100	100	0.1	2.1
<i>2010–11 to 2013–14 (new items)</i>						
Lone parent, working	25.9	34.4	11.9	13.0	0.1	1.1
Lone parent, non-working	62.8	62.2	11.6	10.6	–0.4	–0.1
Couple, both working	5.9	7.6	47.1	47.8	–0.1	0.8
Couple, one working	21.7	24.6	23.4	22.9	0.0	0.7
Couple, neither working	68.3	56.2	6.0	5.7	–0.1	–0.7
All	22.3	23.5	100	100	–0.5	1.7

Source: Authors' calculations using the Family Resources Survey, 2006–07, 2010–11 and 2013–14.

Table 5.4. Changes in child material deprivation and absolute child poverty, by family type and work status (UK)

	Material deprivation			Absolute poverty, BHC			Absolute poverty, AHC		
	2006–07 (%)	2010–11 (%)	Change (ppt)	2006–07 (%)	2010–11 (%)	Change (ppt)	2006–07 (%)	2010–11 (%)	Change (ppt)
<i>2006–07 to 2010–11 (old items)</i>									
Lone parent, working	32.5	32.8	0.3	16.0	11.1	–5.0	27.0	20.1	–6.9
Lone parent, non-working	71.8	69.6	–2.2	59.4	33.1	–26.3	76.7	62.4	–14.3
Couple, both working	7.1	8.4	+1.4	6.5	6.5	0.0	9.6	9.8	+0.2
Couple, one working	21.6	26.8	+5.2	31.5	25.5	–6.0	39.7	37.4	–2.4
Couple, neither working	66.5	74.2	+7.7	67.9	57.1	–10.8	76.3	72.9	–3.5
All	24.4	26.7	+2.2	23.3	17.6	–5.7	30.5	27.3	–3.2
<i>2010–11 to 2013–14 (new items)</i>									
Lone parent, working	25.9	34.4	+8.5	11.1	13.4	+2.3	20.1	27.4	+7.3
Lone parent, non-working	62.8	62.2	–0.6	33.1	28.8	–4.3	62.4	59.2	–3.2
Couple, both working	5.9	7.6	+1.6	6.5	7.5	+1.0	9.8	11.0	+1.2
Couple, one working	21.7	24.6	+2.9	25.5	26.4	+0.9	37.4	39.8	+2.4
Couple, neither working	68.3	56.2	–12.1	57.1	57.5	+0.4	72.9	76.5	+3.6
All	22.3	23.5	+1.2	17.6	17.7	+0.1	27.3	28.6	+1.3

Source: Authors' calculations using the Family Resources Survey, 2006–07, 2010–11 and 2013–14.

contribution of future research: sensible hypotheses include a tightening of credit conditions or poorer households facing higher inflation rates (due to energy and food price rises).

5.3 Material deprivation and income

As comparisons between child poverty rates and child material deprivation show, the relationship between measures of material deprivation and income-based measures of poverty is not straightforward. In this section, we look in more detail at the relationship between material deprivation and income, documenting the relationship between household income and the likelihood of being ‘materially deprived’ as defined by the government’s overall measure, as well as the likelihood of being unable to afford particular items.⁷⁴ We broaden our analysis to include parents, since the child material deprivation measure is defined for all individuals in families with children. We do not include pensioners, since the pensioner material deprivation rate is measured differently and is less closely related to financial constraints.⁷⁵ Throughout this section, as our focus is not on tracking trends over time, we combine data for the four years since the introduction of the current set of items in 2010–11 in order to maximise the sample size used for the analysis.

Figure 5.7. Material deprivation among parents and children below median income, by whole-population income vingtile, 2010–11 to 2013–14 (UK)



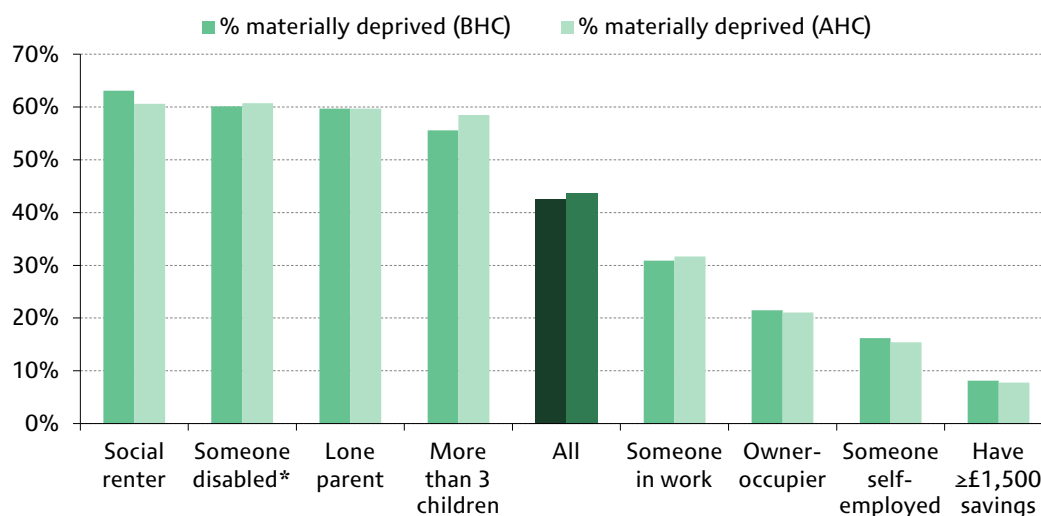
Note: Incomes have been measured net of taxes and benefits.

Source: Authors’ calculations using the Family Resources Survey, 2010–11 to 2013–14.

⁷⁴ See Brewer and O’Dea (2012) for a discussion of how income and material deprivation relate to expenditure.

⁷⁵ See chapter 6 of Cribb, Joyce and Phillips (2012) for further details.

Figure 5.8. Material deprivation among parents and children in absolute income poverty by family characteristics, 2010–11 to 2013–14 (UK)



* Figures for families in which someone is disabled are based on data from 2012–13 and 2013–14 only, as the indicator of disability was not available before that time.

Note: Incomes have been measured net of taxes and benefits. The absolute poverty line is defined as 60% of median income in 2010–11, with incomes measured BHC or AHC as indicated in the key.

Source: Authors' calculations using the Family Resources Survey, 2010–11 to 2013–14.

Figure 5.7 focuses on children and parents with a household income below the median. It plots the probability of being materially deprived for individuals in each of the 10 five-percentile bands of income below the median (income vingtiles, or twentieths). Note that the BHC and AHC poverty lines are in the fourth and fifth vingtiles respectively. The figure highlights three points. First, from the third vingtile upwards, the proportion of parents and children in material deprivation falls as income rises, as one would expect. Second, that fall is slightly steeper when incomes are measured after housing costs; after-housing-costs income is a better predictor of whether a family is likely to be deprived. Third, the relationship between material deprivation and income is different and counterintuitive at the very bottom of the distribution – individuals in the bottom decile of the overall income distribution are less likely to be deprived than those with slightly higher incomes.

Figure 5.8 helps us to understand this puzzle. Focusing on parents and children in income poverty, we document how the probability of being materially deprived varies with a number of family characteristics. While around half of all parents and children in income poverty are also materially deprived, that share is significantly lower for certain types of families. In particular, less than 10% of individuals in poor families with at least £1,500 of savings are materially deprived, and that figure is less than 20% for individuals in poor families where someone is self-employed. In the former case, the low rate of material deprivation arises presumably (at least partly) because those families are able to draw on those savings to support their living standards. In the latter case, it is

likely to (at least partly) reflect the greater volatility of self-employment income, including the possibility of losses in any one year; many of those families will have only temporarily low incomes, and hence are less likely to be materially deprived.

Importantly, these kinds of families are much more likely to be at the very bottom of the income distribution than just above. In the bottom vingtile of the overall income distribution (after housing costs), 43% of parents and children live in families with at least £1,500 of savings or with someone who is self-employed, compared with 18% in the third income vingtile.

Figure 5.8 also provides a more general picture of which characteristics are most associated with material deprivation for low-income families with children. As one would expect, one factor is whether the family faces additional costs – those in families where someone is disabled, or with more than three children, are more likely to be deprived than average. (Note that equivalisation is designed to adjust for the costs of children – one possible interpretation of this result is that the equivalence scale does not do this adequately.) Another likely factor is whether the low income is temporary or permanent: one would expect the prevalence of material deprivation to reflect both individuals' current household income and their 'permanent' or 'lifetime' income, given that they may be able to effectively transfer income between periods of life by saving and dissaving. The higher prevalence of material deprivation among low-income individuals in social housing and in lone-parent families might reflect relatively low lifetime incomes in those groups. Similarly, the lower prevalence of material deprivation among low-income individuals in owner-occupied housing or in working families may be a reflection of higher lifetime incomes in those groups.

This is strong evidence that simply looking at current income is inadequate when thinking about who is in 'poverty'. Of those with low levels of current income, some groups (such as social renters, lone parents and the disabled) seem to be much worse off than others (such as owner-occupiers, the self-employed and those with some savings). For example, social renters with AHC incomes at around the median (the 10th vingtile) have deprivation rates at least as high as those of the lowest-income owner-occupiers.

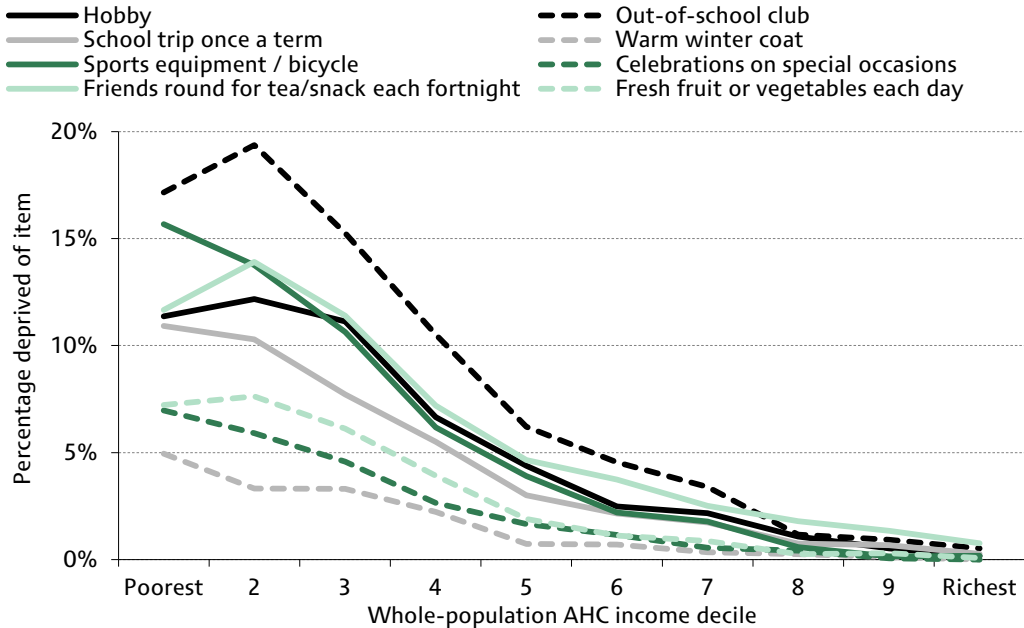
Item deprivation and income

So far in this section, we have focused on the relationship between income and the measure of material deprivation defined by the government. But it is also possible to look at the relationship between income and the reported affordability of particular items. Comparing this relationship for different items gives an indication of the priorities of low-income families – and, perhaps, insights into the process by which they cut back when experiencing a fall in income. Since we are using cross-sectional data (we observe each household only once), we cannot observe that process directly – but other research using both cross-sectional and panel data (repeated observations of the same households) has found the cross-sectional relationship between income and item deprivation

to be similar to the relationship between changes in income and changes in item deprivation for particular households.⁷⁶

Figure 5.9 shows the proportion of children whose families are not able to afford certain items, by overall AHC income decile. Eight of the 12 child-specific items in the material deprivation measure are shown. Of the four not shown, two are asked of only a small subset of families with children (whether there are enough bedrooms for every child aged over 10 and whether children go to a playgroup at least once a week), one is not directly a question of affordability (a safe outdoor space nearby) and one is excluded simply because the deprivation rate is vastly higher than that for all other items (a holiday away from home for at least one week a year).

Figure 5.9. Child deprivation by item and AHC income decile, 2010–11 to 2013–14 (UK)

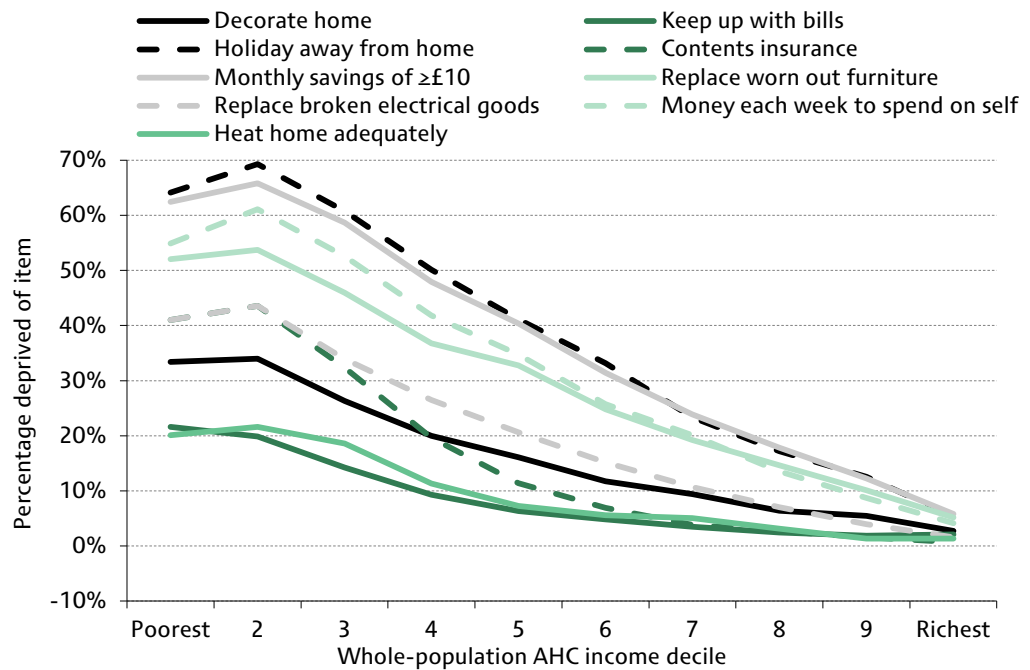


Source: Authors’ calculations using the Family Resources Survey, 2010–11 to 2013–14.

The figure clearly shows differences between items. The proportion of children in families who say they cannot afford a regular organised activity outside of school is clearly rising from the 8th income decile downwards, reaching nearly 20% towards the bottom of the distribution. Low-income families then seem to cut back on hobbies, school trips, sports equipment and having friends round, with more than 10% of children deprived of each of those items at the bottom of the distribution. On the other hand, almost no children outside the bottom four income deciles are deprived of eating fresh fruit or vegetables every day, celebrating special occasions or having a warm winter coat. Even at the bottom of the distribution, less than 8% of children are deprived of these items (only around 5% in the case of a warm winter coat).

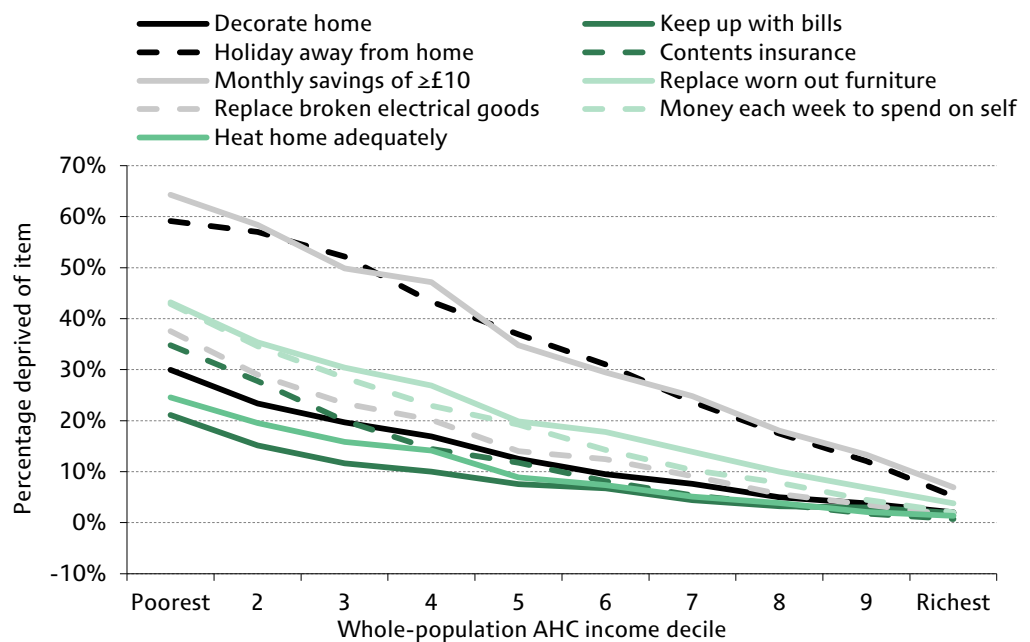
⁷⁶ Deutsch et al., 2015.

Figure 5.10a. Deprivation by item and AHC income decile for adults with children, 2010–11 to 2013–14 (UK)



Source: Authors' calculations using the Family Resources Survey, 2010–11 to 2013–14.

Figure 5.10b. Deprivation by item and AHC income decile for adults without children, 2010–11 to 2013–14 (UK)



Source: Authors' calculations using the Family Resources Survey, 2010–11 to 2013–14.

Figures 5.10a and 5.10b provide the same analysis, but this time looking at all nine of the adult-specific items in the material deprivation measure for adults with and without children respectively. Here we are able to include working-age adults without children, since although the overall material deprivation measure is not defined for that group, the data still records whether they are deprived of particular items.

The first thing to note is the much larger scale of both figures. Whereas deprivation rates for almost all of the child items were lower than 20% even at the bottom of the income distribution, the lowest deprivation rates at that point for adult items are around 20%, with rates for most items being significantly higher. This is true whether or not low-income adults have children, although deprivation rates are clearly higher for those with children.

It is also noticeable that substantial rates of deprivation with respect to the adult items start much further up the income distribution than for child deprivation. While deprivation rates for most of the child items are near-zero across the top half of the income distribution, deprivation with respect to some of the adult items rises significantly between the top of the income distribution and the middle.

Looking at the differences between items, making regular savings and taking an annual holiday away from home are clearly the things that low-income families are most likely to say they feel unable to afford, with the majority of adults towards the bottom of the distribution saying this. At the other end of the spectrum, ensuring that their accommodation is warm enough and keeping up with bills appear to be high priorities for most adults, both with and without children.

There is also some evidence that adults with and without children have different relative priorities. In particular, having money to spend on themselves seems to be a lower priority relative to other items for adults with children than for those without. This is consistent with the idea supported by other research⁷⁷ that adults are more reluctant to see their children deprived than to deprive themselves when budgets are tight, at least with respect to the items considered.

5.4 Conclusion

Together, the non-income measures discussed in this chapter provide a clear and coherent picture of the impact of the Great Recession and its aftermath on those with low living standards.

Up to 2009–10, there had been an upwards trend in the proportion of families in arrears on household bills, mostly driven by gas and electricity bills (whose prices rose rapidly in real terms over this period). Interestingly, and for reasons that are not yet clear, arrears on most bills have since declined. Specific benefits cuts introduced in 2013–14 do appear, however, to have had impacts on the ability of the households affected to pay specific bills. Council tax arrears among working-age recipients of council tax support rose by an average of 10ppt in those areas where the highest minimum payments were introduced after the localisation of council tax benefit, but fell where there was no minimum payment. Rent arrears increased by 8ppt among those likely to be affected by the so-called

⁷⁷ Blow, Walker and Zhu, 2012.

'bedroom tax', with no significant change among working-age social tenants who were not deemed to be 'under-occupying' their homes.

Meanwhile, child material deprivation has been rising since the recession, and in fact since the mid 2000s. Increases in the proportion of children in working families who are deemed 'materially deprived' according to the government's measure have more than outweighed slight falls in material deprivation among workless families. For some groups, the change has been dramatic: the proportion of children of working lone parents who are materially deprived went from a quarter in 2010–11 to a third in 2013–14.

How do these changes relate to income-based measures of poverty? In the case of arrears, although low-income households are more likely to be in arrears, recent changes in arrears have not followed trends in income poverty closely. This is not particularly surprising given the conceptual difference in what the two things are measuring (low incomes or a failure to meet existing expenditure commitments). In the case of child material deprivation, the change since 2010–11 is very similar to that in absolute AHC child poverty, which we argued in Chapter 4 is likely to be the best measure of changes in income poverty over recent years. However, large falls in absolute income poverty among children in the late 2000s did not translate into lower rates of material deprivation. The discrepancy between the two trends was large and it would be very valuable for further work to try to understand it.

Non-income measures can clearly enhance our understanding of changes in the circumstances of households with low living standards. Indeed, the material deprivation measure helps to highlight that current income can be inadequate when thinking about who is in 'poverty'. Of those with low levels of current income, some groups – social renters, lone parents and the disabled – seem to be much worse off than others – owner-occupiers, the self-employed and those with some savings.

The government's recent announcement on a 'new approach' to tackling child poverty emphasised the importance of monitoring the causes of poverty.⁷⁸ While it is sensible to consider the causes, it is also important to measure poverty itself as accurately as possible. To that end, indicators of material deprivation should remain as a valuable complement to income-based measures.

However, non-income measures work best considered alongside others, rather than aggregated as part of composite indices. The government's combined child poverty and material deprivation measure clearly illustrates what can be missed by this aggregation – large falls in relative income poverty have masked increases in the child material deprivation rate. During the last parliament, the government consulted on combining many more measures together in a composite index⁷⁹ –

⁷⁸ <https://www.gov.uk/government/news/government-to-strengthen-child-poverty-measure>.

⁷⁹ See HM Government (2012).

including low incomes and arrears, which we have shown to have moved in opposite directions recently. However, the recent announcement around the proposed abolition of the Child Poverty Act and its replacement with other measures contains no reference to such a composite index. IFS researchers had made the case against such an index, and hence this is a welcome development.⁸⁰

⁸⁰ See Browne et al. (2013).

Appendix A. The Households Below Average Income (HBAI) methodology⁸¹

Income as a measure of living standards

Most people would consider that well-being consists of more than a simple measure of material circumstances. However, even if we wanted to, it would be extremely hard to define an objective index of well-being, let alone to measure it. The main approach to measuring living standards taken in the government's HBAI document (and therefore in this report) is to focus solely on material circumstances and to use income as a proxy for most of the analysis. For families with children and pensioners, 'material deprivation' indicators are also used, to supplement and perhaps improve upon the information on living standards provided by income. These indicators are based on questions that effectively ask people whether they can afford to do particular things, with the precise procedure differing between families with children and pensioners. Chapter 5 provides detailed analysis of changes in material deprivation according to these indicators and how they relate to income-based measures of poverty.

Even as a measure of material living standards, the HBAI income measure has some important limitations. For example, it is a 'snapshot' measure – reflecting actual, or in some cases 'usual', income at around the time of the Family Resources Survey (FRS) interview. Measuring income in this way means the HBAI income statistics capture both temporary and permanent variation in income between individuals, but the latter would generally be regarded as a better measure of their relative welfare. For example, having a temporarily low income is unlikely to have severe consequences for current material living standards if individuals are able to draw on previously accumulated wealth. Statistics based upon current incomes will attribute the same level of welfare to people with the same income, regardless of how much savings or other assets they have, or how much they spend. Consumption would arguably make a better measure of material well-being, but reliable data can be harder and more expensive to collect. Using consumption as the measure of well-being can change our interpretation of who is 'poor' and how rates of poverty have changed over time.⁸²

⁸¹ Many of these issues are also discussed in Berthoud and Zantomio (2008).

⁸² See Brewer, Goodman and Leicester (2006), Brewer and O'Dea (2012) and Browne et al. (2013).

The treatment of housing costs

The government's HBAI publication provides information on two measures of income. One measure captures income before housing costs are deducted (BHC) and the other is a measure after housing costs have been deducted (AHC). The key housing costs captured in the HBAI data are rent payments and mortgage interest payments, but they also include water rates, community water charges, council water charges, structural insurance premiums for owner-occupiers, and ground rents and service charges. Mortgage capital repayments are not included, on the basis that these represent the accumulation of an asset (they increase net housing wealth), and are therefore better thought of as a form of saving than as a cost of housing. Costs such as maintenance, repairs and contents insurance are also not included.

When looking at changes in average living standards across the population as a whole, there is usually a strong case for focusing on income measured BHC. This is because most individuals exercise a considerable degree of choice over housing cost and quality, at least in the medium and long term, and for those individuals housing should be treated as a consumption good like any other (i.e. the amount that households choose to spend on it should not be deducted from income). For instance, consider two households with the same BHC income, one of whom decides to spend a larger fraction of that income on a larger house in a better neighbourhood, while the other has different preferences and chooses to spend the difference on other things. On an AHC basis, the former household would be considered poorer, but their living standards may be comparable.

There are, however, a number of reasons to focus on income measured AHC in certain circumstances.

First, income measured AHC may provide a better indicator of the living standards of those who do not face genuine choices over their housing, particularly if housing cost differentials do not accurately reflect differences in housing quality. This is likely to be the case for many in the social rented sector, where individuals tend to have little choice over their housing and where rents have often been set with little reference to housing quality or the prevailing market rents.

Second, the existence of housing benefit means that measuring income AHC has an advantage over BHC as a measure of living standards for housing benefit recipients. This is because housing benefit reimburses individuals specifically for their rent. Consider a household with no private income whose rent increases by £10 per week. This might trigger a £10 increase in housing benefit entitlement to cover the rent increase. Hence, AHC income would remain unchanged but BHC income would increase by £10 per week. Therefore, where rent changes do not reflect changes in housing quality – for example, when they simply reflect changes in the rules governing social rents – the subsequent changes in BHC (but not AHC) income can give a misleading impression of the change in living standards of households on housing benefit.

Third, measuring income AHC may be more appropriate than BHC when comparing households that own their home outright (and so pay no rent or mortgage interest costs) with those that do not. On a BHC basis, an individual who owns their house outright will be treated as being as well off as an otherwise-identical individual who is still paying off a mortgage; an AHC measure, though, would indicate that the former was better off.⁸³ This is particularly important when comparing incomes across age groups – pensioners are much more likely to own their homes outright than working-age adults.

Fourth, comparing changes in AHC incomes may provide better information about relative changes in living standards when some households have seen large changes in their housing costs that are unrelated to changes in housing quality. This has been particularly relevant since 2007–08, as rapid falls in mortgage interest rates reduced the housing costs of those with a mortgage significantly but not those who rent their homes (or own them outright). However, when incomes are measured BHC, changes over time in the incomes of all households are adjusted for inflation using a price index that accounts only for *average* housing costs. This will understate the effect of falling housing costs on living standards for those with a mortgage and overstate it for those without a mortgage. Changes in income measured AHC do not suffer from this issue, since changes in housing costs are accounted for by subtracting each household's actual housing costs from their income. This difference is important to bear in mind when looking at changes in poverty and inequality. Those towards the bottom of the income distribution (around the poverty line), as well as the youngest and oldest adults, are less likely than average to have a mortgage.

Income sharing

To the extent that income sharing takes place within households, the welfare of any one individual in a household will depend not only on their own income, but also on the incomes of other household members. By measuring income at the household level, the HBAI statistics implicitly assume that all individuals within the household are equally well off and therefore occupy the same position in the income distribution. For many households, this assumption may provide a reasonable approximation – for example, couples may benefit equally from income coming into the household, no matter who the income is paid to. For others, such as students sharing a house, it is unlikely to be appropriate. Perfect income sharing is by no means the only 'reasonable' assumption that one could make: for example, one could effectively assume that there is complete income sharing *within* the different benefit units⁸⁴ of a household but not *between* them,

⁸³ A conceptually better solution to this problem would be to impute an income from owner-occupation and add this to BHC income. Unlike the AHC measure, this would also capture the benefits to individuals of living in better-quality housing. See Brewer and O'Dea (2012) for an example of such an imputation procedure.

⁸⁴ Benefit units are the level at which benefits are paid to people. A benefit unit can be either a single person or a couple, plus any dependent children of that single person or couple. For this reason, a benefit unit is frequently described as a 'family'. However, people living together who

by measuring incomes at the benefit unit level rather than at the household level (and making an assumption about how housing costs are split across benefit units). However, given the data available, perfect income sharing is one of the least arbitrary and most transparent assumptions that could be made.

Comparing incomes across households

Controlling for household size and structure is important when comparing living standards across households. If two households, one composed of a single adult and the other composed of a couple with two children, both have the same total income, the living standard of the couple with children will usually be significantly lower than that of the single adult, as the larger household normally has a greater need for material resources. Therefore, if household income is to reflect the standard of living that household members experience, and if we are to compare these incomes across different household types, then some method is required to adjust incomes for the different needs that different households face.

The official HBAI income statistics currently use the modified OECD equivalence scale for BHC incomes, and an AHC variant from the Department for Work and Pensions (DWP), shown in Table A.1. These equivalence scales are used to adjust incomes on the basis of household size and composition. For example, when income is measured before housing costs, the OECD scale implies that a single person would require 67% of the income that a childless couple would require to attain the same standard of living. So, to get the equivalent income of that single person, we divide their actual income by 0.67. This process is referred to as 'income equivalisation'. Having equivalised household incomes, cash income figures are expressed as the equivalents for a childless couple, i.e. a household's income is expressed as the amount that a childless couple would require to enjoy the same standard of living as that household.

Table A.1. Modified OECD equivalence scales

	BHC equivalence scale	AHC equivalence scale
First adult	0.67	0.58
Spouse	0.33	0.42
Other second adult	0.33	0.42
Third and subsequent adults	0.33	0.42
Child aged under 14	0.20	0.20
Child aged 14 and over	0.33	0.42

The modified OECD scale does not take into account other characteristics of the household besides the age and number of individuals in the household, although

are related can be in two separate benefit units. For example, a household composed of a couple living with one of their parents would be two separate benefit units, as would a household composed of two adult siblings living together.

there may be other important factors affecting a household's needs. An important example of these would be the disability or health status of household members. The conventional methodology in HBAI would place a household receiving disability benefits higher up the income distribution than an otherwise-equivalent household without such benefits. But if this higher level of income only compensates the household for the greater needs it has or the extra costs it faces, then the standard of living of this household may be no higher.⁸⁵

Sample weighting, and adjusting the incomes of the 'very rich'

The incomes analysed in this report are derived from the Family Resources Survey (FRS) and, prior to 1994–95, the Family Expenditure Survey (FES). These surveys are designed to provide a broadly representative sample of households in Great Britain until 2001–02, and in the whole United Kingdom from 2002–03 onwards. However, because they are voluntary surveys, there is inevitably a problem of non-response, which may differ according to family type and according to income. Such non-response bias is dealt with in two ways. First, weights are applied to the data to ensure that the composition of the sample (in terms of age, sex, partnership status, region and a number of other variables) reflects the true UK population.⁸⁶ For example, if there are proportionately fewer lone parents in the sample than there are in the population, then relatively more weight must be placed upon the data from those lone parents who actually do respond.

Second, a special adjustment is applied to incomes at the very top of the income distribution to correct for the particular problems in obtaining high response rates from individuals with very high incomes and the volatility in their reported incomes. This adjustment uses projected data from HMRC's Survey of Personal Incomes (SPI) – a more reliable source of data for the richest individuals based on income tax returns. Individuals with an income above a very high threshold are assigned an income level derived from the SPI, which is an estimate of the average income for people above that threshold in the population (the threshold and replacement income value are set separately for pensioners and non-pensioners). Note that this procedure will therefore not capture the *inequality* within the very richest section of the population. There is no corresponding correction for non-response, or for misreporting of incomes, at the lower end of the income distribution, meaning caution should be used when considering those with the very lowest incomes.

⁸⁵ See also section 5.3 of Brewer et al. (2008).

⁸⁶ See Department for Work and Pensions (2015).

Adjusting for inflation

All of the description of the HBAI methodology so far sets out how we, following the government's HBAI methodology, measure living standards in any one year. However, because of inflation, the same cash incomes do not have the same purchasing power or real value over time. It is therefore necessary to adjust for inflation, and express all figures in real terms, which we do in the prices of the latest year (2013–14 in this report). The adjustment for inflation is the one way in which we differ from the statistics produced by the Department for Work and Pensions.

We account for inflation using variants of the Consumer Prices Index (CPI). For comparing BHC measures of income over time, we use a variant of the standard CPI that includes owner-occupiers' housing costs (mortgage interest payments, and insurance and ground rent for owner-occupiers); for AHC measures, we use a variant of the CPI that excludes all housing costs (including rent and water costs, which are part of the standard CPI).⁸⁷ These measures are different from (and more appropriate than) the variants of the Retail Prices Index (RPI) that DWP still uses to account for inflation in the official statistics. The RPI is known to significantly and systematically overstate inflation due to defects in its formula – particularly since 2010.⁸⁸ DWP is planning to review its use of the RPI once the UK Statistics Authority has responded to last year's Review of Consumer Price Statistics⁸⁹ led by Paul Johnson. As the way we account for inflation is different from DWP's method, our figures for income growth and measures of absolute poverty are different from those produced by DWP. However, our priority is to provide the most accurate picture possible of trends in living standards over time, which means using an alternative inflation measure to that currently used in official statistics.

The income measure summarised

In the analysis in this report, our main measure of living standards is *household equivalised income after deducting taxes and adding benefits and tax credits*, expressed as the equivalent income for a couple with no dependent children and in average 2013–14 prices. For brevity, we often use this term interchangeably with 'income'.

⁸⁷ These variants are not produced by the Office for National Statistics (ONS). We are very grateful to our colleague Peter Levell for constructing these measures of inflation for use in our analysis. These 'deflators' are available online at http://www.ifs.org.uk/uploads/HBAI_inflation.xlsx.

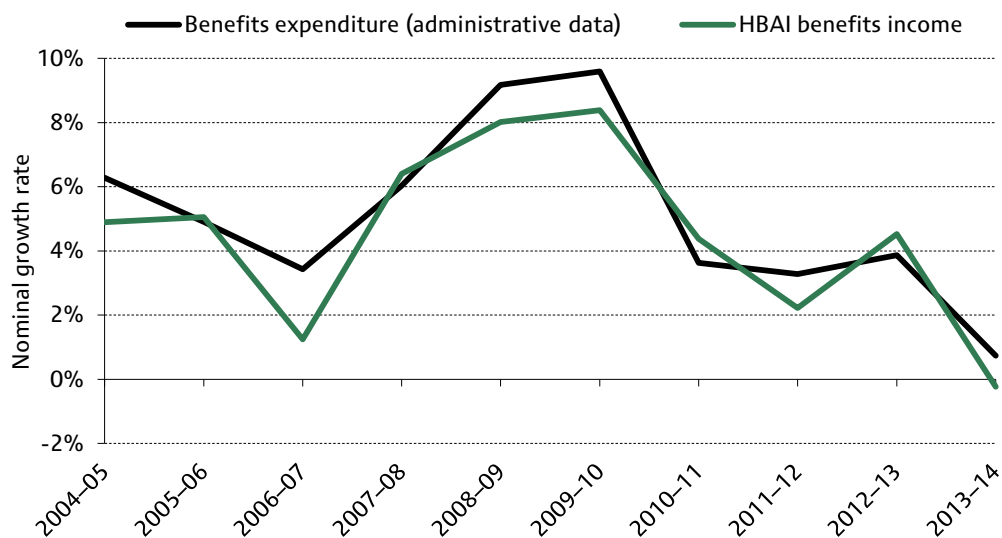
⁸⁸ See box 3.3 in Office for Budget Responsibility (2015a) for the latest estimates of the difference between CPI and RPI measures of inflation.

⁸⁹ See Johnson (2015) for more details.

Appendix B. Benefit and tax credit income: comparing HBAI and administrative data

Figure B.1 shows nominal growth in total benefit and tax credit spending as recorded in administrative data by the Department for Work and Pensions (DWP) and HM Revenue and Customs (HMRC), compared with nominal growth in benefit and tax credit income measured by HBAI. (Reflecting the availability of administrative data, tax credit and child benefit income is for the UK and other benefit income is for Great Britain.)

Figure B.1. Nominal growth in total spending on benefits and tax credits: comparing HBAI and administrative data



Note: Tax credit and child benefit income is for the UK. Other benefit income is for Great Britain. As of 2013–14, the figure excludes council tax support as this was no longer managed by DWP. Source: HBAI benefits income from authors’ calculations using Family Resources Survey, various years. Administrative expenditure from DWP benefit expenditure table 1a (available at <https://www.gov.uk/government/statistics/benefit-expenditure-and-caseload-tables-2015>) and HMRC annual accounts, various years (latest available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/330670/HMRC-annual-report-2013-14.pdf).

According to the administrative data, nominal benefit spending grew by 0.7% between 2012–13 and 2013–14, whereas benefit and tax credit receipts recorded by the HBAI data fell slightly, by 0.2%. The graph shows that this latest discrepancy is by no means unprecedented; in fact, over the last 10 years, the average absolute difference in the growth recorded by the administrative data and HBAI data was 1 percentage point. Differences from year to year are to be expected due to random sampling variation in the underlying survey data, as well as to possible fluctuations in the survey’s ability to correctly record benefit and tax credit income for those who are sampled.

If the differences in growth rates from year to year were entirely due to sampling variation, then they should average close to zero over a number of years. However, there is some evidence that the HBAI data have been getting systematically worse at recording benefit and tax credit receipt. Taking the period since 2004–05 as a whole, administrative data show a cash increase in benefit and tax credit spending of 64%, whilst HBAI records an increase of only 55%.

Table B.1 documents the extent of under-recording of the largest benefits and tax credits (in expenditure terms, according to administrative data) in the HBAI data. Overall, the HBAI data captured around 80% of benefit and tax credit spending in 2013–14 (this is similar to 2012–13). Within that aggregate figure, the general pattern that emerges is particularly poor recording of receipt of means-tested payments. For example, whilst HBAI picked up around 90% of child benefit and basic state pension spending in 2013–14, it recorded just 59% of pension credit spending and 71% of tax credit spending. The particularly poor recording of pension credit receipt is of continuing concern, given its potential implications for the measurement of pensioner poverty. In the latest year of data, there was a noticeable fall in the recording of disability living allowance, from 82% in 2012–13 to 73% in 2013–14. This was driven by a fall in the recorded number of claimants rather than falling average receipt and may help to explain the significant rise in AHC poverty among disabled families reported in DWP’s HBAI publication.⁹⁰

More generally, the effect of this under-recording on median income, inequality and poverty is not known, as it depends upon precisely where those with under-reported incomes are in the income distribution. But the general tendency for means-tested benefits to be recorded poorly is suggestive that the largest bias caused may be an underestimation of the incomes of low-income households.

Table B.1. Total annual expenditure on major benefits in 2013–14 (GB)

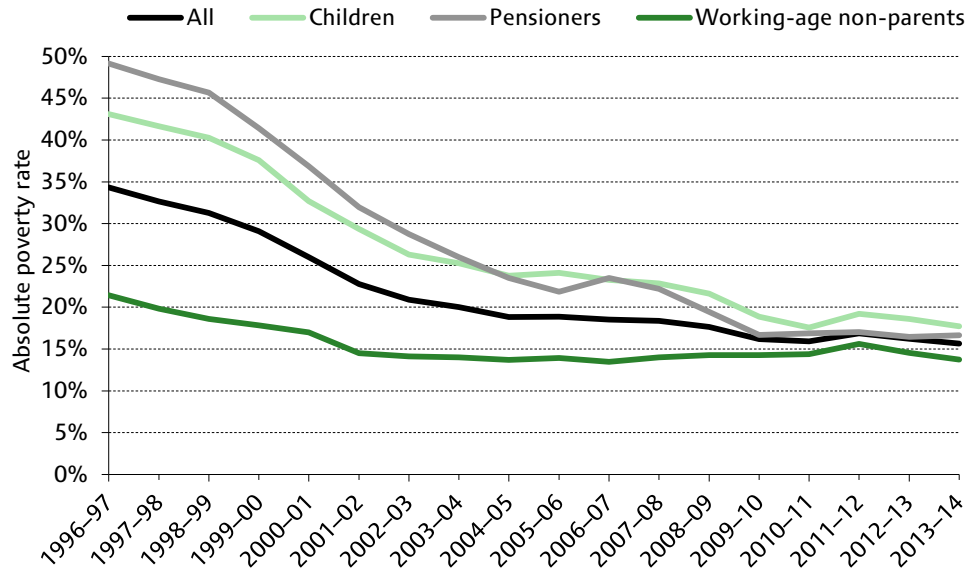
	Administrative data (£ billion)	HBAI data (£ billion)	% of total expenditure recorded in HBAI data
Basic state pension	83.1	73.3	88%
Pension credit	7.0	4.1	59%
Tax credits	28.8	20.4	71%
Child benefit	11.1	10.2	92%
Housing benefit	24.2	18.9	78%
Disability living allowance	13.8	10.0	73%
All benefits and tax credits	203.7	162.0	80%

Source: HBAI benefits income from authors’ calculations using Family Resources Survey, 2013–14. Administrative expenditure from DWP benefit expenditure table 1a and table on tax credits and child benefit (available at <https://www.gov.uk/government/statistics/benefit-expenditure-and-caseload-tables-2015>).

⁹⁰ Department for Work and Pensions, 2015.

Appendix C. Supplementary analysis to Chapter 4

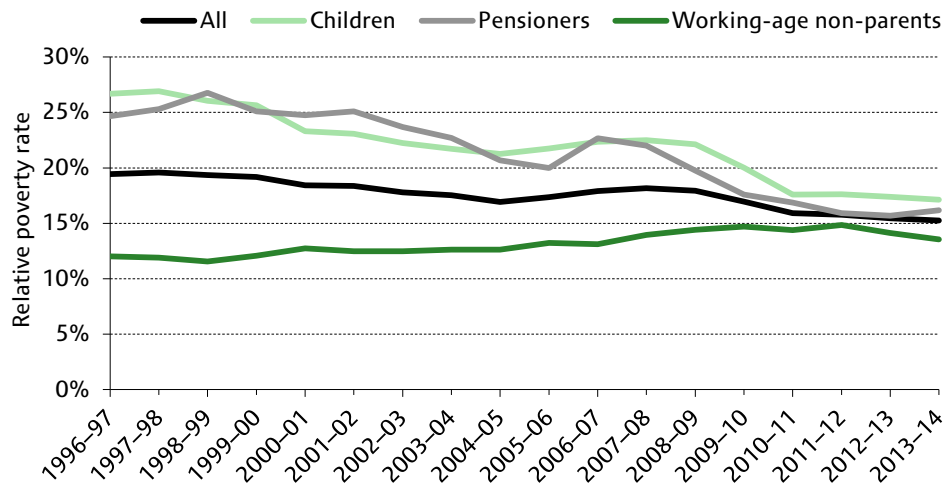
Figure C.1. Absolute poverty rates (BHC), by family type



Note: Figures are presented for GB up until 2001-02 and for the whole of the UK from 2002-03 onwards. The absolute poverty line is defined as 60% of median income in 2010-11.

Source: Authors' calculations using Family Resources Survey, various years.

Figure C.2. Relative poverty rates (BHC), by family type



Note: Figures are presented for GB up until 2001-02 and for the whole of the UK from 2002-03 onwards.

Source: Authors' calculations using Family Resources Survey, various years.

Table C.1. Cash values of poverty lines for example families in 2013–14 (£ per week)

	Childless couple	Single adult	Couple, 1 child	Lone parent, 1 child	Couple, 3 children
AHC					
Absolute poverty line	235	136	282	183	376
Relative poverty line	232	134	278	181	371
BHC					
Absolute poverty line	274	183	329	238	439
Relative poverty line	272	181	326	236	435

Note: The children in these example families are assumed to be aged 13 or younger. For families with older children, the poverty lines are slightly higher.

Source: Authors' calculations using the Family Resources Survey.

Table C.2. Decomposition of the change in absolute AHC non-pensioner poverty between 2012–13 and 2013–14, by family type and work status

	Non-pensioner poverty rate (%)		Proportion of non-pensioner population (%)		Compositional Incidence effect (ppt)	
	2012–13	2013–14	2012–13	2013–14		
Single adults						
Full-time	12.7	13.3	13.2	14.5	-0.2	0.1
Part-time	30.7	30.4	6.0	5.8	0.0	0.0
Workless	55.4	55.2	12.9	11.7	-0.3	0.0
Couples						
Self-employed	26.3	24.7	10.2	10.7	0.0	-0.2
Both full-time	3.0	3.5	19.8	20.2	-0.1	0.1
One full-time, one part-time	7.5	8.0	15.8	15.6	0.0	0.1
One full-time, one not working	27.9	29.1	12.2	12.4	0.0	0.2
One or two part-time	46.3	43.9	4.5	3.8	-0.1	-0.1
Workless	62.2	62.4	5.5	5.2	-0.1	0.0
All	24.0	23.3	100	100	-0.8	0.1

Note: The non-pensioner poverty rate is calculated as the proportion of non-pensioners living in a household with an income after housing costs of less than 60% of the 2010–11 median.

Source: Authors' calculations using Family Resources Survey, various years.

Table C.3. Decomposition of the change in absolute AHC child poverty between 2012–13 and 2013–14, by family type and work status

	Child poverty rate (%)		Proportion of child population (%)		Compositional effect (ppt)	Incidence effect (ppt)
	2012–13	2013–14	2012–13	2013–14		
Single adults						
Full-time	22.8	20.7	5.7	6.0	0.0	–0.1
Part-time	31.5	33.1	6.6	7.0	0.0	0.1
Workless	62.8	59.2	11.2	10.6	–0.2	–0.4
Couples						
Self-employed	32.6	28.9	11.9	12.2	0.0	–0.5
Both full-time	4.0	5.2	16.2	17.0	–0.2	0.2
One full-time, one part-time	8.3	9.0	21.5	20.9	0.1	0.2
One full-time, one not working	32.1	34.5	16.0	16.3	0.0	0.4
One or two part-time	55.8	57.5	5.2	4.3	–0.2	0.1
Workless	74.6	76.5	5.7	5.7	0.0	0.1
All	29.0	28.6	100	100	–0.5	0.1

Note: The child poverty rate is calculated as the proportion of children living in a household with an income after housing costs of less than 60% of the 2010–11 median.

Source: Authors' calculations using Family Resources Survey, various years.

Table C.4. Decomposition of the change in absolute BHC non-pensioner poverty between 2012–13 and 2013–14, by family type and work status

	Non-pensioner poverty rate (%)		Proportion of non-pensioner population (%)		Compositional effect (ppt)	Incidence effect (ppt)
	2012–13	2013–14	2012–13	2013–14		
Single adults						
Full-time	7.4	7.8	13.2	14.5	-0.1	0.1
Part-time	17.9	18.2	6.0	5.8	0.0	0.0
Workless	35.7	33.8	12.9	11.7	-0.2	-0.2
Couples						
Self-employed	21.0	19.7	10.2	10.7	0.0	-0.1
Both full-time	1.8	2.1	19.8	20.2	-0.1	0.1
One full-time, one part-time	3.7	4.2	15.8	15.6	0.0	0.1
One full-time, one not working	17.7	18.2	12.2	12.4	0.0	0.1
One or two part-time	33.2	34.0	4.5	3.8	-0.1	0.0
Workless	51.0	47.6	5.5	5.2	-0.1	-0.2
All	16.1	15.4	100	100	-0.5	-0.2

Note: The non-pensioner poverty rate is calculated as the proportion of non-pensioners living in a household with an income before housing costs of less than 60% of the 2010–11 median.

Source: Authors' calculations using Family Resources Survey, various years.

Table C.5. Decomposition of the change in absolute BHC child poverty between 2012–13 and 2013–14, by family type and work status

	Child poverty rate (%)		Proportion of child population (%)		Compositional effect (ppt)	Incidence effect (ppt)
	2012–13	2013–14	2012–13	2013–14		
Single adult						
Full-time	12.2	9.6	5.7	6.0	0.0	–0.2
Part-time	17.3	16.7	6.6	7.0	0.0	0.0
Workless	33.3	28.8	11.2	10.6	–0.1	–0.5
Couple						
Self-employed	26.3	22.8	11.9	12.2	0.0	–0.4
Both full-time	2.4	3.2	16.2	17.0	–0.1	0.1
One full-time, one part-time	4.1	5.0	21.5	20.9	0.1	0.2
One full-time, one not working	20.3	21.0	16.0	16.3	0.0	0.1
One or two part-time	39.4	42.2	5.2	4.3	–0.2	0.1
Workless	58.2	57.5	5.7	5.7	0.0	0.0
All	18.6	17.7	100	100	–0.3	–0.6

Note: The child poverty rate is calculated as the proportion of children living in a household with an income before housing costs of less than 60% of the 2010–11 median.

Source: Authors' calculations using Family Resources Survey, various years.

References

- Adam, S., Browne, J., Emmerson, C., Hood, A., Johnson, P., Joyce, R., Miller, H., Phillips, D., Pope, T. and Roantree, R. (2015), 'Taxes and benefits: the parties' plans', Institute for Fiscal Studies (IFS), Briefing Note no. BN172 (<http://www.ifs.org.uk/publications/7733>).
- Adam, S., Browne, J., Jeffs, W. and Joyce, R. (2014), *Council Tax Support Schemes in England: What Did Local Authorities Choose, and with What Effects?*, Report no. R90, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/7057>).
- Avram, S., Brewer, M. and Salvatori, A. (2013), *Lone Parent Obligations: An Impact Assessment*, DWP Research Report no. 845, London: Department for Work and Pensions (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211688/rrep845.pdf).
- Belfield, C., Chandler, D. and Joyce, R. (2015), 'Housing: trends in prices, costs and tenure', Institute for Fiscal Studies (IFS), Briefing Note no. BN161 (<http://www.ifs.org.uk/publications/7593>).
- Belfield, C., Cribb, J., Hood, A. and Joyce, R. (2014), *Living Standards, Poverty and Inequality in the UK: 2014*, Report no. R96, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/7274>).
- Berthoud, R. and Zantomio, F. (eds) (2008), *Measuring Poverty: Seven Key Issues*, Colchester: Institute for Social and Economic Research.
- Blow, L., Walker, I. and Zhu, Y. (2012), 'Who benefits from child benefit?', *Economic Inquiry*, vol. 50, pp. 153–70.
- Brewer, M., Goodman, A. and Leicester, A. (2006), *Household Spending in Britain: What Can It Teach Us about Poverty?*, Bristol: Policy Press.
- Brewer, M., Muriel, A., Phillips, D. and Sibieta, L. (2008), *Poverty and Inequality in the UK: 2008*, Commentary no. C105, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/4258>).
- Brewer, M. and O'Dea, C. (2012), 'Measuring living standards with income and consumption: evidence from the UK', Institute for Fiscal Studies (IFS), Working Paper no. W12/12 (<http://www.ifs.org.uk/publications/6276>).
- Browne, J., Cribb, J., Hood, A., Johnson, P., Joyce, R., O'Dea, C., Phillips, D. and Sibieta, L. (2013), 'Response of IFS researchers to "Measuring Child Poverty: a consultation on better measures of child poverty"' (<http://www.ifs.org.uk/publications/6607>).
- Browne, J. and Phillips, D. (2015), 'Short run responses to the new 50% income tax rate in the UK', presentation to the Royal Economic Society Conference (<http://www.ifs.org.uk/publications/7675>).
- Clarke, A., Hill, L., Marshall, B., Monk, S., Pereira, I., Thomson, E., Whitehead, C. and Williams, P. (2014), *Evaluation of Removal of the Spare Room Subsidy*, DWP Research Report no. 882, London: Department for Work and Pensions (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/329948/rr882-evaluation-of-removal-of-the-spare-room-subsidy.pdf).
- Cribb, J., Hood, A., Joyce, R. and Phillips, D. (2013), *Living Standards, Poverty and Inequality in the UK: 2013*, Report no. R81, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/6759>).

- Cribb, J., Hood, A. and Joyce, R. (2015), 'Living standards: recent trends and future challenges', Institute for Fiscal Studies (IFS), Briefing Note no. BN165 (<http://www.ifs.org.uk/publications/7615>).
- Cribb, J. and Joyce, R. (2015), 'Earnings since the recession', in C. Emmerson, P. Johnson and R. Joyce (eds), *The IFS Green Budget: February 2015*, London: Institute for Fiscal Studies (http://www.ifs.org.uk/uploads/gb/gb2015/ch2_gb2015.pdf).
- Cribb, J., Joyce, R. and Phillips, D. (2012), *Living Standards, Poverty and Inequality in the UK: 2012*, Commentary no. C124, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/6196>).
- Davison, A. C. and Hinkley, D. V. (1997), *Bootstrap Methods and Their Application*, Cambridge: Cambridge University Press.
- Department for Work and Pensions (2015), *Households below Average Income: An Analysis of the Income Distribution 1994/95 – 2013/14*, London: DWP.
- Deutsch, J., Guio, A., Pomati, M. and Silber, J. (2015), 'Material deprivation in Europe: which expenditures are curtailed first?', *Social Indicators Research*, vol. 120, pp. 723–40.
- EAPN Social Inclusion Working Group (2009), 'Poverty and inequality in the EU', European Anti Poverty Network (EAPN) Explainer (http://www.eapn.eu/images/docs/povertyexplainer_en.pdf).
- Emmerson, C., Heald, K. and Hood, A. (2014), *The Changing Face of Retirement: Future Patterns of Work, Health, Care and Income among the Older Population*, Report no. R95, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/7251>).
- Gregg, P. and Wadsworth, J. (2008), 'Two sides to every story: measuring polarization and inequality in the distribution of work', *Journal of the Royal Statistical Society: Series A*, vol. 171, pp. 857–75.
- HM Government (2012), *Measuring Child Poverty: A Consultation on Better Measures of Child Poverty* (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228829/8483.pdf).
- HM Revenue and Customs (2012), *The Exchequer Effect of the 50 per cent Additional Rate of Income Tax* (<http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hmrc.gov.uk/budget2012/excheq-income-tax-2042.pdf>).
- Hood, A. (2015), 'Benefit changes and distributional analysis', presentation at IFS Post-Budget Briefing 2015 (<http://www.ifs.org.uk/publications/7855>).
- Johnson, P. (2015), *UK Consumer Price Statistics: A Review*, London: UK Statistics Authority (<http://www.statisticsauthority.gov.uk/reports---correspondence/current-reviews/uk-consumer-price-statistics---a-review.pdf>).
- Joyce, R. (2015), 'Child poverty in Britain: recent trends and future prospects', Institute for Fiscal Studies (IFS), Working Paper no. W15/07 (<http://www.ifs.org.uk/publications/7584>).
- Miller, R. (2011), 'The long-run difference between RPI and CPI inflation', Office for Budget Responsibility (OBR), Working Paper no. 2 (<http://budgetresponsibility.org.uk/wordpress/docs/Working-paper-No2-The-long-run-difference-between-RPI-and-CPI-inflation.pdf>).
- Office for Budget Responsibility (2015a), *Economic and Fiscal Outlook – March 2015* (<http://budgetresponsibility.org.uk/economic-fiscal-outlook-march-2015/>).

Living standards, poverty and inequality in the UK: 2015

Office for Budget Responsibility (2015b), *Economic and Fiscal Outlook – July 2015* (<http://cdn.budgetresponsibility.independent.gov.uk/July-2015-EFO-234224.pdf>).

Office for National Statistics (2014), 'Working and workless households, 2014', Statistical Bulletin (http://www.ons.gov.uk/ons/dcp171778_382704.pdf).