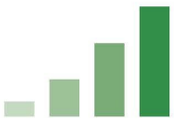

Institute for Fiscal Studies

Living Standards, Poverty and Inequality in the UK: 2014

Chris Belfield
Jonathan Cribb
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JRF JOSEPH ROWNTREE FOUNDATION

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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 number RES-544-28-0001) is also very gratefully acknowledged.

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Contents

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 thirteenth 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 2012–13. The picture is strikingly different. Average incomes have just begun to stabilise after falling sharply in the aftermath of the Great Recession. Income inequality has fallen back to levels last seen one or two decades ago, depending on the measure. And whilst relative poverty has also been falling, this is only because the poverty line fell in line with average incomes. In absolute terms, the poor have become worse off in recent years – particularly when their housing costs are properly accounted for. Important new themes have emerged, including the falling-behind of young adults as they have struggled in the labour market and large differences in trends in the cost of housing across the population as mortgage interest rates have plummeted.

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 1.5% 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 1.3% 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 has been no exception.

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

- Official HBAI statistics show that inflation-adjusted median household income (measured before housing costs, BHC) was broadly stable between 2011–12 and 2012–13 (a fall of 0.2%) and mean income fell by 1.5%. Neither change was statistically significant. This comes after a two-year period following the recent recession in which average incomes fell sharply. As a result, real median income in 2012–13 was 5.8% below its 2009–10 peak and mean income was 8.5% lower.

- The fall in average income since 2009–10 was driven largely by a 9.4% fall in the pre-tax earnings of households. This came about despite a rise in the proportion of people employed, because the pay of workers grew much less quickly than prices.

- HBAI statistics continue to use the retail price index (RPI) to adjust for inflation. This is generally agreed to overstate inflation, so the headline statistics are likely to overstate the real falls in income. Using the improved RPIJ measure, real median income was 3.6% (rather than 5.8%) lower in 2012–13 than its peak in 2009–10; and there was even small (but statistically insignificant) real growth, of 0.5%, in 2012–13. Real median income in 2012–13 is no higher than in 2005–06 according to the RPIJ, rather than 2000–01 using the RPI.

- Changes in housing costs have had a significant impact on living standards since the recession. Between 2007–08 and 2012–13, historically large falls in mortgage interest payments, caused by falls in interest rates, reduced the real housing costs of mortgage-paying owner-occupying households by 37% and reduced the proportion of their income spent on housing costs from 18% to 13%. This drove a real fall in average housing costs of nearly 20%. Without this fall in housing costs, mean after-housing-costs income would have fallen by 13% rather than 10%.

- Trends in housing costs have not been offering the same scale of relief for renters, whose proportion of income spent on housing costs rose from 26% in 2007–08 to 28% in 2012–13. In addition, the proportion of people living in a mortgaged home – rather than in a home that is rented or owner-occupied without a mortgage – continued its decline over the same period, falling by 5 percentage points. Hence, falls in mortgage interest rates have benefited fewer people than would otherwise have been the case.

- The recession had differing impacts across the UK. Comparing 2007–08 to 2009–10 with 2010–11 to 2012–13, real falls in median BHC income range from 8% in Northern Ireland to 2% in the East Midlands. There is no clear geographic relationship between pre-crisis income levels and income changes since the crisis.

- Accounting for different changes in housing costs across the UK is also important. On an after-housing-costs basis, London and Northern Ireland saw the largest falls in real median income, at over 8%. London saw the smallest fall in housing costs, in part because it has a lower proportion of mortgagers than the UK as a whole – and hence has benefited less from falls in mortgage interest payments.

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. 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 contributed to further increases in the incomes of the old relative to those of the young.

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

- There was little change in income inequality in the UK between 2011–12 and 2012–13. However, inequality remains significantly lower than in 2007–08: real (RPI-deflated) incomes measured before housing costs (BHC) fell by 6.2% at the 90th percentile and 4.5% at the median, and rose by 0.9% at the 10th percentile. As a result, the Gini coefficient fell from 0.36 to 0.34, lower than its 1990 level.

- The primary reason for the fall in inequality was that real earnings fell sharply while benefit entitlements remained relatively stable. Median income for non-working households (including pensioners) was 60% of that of working households in 2007–08, but 67% by 2012–13.

- The fall in income inequality was much smaller when incomes are measured after deducting housing costs (AHC). On that basis, incomes fell by 8.0% at the 90th percentile, 8.7% at the median and 6.4% at the 10th percentile. This is because the large falls in mortgage costs primarily benefited those towards the top of the income distribution. Housing costs fell by over 20% across the top half of the distribution, but by less than 10% in the second and third income deciles.

- Over recent years, the incomes of pensioner households have continued to increase relative to those of working-age households (both BHC and AHC). Median AHC income among pensioner households overtook that of working-age households in 2009–10, for the first time since records began in 1961. By 2012–13, it was 5% higher, having been 5% lower in 2007–08 and 20% lower as recently as 1992. The relative increase in pensioner incomes was in stark contrast to the fortunes of young adults, who saw by far the largest falls in income.

- This is despite the fact that recent changes in housing costs have tended to benefit younger adults more. Falling mortgage interest rates provided the largest boost to

young homeowners, because they tend to have the most outstanding mortgage debt. Moreover, young renters are the most likely to rent from a private landlord, and private rents have fallen relative to social rents.

- However, it looks likely that younger adults will face higher housing costs in later life than their predecessors, because more will still be renting rather than owner-occupying with no outstanding mortgage. Recently, each successive birth cohort has had a lower homeownership rate than the last. The age-25 homeownership rate has halved in 20 years, falling to 21% of those born in the mid 1980s from 34% for the mid-1970s cohort and 45% for the mid-1960s cohort.

- There is good reason to think that the falls in income inequality since 2007–08 are currently being reversed. As earnings growth catches up with inflation, primarily boosting incomes for middle- and higher-income households, cuts to benefits and tax credits are reducing incomes primarily towards the bottom. In contrast, the increase in pensioner incomes relative to working-age incomes continues a much longer-term trend and may well prove more durable.

Chapter 4 – 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.

Finally, we can gain a richer understanding of patterns of low living standards by looking also at non-income-based measures. These include indicators of 'material deprivation' – which measure the extent to which families say they are unable to afford various commodities or services – and the prevalence of arrears with household bills, mortgage payments or rent.

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

- Official statistics show that 10.6 million individuals (16.8% of the population) were in absolute poverty in the UK in 2012–13, measuring incomes before housing costs (BHC) and using a poverty line equal to 60% of 2010–11 median income in real terms. This was a fall of 200,000 individuals (0.5 percentage points) since 2011–12. Measured after housing costs (AHC), 14.6 million (23.2%) were in absolute poverty, an increase of 600,000 individuals (0.8ppt).

- Measured BHC, absolute poverty is close to the pre-crisis level seen between 2004–05 and 2008–09; but on an AHC basis, absolute poverty is 3.0 million (3.6ppt) above its low point in 2004–05 and at its highest level since 2001–02.

- There were significant falls in relative poverty between 2007–08 and 2012–13, using a poverty line of 60% of median income. It fell by 1.3 million (2.8ppt) to 9.7 million (15.4%) BHC and by 300,000 (1.5ppt) to 13.2 million (21.0%) AHC. This was driven by pensioners and families with children. Low-income members of those groups get most of their income from state benefits, and benefit entitlements were much more stable than median income over this period.

- Recent poverty trends look less favourable on an AHC basis, because they account for variation in housing cost trends. Although on average housing costs have fallen sharply, they have fallen by less for low-income households.

- There is evidence that low living standards may be better detected by looking at the income available after housing costs have been paid. London has a BHC income poverty rate lower than the UK average, yet the highest rates of AHC income poverty and material deprivation. Child material deprivation has been rising since the start of the Great Recession, and it increased by 300,000 children (2.1ppt) in 2012–13 alone. Over the same period, the rate of absolute income poverty among children rose when measured AHC but fell when measured BHC.

- The proportion of individuals in arrears on household bills fell from a peak of 9.9% in 2009–10 to 8.1% in 2012–13 (after rising in the pre-recession years). This happened alongside large *falls* in incomes; but the peak in arrears aligns with the peak in redundancies and with rises in unemployment. This may be because arrears are more related to unexpected falls in income than to low levels of income per se.

- The government recently proposed combining indicators such as income, material deprivation and arrears into one index of child poverty. The analysis here serves as a reminder that such an index could conceal important differences between movements in its component parts and could be difficult to interpret.

- It is likely that future releases of HBAI data will show increases in income poverty among children and working-age adults. This is because cuts to the working-age social security budget as part of the fiscal consolidation were accelerated from April 2013. The outlook for pensioner poverty continues to look more favourable.

Chapter 5 – Young Adults and the Recession

Evidence from previous recessions, in the UK and elsewhere, suggests that they often hit young adults particularly hard. That has certainly been the case with this recession, and in last year's report we highlighted that recent trends in the incomes of young adults have indeed been the worst of all age groups.

Lower employment rates and lower pay for those in work fully explain the large drops in young adults' household incomes. We analyse these labour market outcomes in detail in this year's report. But when considering living standards, and the headline household-level income measures provided by the HBAI data, it is also important to understand the role of other household members. In particular, many young adults live with their parents – and the number doing so has increased since the recession. This might provide an important cushion for their living standards when their own incomes are falling.

This year, we look in detail at the living standards of young adults, how these seem to have been affected by the recession and what this might say about their future prospects. We draw both on the HBAI data and, for the purposes of analysing labour market outcomes, the Labour Force Survey (LFS).

Key findings on young adults and the Great Recession from this year's report include:

- Real incomes have fallen across the working-age spectrum since the recession, and particularly sharply for young adults. Comparing 22- to 30-year-olds in 2012–13 with 22- to 30-year-olds in 2007–08, median household income (RPI-deflated) fell by 13% BHC and 20% AHC. This compares with falls of 7% and 11% respectively for those aged 31–59.

- Over the same period, absolute income poverty (using a fixed real poverty line of 60% of 2010–11 median income) rose by 1.4 percentage points (ppt) BHC and by 6.5ppt AHC for adults aged 22–30, while it rose by 0.9ppt BHC and 3.4ppt AHC for adults aged 31–59.

- The fall in income for young adults since 2007–08 is entirely accounted for by falls in their earned income (and in the earnings of cohabiting partners, where applicable). These are due both to falls in employment and to sharp falls in real pay for those employed.

- Between 2007–08 and 2012–13, the employment rate fell by 4ppt for 22- to 30-year-olds while remaining unchanged for 31- to 59-year-olds. Median real earnings for employees aged 22–30 fell by 15% between 2007–08 and 2012–13. This is despite an increase in the proportion with high levels of formal education. It compares with a fall of 6% for adults aged 31–59.

- The earnings falls among young workers are partly due to lower hours of work (including more part-time work) – some of which looks involuntary, as indicators of 'under-employment' have risen. However, their hourly wages have also fallen particularly sharply. Median hourly wages fell by 11% in real terms for employees aged 22–30 between 2007–08 and 2012–13, and by just 3% for those aged 31–59.

- Just over a quarter of people aged 22–30 live with parents, and this proportion rose by 7% (2ppt) between 2005–06 to 2007–08 and 2010–11 to 2012–13. This has tended to moderate the fall in household income for those concerned. Median household (BHC) income among 22- to 30-year-olds living with parents fell by about 8% over this period; focusing only on their own income and that of any cohabiting partners, median income fell by 17%.

- There is evidence to suggest that the income levels of parents affect the living standards of young adults who live with them. Young adults who live with low-income parents are more likely than those who live with high-income parents to say that they cannot afford a holiday, cannot afford to save £10 per month or cannot keep up with regular payments. This is true even when comparing young adults whose personal incomes (and those of their partners) are similar. This implies that parents' incomes, which have been relatively stable, may have provided important insurance against falling personal incomes for some young adults since the start of the Great Recession.

1. Introduction

In this report, we examine the distribution of household income in the UK. We assess the changes to average incomes, income inequality and income poverty that occurred in the latest year of data (2012–13), and put these in historical context using comparable data spanning the last 50 years.

The analysis draws upon the latest figures from the Department for Work and Pensions (DWP)'s Households Below Average Income (HBAI) series, published on 1 July 2014. 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. 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 is not the same as a family; for instance, young adults living together (other than as a couple) are in the same household but not the same family, which is defined as a single adult or couple and their dependent children.
- 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).

It is worth noting that since the publication of the 2011–12 HBAI data in June 2013, the data between 2002–03 and 2011–12 have been revised. These revisions reflect new information about the demographic characteristics of the UK population collected in the 2011 Census. The effects of these revisions on average incomes, inequality and poverty have been small and all the analysis in this report uses the revised data.[1]

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 between different age groups. Chapter 4 examines trends in poverty, looking at absolute and relative measures of poverty, as well as additional indicators of low living standards, such as material deprivation. Chapter 5 analyses in detail the living standards of young adults – a group that has been hit particularly hard since the start of the Great Recession.

[1] See https://www.gov.uk/government/publications/re-grossed-households-below-average-income-hbai-estimates-200203-to-201112 for details of the effect of introducing new demographic data from the 2011 Census on HBAI data.

2. Living Standards

Key findings

- Official HBAI statistics show that inflation-adjusted median household income (measured before housing costs, BHC) was broadly stable between 2011–12 and 2012–13 (a fall of 0.2%) and mean income fell by 1.5%. Neither change was statistically significant. This comes after a two-year period following the recent recession in which average incomes fell sharply. As a result, real median income in 2012–13 was 5.8% below its 2009–10 peak and mean income was 8.5% lower.

- The fall in average income since 2009–10 was driven largely by a 9.4% fall in the pre-tax earnings of households. This came about despite a rise in the proportion of people employed, because the pay of workers grew much less quickly than prices.

- HBAI statistics continue to use the retail price index (RPI) to adjust for inflation. This is generally agreed to overstate inflation, so the headline statistics are likely to overstate the real falls in income. Using the improved RPIJ measure, real median income was 3.6% (rather than 5.8%) lower in 2012–13 than its peak in 2009–10; and there was even small (but statistically insignificant) real growth, of 0.5%, in 2012–13. Real median income in 2012–13 is no higher than in 2005–06 according to the RPIJ, rather than 2000–01 using the RPI.

- Changes in housing costs have had a significant impact on living standards since the recession. Between 2007–08 and 2012–13, historically large falls in mortgage interest payments, caused by falls in interest rates, reduced the real housing costs of mortgage-paying owner-occupying households by 37% and reduced the proportion of their income spent on housing costs from 18% to 13%. This drove a real fall in average housing costs of nearly 20%. Without this fall in housing costs, mean after-housing-costs income would have fallen by 13% rather than 10%.

- Trends in housing costs have not been offering the same scale of relief for renters, whose proportion of income spent on housing costs rose from 26% in 2007–08 to 28% in 2012–13. In addition, the proportion of people living in a mortgaged home – rather than in a home that is rented or owner-occupied without a mortgage – continued its decline over the same period, falling by 5 percentage points. Hence, falls in mortgage interest rates have benefited fewer people than would otherwise have been the case.

- The recession had differing impacts across the UK. Comparing 2007–08 to 2009–10 with 2010–11 to 2012–13, real falls in median BHC income range from 8% in Northern Ireland to 2% in the East Midlands. There is no clear geographic relationship between pre-crisis income levels and income changes since the crisis.

- Accounting for different changes in housing costs across the UK is also important. On an after-housing-costs basis, London and Northern Ireland saw the largest falls in real median income, at over 8%. London saw the smallest fall in housing costs, in part because it has a lower proportion of mortgagers than the UK as a whole – and hence has benefited less from falls in mortgage interest payments.

In this chapter, we analyse average living standards in the UK, as measured by the latest year of Households Below Average Income (HBAI) data. We look at changes in the most recent year of data, set these in the context of both the recent recession and the longer term, and investigate the drivers of the trends observed. We also look at how living standards, and changes in living standards, vary across the regions and nations of the UK.

Before reporting our findings, it is worth setting out some key information about how the figures are calculated and presented.

All monetary values in this chapter are expressed in average 2012–13 prices, and so all differences we refer to are after accounting for inflation as measured by a series based on the retail price index (RPI).[2] Section 2.1 includes a discussion of the effect of using different measures of inflation on reported changes in living standards, in light of concerns over the RPI as a basis for measuring inflation. In addition, all household incomes have been 'equivalised' to account for varying household sizes and compositions, and cash amounts are expressed as the equivalent income for a childless couple.[3] Unless stated otherwise, income is measured net of taxes and benefits but before housing costs have been deducted (BHC).

Throughout this report, some statistics will be presented on a UK basis, while some will be presented on a Great Britain (GB) basis (mainly those looking at longer-term trends). This is because Northern Ireland was only introduced to the HBAI series in 2002–03.

This chapter proceeds as follows. In Section 2.1, we examine trends in average incomes, putting the latest measured changes in the context of the recession and post-recession period as a whole and in their longer-term historical perspective. This includes a discussion of how sensitive the figures are to the inflation measure used to adjust for changes in the cost of living. In Section 2.2, we analyse the drivers of these income changes, by looking at how changes in the different sources of household income have contributed to the overall change in incomes. Section 2.3 delves deeper and focuses specifically on the role of housing costs in affecting recent trends in living standards, distinguishing between housing costs in different housing tenures. Section 2.4 then looks at differences in trends in living standards across the nations and regions of the UK since the recession. Finally, Section 2.5 discusses the prospects for living standards in the years ahead and Section 2.6 concludes.

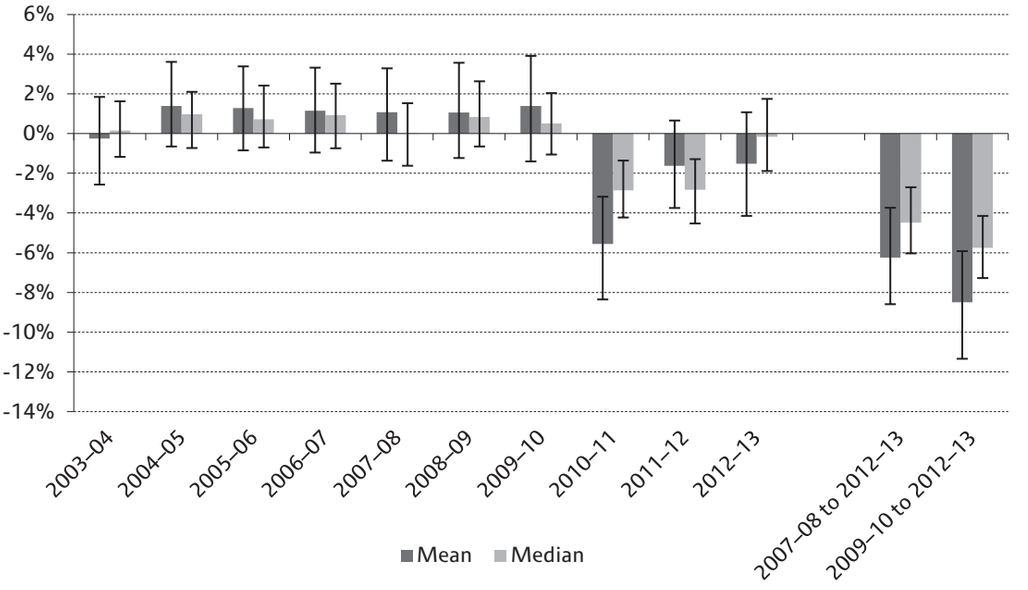
2.1 Trends in UK living standards

In 2012–13, median household income in the UK was £440 per week and mean income was £535 per week. Relative to the previous year, this suggests that median income

[2] The price index used to deflate before-housing-costs (BHC) income is equivalent to RPI excluding council tax; the index used to deflate after-housing-costs (AHC) income is the Rossi index.

[3] Table A.1 in Appendix A shows how equivalence scales are derived for different household types.

Figure 2.1. Real average BHC income growth with 95% confidence intervals (UK)



Note: Confidence intervals were calculated by bootstrapping the changes using 500 iterations. This involves recalculating statistics for each of a series of random samples drawn 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.

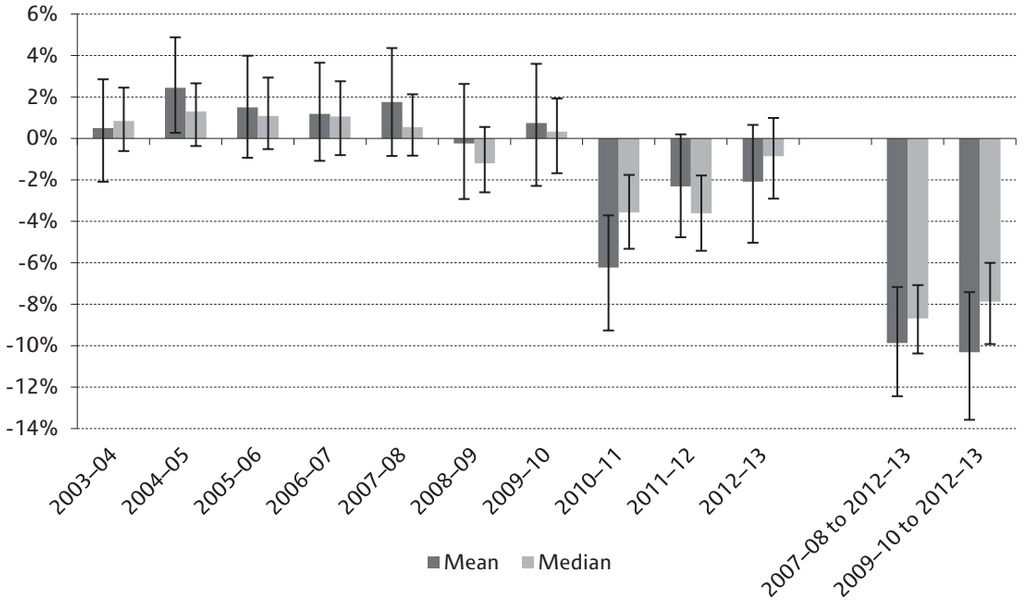
was broadly stable while mean income, if anything, fell: the HBAI data record real falls of 0.2% and 1.5% respectively. As is typically the case year-on-year, neither of these changes is statistically significant.

Figure 2.1 displays these changes and puts them in recent context. It shows the estimated changes in average incomes in each year since 2003–04, along with the 95% confidence intervals for these estimates. The final sets of bars show the total changes since 2007–08 (the last pre-recession year) and 2009–10 (the year in which BHC incomes peaked). This graph shows the figures for BHC income, as in the numbers referred to above; Figure 2.2 shows figures for income after housing costs have been deducted (AHC).

Average income changes in 2012–13 came on the back of two years of large falls immediately following the recession. As a result, real median BHC income in 2012–13 was 5.8% below its 2009–10 peak and mean BHC income was 8.5% lower. In addition, these sizeable falls followed a period of only slow income growth that began in the early 2000s, well before the recession. Trends in average incomes on an AHC basis have been qualitatively similar, with even larger proportionate income falls associated with the recession than on a BHC basis (all else equal, we would expect this, as AHC incomes by definition start from a lower level than BHC incomes). Median AHC income is now 8.7% below its peak in 2007–08. Over the same period, mean AHC income fell by 9.9%.

In interpreting these figures, it is important to note that changes in mean income are sensitive to what happens to the very highest incomes. The introduction of the 50%

Figure 2.2. Real average AHC income growth with 95% confidence intervals (UK)



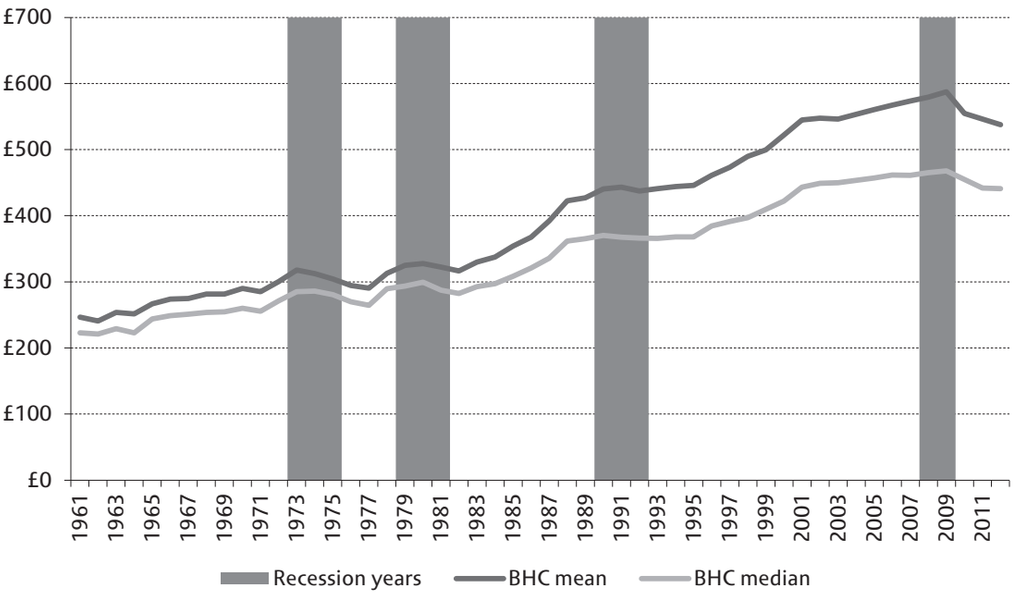
Note: Confidence intervals were calculated by bootstrapping the changes using 500 iterations. This involves recalculating statistics for each of a series of random samples drawn from the original sample, as a way of approximating the distribution of statistics that would be calculated from different possible samples out of the underlying population. See Davison and Hinkley (1997).
Source: Authors' calculations using the Family Resources Survey, various years.

marginal income tax rate on individual incomes above £150,000 in April 2010 is likely to have artificially boosted top incomes (and hence mean income) in 2009–10 and depressed them for a period subsequently. This is due to 'forestalling' – the tax increase created incentives for high-income individuals to bring income forward to before its introduction. This would act to increase the rate of mean income growth in 2009–10 and increase the falls in mean income in 2010–11. In April 2013, the top income tax rate was reduced from 50% to 45%. In this case, we would expect the converse to take place: high-income individuals would have an incentive to *delay* the receipt of income until after April 2013. This would act to artificially reduce mean income in 2012–13 (and subsequently increase it in 2013–14).[4] Due to these tax changes, it will be some time before the 'underlying' current trends in top incomes and mean income are clear.

To put these figures in longer-term context and in the context of previous recessions, Figure 2.3 plots the level of real mean and median BHC income since 1961 and Figure 2.4 plots the percentage changes in each year, with years of recession shaded in grey in

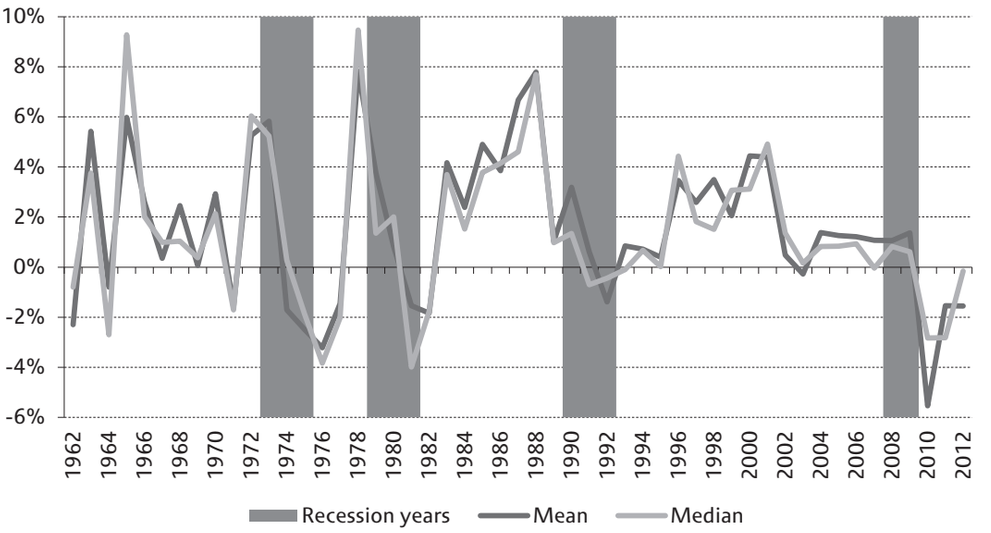
[4] The Survey of Personal Incomes (SPI) adjustment (see Appendix A) for those with the highest incomes in HBAI takes account of this. HM Revenue and Customs (HMRC) assumes that about £5.25 billion of taxable income was artificially delayed from 2012–13 to 2013–14 due to the cut to the top income tax rate in April 2013 (HM Revenue and Customs, 2014, p. 56). It also assumes that the unwinding of the income shifting forward to 2009–10 (due to the earlier rise in the top income tax rate to 50% in April 2010) continued in both 2011–12 and 2012–13, but in roughly equal magnitude, so the effect of that on mean income growth between the two years is small.

Figure 2.3. Mean and median household BHC income (GB)



Note: Incomes have been measured before housing costs have been deducted and are expressed in 2012–13 prices. All incomes have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.
Source: Authors' calculations using the Family Resources Survey and Family Expenditure Survey, various years, and Muriel and Sibieta (2009).

Figure 2.4. Year-on-year changes in mean and median BHC income (GB)



Note: Incomes have been measured before housing costs have been deducted, and are expressed in 2012–13 prices. All incomes have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple. Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.
Source: Authors' calculations using the Family Resources Survey and Family Expenditure Survey, various years.

each case.[5] Data from Great Britain only are used for consistency, as Northern Ireland has been included in the HBAI data only since 2002–03.

The average income falls seen thus far in the wake of the recent recession are considerably larger than those for the early 1990s recession, when real median income fell by only 1.2% from peak to trough. In proportionate terms, similar falls have been seen in the previous two recessions[6] (although, because the level of income is higher now than in decades past, the absolute income falls were bigger this time, as is clear from Figure 2.3). However, it is clear from these figures that growth in average incomes in the years preceding the recent recession was unusually slow for a period of economic expansion. Median income rose by a total of 11.9% and 13.2% in the three years prior to the peak of the mid 1970s and early 1980s, respectively. Before the recent recession, the rise was just 1.4%. As a result, average inflation-adjusted incomes are no higher in 2012–13 than in 2001–02 when using the official measure. At no other point since the series began in 1961 have average real incomes failed to increase over a period of (just over) a decade (although we show below that an alternative, and preferable, measure of inflation gives a slightly less gloomy impression of the last decade).

It is also noteworthy that, in each of the previous recessions, any falls in average incomes were more than wiped out in the first two years of subsequent growth. As we explain in Section 2.5, there are good reasons to think it highly unlikely that this will be the case this time.

Inflation and living standards

In order to compare incomes across years, we adjust for inflation, reporting all incomes in 2012–13 prices. There are a variety of measures of inflation and the government's official HBAI publication uses an index closely based on the retail price index (RPI).[7] However, due to a feature of how it is calculated known as the 'formula effect', the RPI is now thought to overstate the rate of inflation.[8] The size of the formula effect has increased recently following a seemingly innocuous change in 2010 to the way that clothing prices are sampled.

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[5] Recessions are typically defined in relation to quarters or months, but HBAI data are available each financial year, so we need to use an annual classification. Of course, some years contain both periods of expansion and periods of contraction. We follow the classifications used in Muriel and Sibieta (2009) for previous recessions. The recent recession involved quarter-on-quarter contractions in GDP in each quarter between 2008Q2 and 2009Q2 (inclusive) and no change in 2009Q3. We define it as covering 2008–09 and 2009–10.

[6] The fall in mean income in Great Britain associated with the current recession (8.4%) is similar to that seen in the mid 1970s (8.6%), and the fall in median income (5.7%) is similar to the fall in the early 1980s (5.7%).

[7] Unlike the standard RPI, the index excludes council tax because this is already deducted from net HBAI incomes for each household.

[8] Office for National Statistics, 2013.

This has led the Office for National Statistics (ONS) to produce a new price index, RPIJ, which can be thought of as RPI without the 'formula effect'. It has also produced a new 'CPIH' series, which, like the consumer price index (CPI), does not suffer from the RPI's formula effect but, unlike the CPI, attempts to account for owner-occupied housing costs. However, the CPIH accounts for owner-occupied housing costs based on estimates of what rental income owner-occupiers could get if they let their property. This would probably be the appropriate way to deflate a measure of household income which included an imputed income from owner-occupation[9] and it is the right measure for use with the National Accounts and in thinking about macroeconomic policy. But for the purposes of measuring current living standards, we are probably more interested in actual measured housing costs than in imputed rental income forgone. For example, during the recent crisis, mortgage interest rates plummeted but the CPIH would not account for this when measuring owner-occupied housing costs. Instead, it would look at rental values, which were much more stable. In measuring short-term changes in real incomes, we therefore believe that RPIJ is more appropriate than other available price indices.

The Department for Work and Pensions has (sensibly) indicated that it is reviewing the measure of inflation used in the HBAI series. In the meantime, it has published an annex showing the effect on key income statistics of using alternative inflation measures.[10] Table 2.1 shows the result of using alternative measures of inflation.

Using the RPI-based measure of inflation, we get the dramatic result that average real incomes in 2012–13 are lower than they were 11 years previously. However, overestimating inflation will lead to underestimating growth in living standards. Using the RPIJ or CPIH measures, the fall in living standards was considerably smaller and median income in 2012–13 was above its 2005–06 level. In fact, when using either the RPIJ or CPIH measures of inflation, the HBAI data record a return to real growth for median BHC income in 2012–13, of 0.5% (though this is not statistically significant).

Table 2.1. Real income growth with different inflation indices

Median BHC income	RPI[a]	RPIJ	CPIH
Cumulative fall since peak	–5.8%	–3.6%	–3.4%
The last year income was lower than in 2012–13	2000–01	2005–06	2005–06

[a] Excluding council tax.

Note: Incomes have been measured before housing costs have been deducted. The peak year was 2009–10 for RPI and RPIJ and 2008–09 for CPIH. The last year that income was lower than in 2012–13 excludes 2011–12 for RPIJ and CPIH, as by these measures incomes grew in 2012–13.

Source: Authors' calculations using the Family Resources Survey, various years, and ONS series KVR8 and L522.

[9] A house is a capital good that provides a flow of services that can be continually consumed. A reasonable way of quantifying the value of those services at a point in time is to ask how much the dwelling would attract in the private rental market (a concept known as 'rental equivalence').

[10] Department for Work and Pensions, 2014.

In summary, inflation is important when looking at changes in living standards and the headline HBAI statistics probably overstate the magnitude of recent income falls. This should be borne in mind throughout the rest of this report, in which, to avoid confusion and to enable long-term comparisons, we proceed with the headline HBAI measures. But the bigger picture is not sensitive to the choice of inflation measure: falls in average income since the recession have been historically large and have created an unusually long period in which living standards have not grown.

HBAI compared with National Accounts proxies for living standards

In addition to the HBAI average income measures of living standards, there are two widely-used National Accounts measures: real gross domestic product (GDP) per capita and real household disposable income (RHDI) per capita. Real GDP per capita is the estimated market value of all final goods and services produced in the UK economy, divided by the total number of people in the UK. RHDI focuses on the household sector by excluding the incomes of companies and the government, although it still includes incomes of non-profit institutions serving households (including charities and universities). Table 2.2 compares these measures of average living standards with average incomes measured in HBAI. Mean HBAI incomes are the most comparable with the National Accounts measures (as mean incomes are per-capita incomes), but we include median HBAI incomes too.

In the years before the recession, between 2001–02 and 2007–08, GDP per capita grew far more quickly than the other measures of living standards shown. Much of the discrepancy can be accounted for by rises in firms' pension contributions and employer

Table 2.2. Annualised changes in living standards according to National Accounts and HBAI measures

	RHDI per capita (UK)	GDP per capita (UK)	BHC mean (GB)	BHC median (GB)	AHC mean (GB)	AHC median (GB)
Historical						
Long run: 1987 to 2012–13	2.6%	1.9%	1.3%	1.1%	1.4%	1.3%
Fast growth: 1996–97 to 2001–02	4.5%	3.0%	3.4%	2.9%	4.1%	3.5%
Slow growth: 2001–02 to 2007–08	1.4%	2.6%	0.9%	0.7%	1.5%	1.3%
Recent recession						
2007–08 to 2009–10	0.6%	–3.9%	1.2%	0.7%	0.2%	–0.4%
2009–10 to 2012–13	–0.7%	0.0%	–2.9%	–1.9%	–3.5%	–2.7%

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 IHXW and IHXZ, and the Family Resources Survey and Family Expenditure Survey, various years.

National Insurance contributions over the period.[11] Neither of these would have any direct impact on household incomes (in contrast to firms paying higher wages, for example). The rise in employer pension contributions appears to have largely reflected the plugging of deficits in defined benefit (final salary) pension schemes, which were underfunded in part because life expectancy had increased faster than anticipated.[12]

When comparing the trends of the different measures of average living standards since the recent recession, two main points stand out: the fall in GDP occurred before the fall in the RHDI or HBAI measures; and the fall in the HBAI measures is much greater than the fall in per-capita RHDI.

There are various reasons why GDP can fall sharply before net household incomes do. Labour market adjustments that affect household incomes – reductions in real wages and employment – can take time. For example, inflation dipped very low (and was even briefly negative) at around the time of the recession. This meant that substantial real wage cuts would have required substantial *nominal* wage cuts, which may be more difficult to implement. There was also substantial growth in public spending relative to tax revenues during this time. This was partly a natural fiscal consequence of the recession, but was also driven by some discretionary policy measures such as welfare increases and a cut in VAT from 17.5% to 15% as a temporary stimulus measure. These were funded by government borrowing, which acted to boost household incomes in the short term at a time when GDP was falling. Indeed, we showed in a previous report that median private income (excluding benefits and ignoring taxes) actually started falling in 2008–09,[13] at the same time as GDP per capita.

The differences between trends in RHDI per capita and in average HBAI incomes can partly be explained by differences in the construction of the measures. Each measure uses a different inflation index to convert incomes into constant prices. Last year's report showed that this accounted for over half of the difference between the change in per-capita RHDI and mean HBAI income between 2007–08 and 2011–12.[14] HBAI also uses a lagged measure of self-employment income. A recovery in self-employment income in 2012–13 would be captured in RHDI, but not in HBAI incomes, and this would act to make per-capita RHDI fall less than mean HBAI income. On the other hand, there are good reasons to be cautious about inferring too much from per-capita RHDI as a measure of living standards. The details of the measure are rather opaque, which makes it difficult to identify the factors driving changes in it. And as a direct survey of households' incomes, rather than a component of the National Accounts, HBAI is likely to be better suited to measuring living standards in many respects. One particular example is that it does not include the incomes of universities and charities.

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[11] Pessoa and Van Reenen, 2012.

[12] For more detail and discussion, see Hood and Joyce (2013).

[13] Cribb, Joyce and Phillips, 2012.

[14] Cribb et al., 2013.

2.2 Average income and its components

In order to better understand the recent changes in average living standards, Table 2.3 considers separately changes in the various components of household income and identifies their contribution to the overall change.[15]

We look at each of the sources of private income (such as gross earnings), as well as taxes and benefits. The total of the net income components before taxes are deducted therefore exceeds 100%. The first row gives the share of mean net household income received from each source (in 2012–13). Gross earnings constitute 85% of mean net income, and gross self-employment incomes constitute a further 11%. Benefits and tax credits contribute about one-fifth. Offsetting this are taxes and other payments, which reduce household incomes by an amount equivalent to 33% of mean income. The following rows give the real percentage change in each component, followed by the contribution of that income source to the change in total income (this is larger if the change in the income source is larger or if its share of total income is larger).[16]

Between 2007–08 and 2009–10, the stability of household incomes in the face of recession was driven by stable real earnings (which account for the majority of household income) and real increases in benefits and tax credits. The latter contributed 2.2 percentage points of the 2.4% growth in mean income over the two years.[17] These increases occurred due to a combination of discretionary increases and falling inflation, which increases the real value of benefits in the short run (as they are typically uprated in April using a lagged measure of inflation, and then fixed in cash terms until the following April).

Between 2009–10 and 2012–13, the fall in average living standards was caused primarily by sharp falls in gross earnings and self-employment income. These acted to reduce mean household income by a combined 9.8% in real terms. Note that these can be caused both by reduced proportions of people in work and by lower real employment incomes for those who are in paid work. The latter effect has been the dominant one in the recent recession (see below). Table 2.3 shows that falls in employment income continued to be the main driver of the mean income fall in 2012–13.

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[15] This methodology excludes those whose income sources 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 2012–13 between the change in total income calculated by summing the components (–1.3%) and the total change in mean income reported earlier (–1.5%).

[16] 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.

[17] This is combining working-age and pensioner benefits and tax credits. It is not equal to the sum of the two due to rounding.

Table 2.3. Change in income sources and contributions to income growth, 2007–08 to 2012–13

	Gross earnings	Gross self-employment income	Benefits and tax credits to working-age families	Benefits to pensioner families	Gross income from savings, investments and private pensions	Other income	Taxes and other deductions from income	Total income	Mean HBAI income
Share of income (2012–13)	85.3%	11.4%	10.6%	9.9%	13.4%	2.8%	–33.4%	100.0%	
2011–12 to 2012–13									
Growth of income source	–3.1%	1.7%	–1.0%	2.8%	–0.5%	8.6%	–2.6%	–1.3%	–1.5%
Contribution to total income growth	–2.7	0.2	–0.1	0.3	–0.1	0.2	0.9	–1.3	
2007–08 to 2009–10									
Growth of income source	0.1%	3.3%	13.3%	10.9%	–4.9%	9.1%	–0.5%	2.4%	2.5%
Contribution to total income growth	0.1	0.4	1.2	0.9	–0.7	0.2	0.2	2.4	
2009–10 to 2012–13									
Growth of income source	–9.4%	–14.2%	–6.1%	–3.8%	–6.3%	–5.6%	–9.6%	–8.6%	–8.5%
Contribution to total income growth	–8.1	–1.7	–0.6	–0.4	–0.8	–0.2	3.2	–8.6	
2007–08 to 2012–13									
Growth of income source	–9.3%	–11.3%	6.3%	6.7%	–10.9%	2.9%	–10.1%	–6.4%	–6.2%
Contribution to total income growth	–8.2	–1.4	0.6	0.6	–1.5	0.1	3.5	–6.4	

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.

The data also show that falling real benefit and tax credit incomes have acted to reduce real household incomes by about 1 percentage point between 2009–10 and 2012–13. This in itself unwinds the real increases in benefits during the recession only partially, but we would expect this trend to continue – and indeed to gather pace – in the next few releases of HBAI data for 2013–14 and beyond. Real cuts to the working-age social security budget (but not pensioner benefits), as one significant element of the post-recession fiscal consolidation, began in April 2011, were accelerated in April 2013 and will continue throughout the parliament. The latest year of data (for 2012–13) do indeed show a real fall in benefits and tax credits going to working-age families (but not pensioner families).[18]

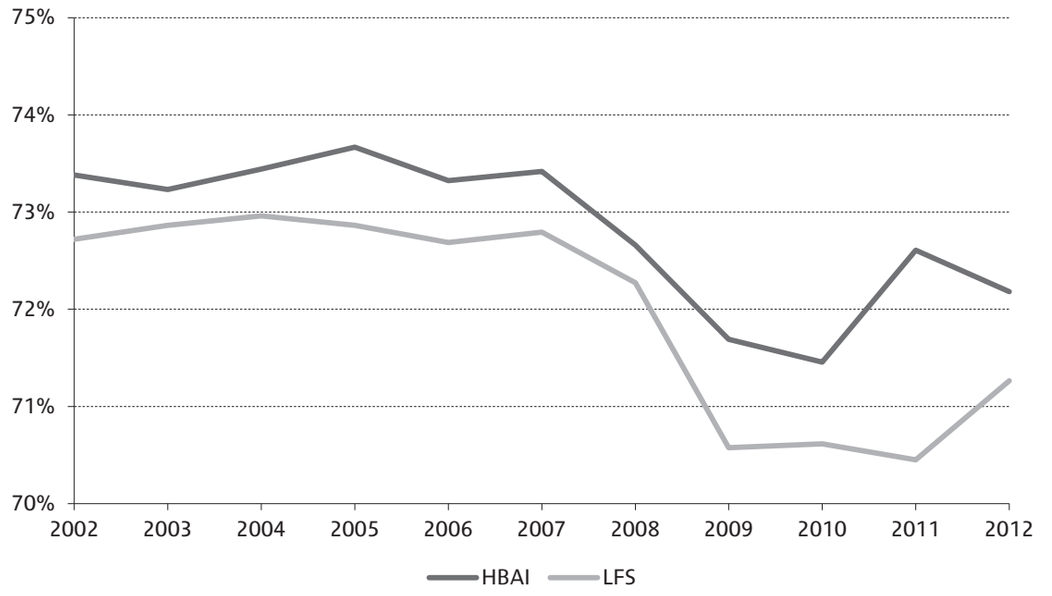
Employment income

To shed more light on the real falls in employment income highlighted above, we can look separately at changes in the employment rate and the earnings of those in work. In the analysis that follows, it is clear that the 9.3% fall in gross earnings between 2007–08 and 2012–13 is a result of both a reduction in the employment rate and a fall in earnings of those employed. To validate the results found here, we also compare the FRS data with data from the Labour Force Survey (LFS) – a quarterly survey with a bigger sample size than the Family Resources Survey and a leading source of labour market statistics in the UK. Figure 2.5 shows the employment rate as measured by these two surveys over the last decade. It includes both employees and the self-employed.

The HBAI data have consistently recorded a slightly higher employment rate than the LFS over the past decade, with a typical differential of about 1 percentage point. Importantly, however, the trends have mostly been similar. There are some differences in growth rates from year to year though (unsurprisingly, given sampling error). In particular, the HBAI data show the employment rate falling by 0.4 percentage points between 2011–12 and 2012–13, while the LFS depicts it rising by 0.8 percentage points. Taking the two years between 2010–11 and 2012–13 together, the stories are more consistent, with a total rise of about 0.7 percentage points in each case. It is possible, therefore, that the slight year-on-year discrepancy is due to HBAI overstating the growth in the employment rate between 2010–11 and 2011–12. This is a reminder not to place too much emphasis on changes observed in single years of data. One consequence of the recorded fall in the employment rate in the HBAI data in 2012–13 is to exacerbate the recorded fall in total earned income in 2012–13 (see Table 2.3) – beyond the fall explained by reductions in workers' pay alone.

[18] 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 state pension and pension credit spending captured dipped slightly in 2011–12. This will act to make HBAI overstate slightly the increase in pensioner benefits in 2012–13 and overstate the fall in 2011–12. 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.

Figure 2.5. Employment rate as measured by the Labour Force Survey (LFS) and HBAI data



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

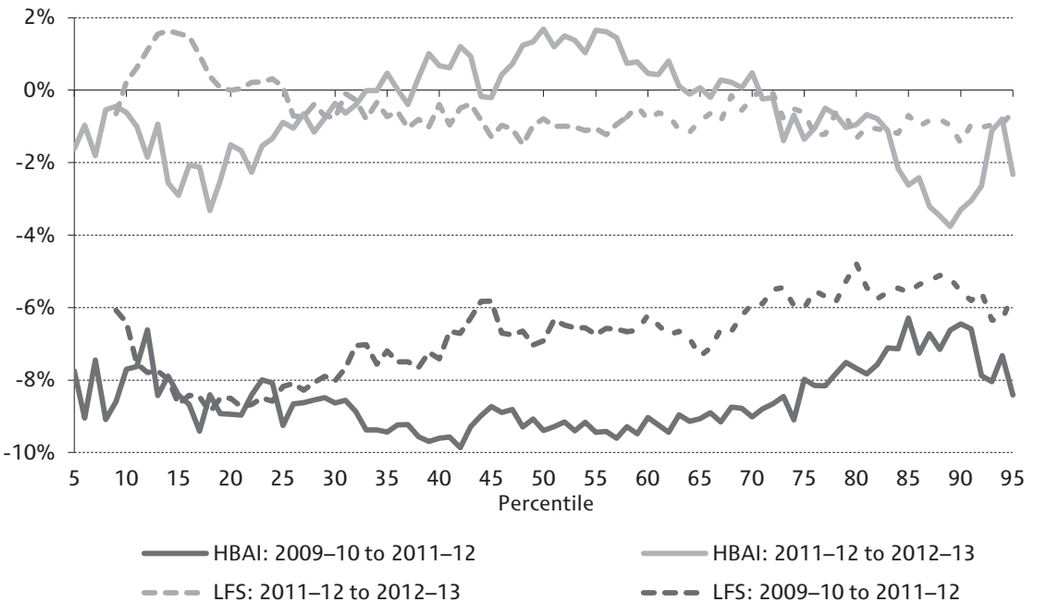
The broad pattern is clear from both data sets though: flat employment rates between 2002–03 and 2007–08, sharp falls over the following two years, and a levelling-out and subsequent recovery between 2009–10 and 2012–13. By 2012–13, the HBAI data record an employment rate 1.2 percentage points lower than in 2007–08; the LFS data record a fall of 1.5 percentage points. Falls in employment have disproportionately hit the young and the low educated,[19] in line with the experience in other developed economies.[20] We look in detail at young adults, including their labour market outcomes, in Chapter 5.

Figure 2.6 turns to changes in the real (pre-tax) weekly earnings of employees. Only mean earnings changes matter when trying to explain mean income changes, but the earnings levels of people right across the individual pay distribution can affect median household income. For example, some very low-paid individuals live with higher earners, and some relatively high earners have large families and are therefore only around the middle of the (equivalised) household income distribution. For completeness, we therefore show earnings changes across the distribution of individual earnings. We focus on the period in which real earnings have generally been falling, since 2009–10, and compare the LFS and HBAI. The self-employed are excluded because the LFS does not record their self-employment income or profits. We also exclude the bottom and top four percentiles. Earnings levels at the bottom are very low,

[19] Blundell, Crawford and Jin, 2014.

[20] Bell and Blanchflower, 2011a.

Figure 2.6. Real earnings growth (employees only) by percentile, 2009–10 to 2012–13



Note: Percentiles 1–4 and 96–99 are excluded because of large statistical uncertainty. For the LFS data, a five-percentile moving average is shown because there is large variability in the year-on-year percentile changes due to the LFS data being rounded to the nearest pound.
Source: Authors' calculations using the Family Resources Survey and the Labour Force Survey, various years.

making proportional changes volatile; data on the earnings of very high-income individuals are less reliable, and (for that reason) the household incomes of some very high-earning individuals are replaced in HBAI using estimates from tax return data (see Appendix A).

The big picture is clear, and is the same in both data sets. Real pay fell sharply between 2009–10 and 2011–12, right across the earnings distribution. In 2012–13 (the latest year of HBAI data), these severe falls in pay came to an end, and earnings growth across the distribution was much closer to the RPI inflation rate, with some parts of the distribution even seeing small real rises.

Blundell, Crawford and Jin (2014) examined the falls in earnings associated with the recession in detail. Between 2010 and 2011, 70% of workers who remained in the same job took real wage cuts, 12% took a nominal freeze and 21% took a nominal cut. Hence, falls in earnings were certainly not driven primarily by workers losing jobs and taking lower-paid ones in their place. The proportions taking a nominal cut or freeze were the largest since comparable data began in the mid 1970s. Real wage falls were experienced widely, across genders, age groups, occupations, industries and firm sizes. We show in Chapter 5, though, that the wages of workers aged under 30 have been hit particularly hard.

Another important point highlighted by Blundell et al. was that the changing characteristics of the workforce and their jobs actually acted to increase the average earnings of the employed between 2007 and 2012. This phenomenon is not unexpected in a recession, as types of workers who tend to earn less – such as the young and the low-educated – tend to be the ones whose employment rates fall most (rising education levels in the population more generally have also been a factor – see Chapter 5). Hence, the workers that are left are higher-earning 'types', on average, than the workforce before the recession. The implication is that, when comparing 'like with like' (i.e. when comparing workers now with workers with the same characteristics before the recession), falls in earnings have been even larger than suggested by Figure 2.6.

Looking at the precise distributional pattern of recent earnings changes in Figure 2.6, the details differ a little between data sets. In 2012–13, the fall in earnings as measured by the HBAI data is concentrated at the bottom and top of the earnings distribution, with a small amount of positive growth in the middle of the distribution. This helps to explain why mean household income in HBAI fell by 1.5% in 2012–13 whereas median household was almost unchanged: some of the biggest earnings falls were towards the top of the earnings distribution, and this affects mean income but has little impact on median income because these individuals are typically well above median household income.[21]

The LFS data give a somewhat different picture, recording earnings changes that were relatively uniform across the distribution in 2012–13. As a result, the LFS suggests less positive changes in real earnings between approximately the 30th and 70th earnings percentiles than HBAI, but more positive changes above and below that range.[22] This looks partly like an unwinding of discrepancies over the previous two years, when HBAI recorded greater falls in the middle of the distribution. Again, then, the stories look more consistent over multiple years than when taking one year in isolation.

In summary, the recession brought both falls in the employment rate and very rapid falls in the real earnings of those in work. However, employment began to recover quite quickly – in 2011–12 – and real earnings were showing clear signs of stabilising during 2012–13. Although this big picture is clear and consistent across data sources, there are some discrepancies in trends measured year-on-year. This highlights the importance of not placing too much emphasis on a single year of HBAI data.

2.3 Housing costs and living standards

We have discussed how BHC incomes have fallen in real terms since 2007–08. Those figures are adjusted for inflation using a price index that includes housing costs, so they

[21] See figure 3.12 of Cribb et al. (2013).

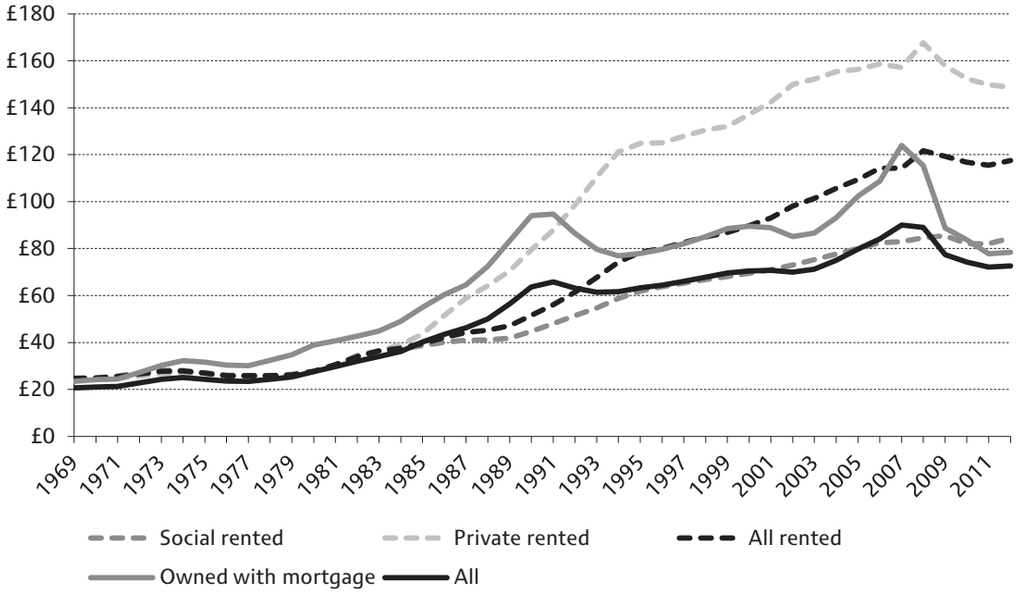
[22] This is one likely reason why median household income recorded in HBAI in 2012–13 fell by considerably less than the 2.2% estimated in a recent projection by IFS researchers (Adams, Hood and Levell, 2014). Those projections were based on an assumed flatter profile of earnings growth, more similar to that recorded in the LFS.

account for *average* changes in housing costs. As ever, though, averages mask variation. Unlike most elements of household spending, we observe housing costs for each household in the HBAI data. Here we therefore use the HBAI data to look explicitly at housing cost trends, how these have varied across people in different housing tenures and how this has affected living standards. In Section 2.4, we look further at similar issues at the level of the regions and nations of the UK, as part of a broader look at how changes in living standards have varied across the country.

When making inferences about living standards, it is important to acknowledge that changes in housing costs and AHC incomes do not capture changes in the quality of housing. Housing costs and AHC incomes could remain the same while housing quality – and hence the standard of living – in fact changes. However, the focus of this section is primarily on the few years since the onset of recession, and changes in housing quality are likely to be less important in that context than over longer periods of time.

Figure 2.7 shows average housing costs over time[23] (measured at the household level and equivalised). These are presented in 2012–13 prices, using an RPI-based price index that excludes housing costs (as used to deflate AHC incomes). Hence, if the amount spent on housing costs rises in real terms, this signals an increase in the quantity of non-housing goods and services that could have been bought with that spending. As well as the average across the whole population, figures are presented

Figure 2.7. Real equivalised mean weekly housing costs by tenure type (GB)



Note: Housing costs are equivalised and gross of housing benefit. 'Social rented' means rented from a local authority or a housing association. Years represent financial years after 1992. Up until 2005–06, figures are three-year moving averages due to the small number of private renters in past years.
Source: Authors' calculations using the Family Resources Survey and Family Expenditure Survey, various years.

[23] Up until 2005–06, figures are three-year moving averages due to the small number of private renters in past years.

separately for renting households (and separately by whether a household rents from a private or social landlord) and for properties that are owner-occupied with a mortgage. Those two groups together account for 66% of households, 72% of individuals and virtually all housing costs (most of the remaining third of households own their homes outright and therefore pay no rent or mortgage costs). The figures we present here are gross of housing benefit, but it is worth bearing in mind that the 'net housing costs' of many lower-income renters are lowered because housing benefit partially or fully reimburses them for their rent.

Mortgage capital repayments are not included within housing costs in the HBAI data, on the basis that they represent the accumulation of an asset (they increase net housing wealth) rather than spending. Mortgage interest payments are included. As well as mortgage interest payments and rents, housing costs measured in HBAI include water rates, community water charges, council water charges, structural insurance premiums for owner-occupiers, and ground rents and service charges.

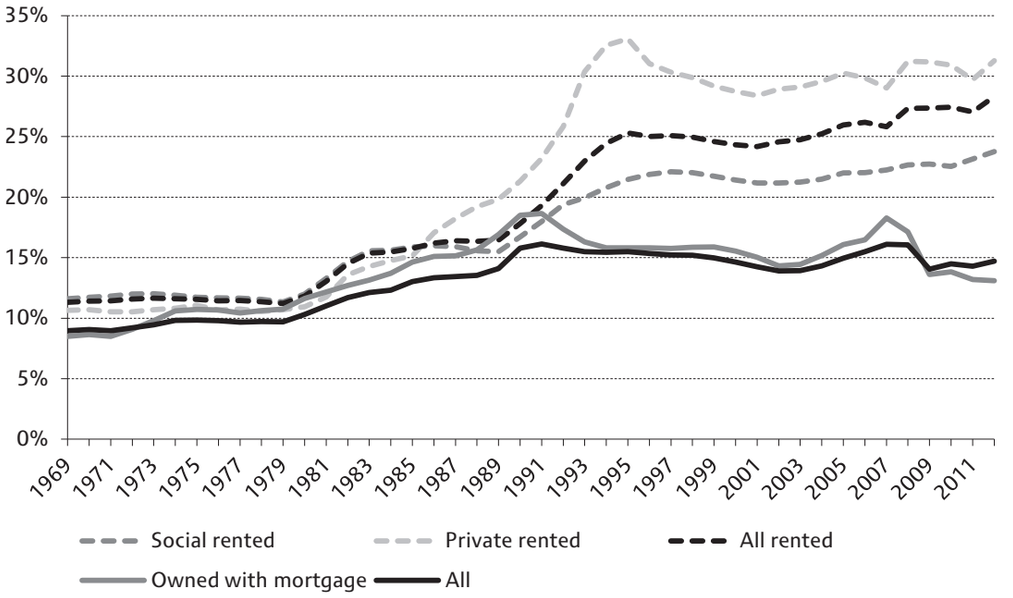
Before the financial crisis, the average housing costs of renters and those in an owner-occupied mortgaged home were similar (at £114 and £124 per week respectively in 2007–08). However, one important consequence of the crisis was a historically large fall in interest rates, and this has had important effects on mortgage payers. The average standard variable interest rate on a mortgage halved in 18 months, falling from 7.7% in October 2007 to 3.8% in April 2009 (and it remains less than 4.5%). Fixed-rate mortgage rates also fell substantially, though more gradually. For example, the average rate on a five-year fix with a 75% loan-to-value mortgage fell from a peak of 6.4% in June 2008 to 3.6% in by the end of 2012–13.[24] In this context, it is no surprise that Figure 2.7 shows the average housing costs of those in an owner-occupied mortgaged home falling by 37% in real terms between 2007–08 and 2012–13. This is the biggest fall in the housing costs of either owner-occupiers or renters since the series began, including during the sharp fall in mortgage payments in the early 1990s. It has returned those costs to the lowest level they have been at since the mid 1990s in real terms. It has also driven an overall fall in average housing costs across the population of 19% since 2007–08.

Looking over a longer period, the average housing costs of people in a mortgaged home have now been lower than, or about the same as, the housing costs of renters since the early 1990s. This followed a period of at least two decades when the opposite was the case. Real mortgage interest payments remain higher than before the mid 1980s (as do real rents paid, and to a greater extent). Of course, the real incomes that people have from which to finance these have increased substantially since then too. As Figure 2.8 shows, long-run changes in housing costs as a proportion of income have been smaller, but still significant, largely due to rises in the late 1980s and early 1990s.

Since the recession, the HBAI data suggest that the average rents paid by renters have essentially stagnated, with average rents paid by private renters actually falling in real

[24] Source: Bank of England series IUMTLMV and IUMBV42 respectively (available at http://tinyurl.com/k2wwdpm and accessed on 14 June 2014).

Figure 2.8. Percentage of income spent on housing costs by tenure type (GB)



Note: Income is measured before housing costs are deducted and both income and housing costs are unequivalised. Housing costs are gross of housing benefit. 'Social rented' means rented from a local authority or a housing association. Years represent financial years after 1992. Up until 2005–06, figures are three-year moving averages due to the small number of private renters in past years.
Source: Authors' calculations using the Family Resources Survey and Family Expenditure Survey, various years.

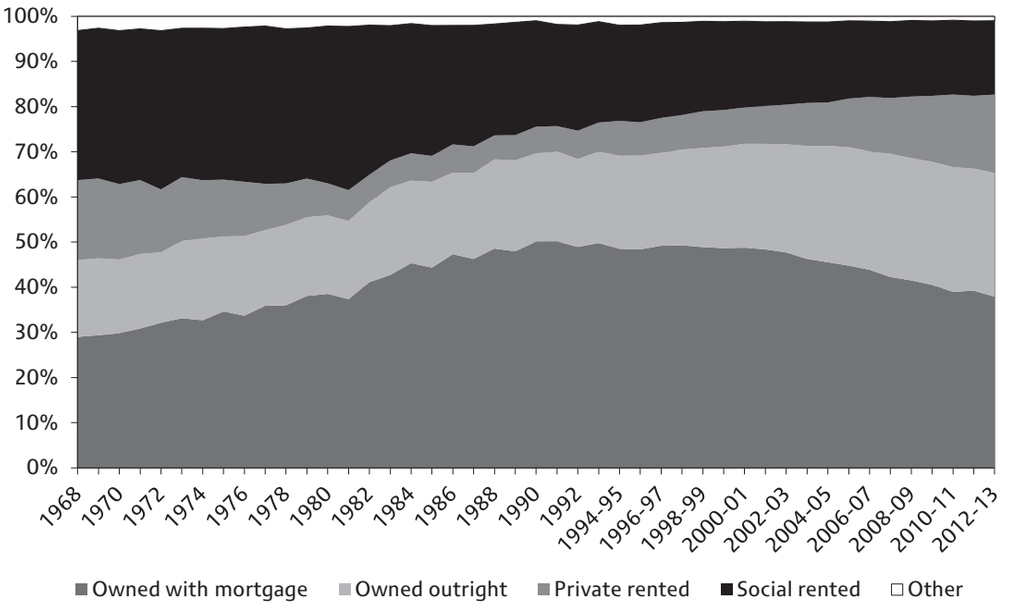
terms between 2008–09 and 2012–13.[25] This also looks like a clear break from before, as there had been a long-term upwards rise in rents paid. Nevertheless, real rents paid remain higher than they have been for most of the last few decades, and overall rents have been stable relative to the large fall in mortgage interest payments over the same period. A consequence is that the proportion of income spent on housing costs has risen from 25.8% in 2007–08 to 28.3% in 2012–13 for renters, while it has fallen from 18.2% to 13.1% for mortgage payers (and from 16.0% to 14.6% for the population as a whole).[26]

Figure 2.9 shows that there have also been substantial changes in the proportions of the population in each tenure type. Since the early 2000s, the long-term trend of increasing owner-occupation and a declining rental sector has begun to reverse. Recent reductions in the prevalence of those who own with a mortgage have been particularly

[25] The ONS index of private housing rental prices (see http://www.ons.gov.uk/ons/dcp171766_311546.pdf) also shows private sector rents rising by considerably less than Rossi inflation since 2007. Interestingly, unlike the HBAI data, it also suggests that this was the case between 2005 (when the series begins) and 2007. One possible reason for the difference is that the index has captured some changes in housing quality that are effectively ignored when looking only at actual rents paid (as in HBAI). Data from the English Housing Survey (see https://www.gov.uk/government/statistical-data-sets/social-and-private-renters) show a real fall of £12 in median private rents between 2008–09 and 2011–12, while social rents were unchanged.

[26] Note that these figures are for the whole of the UK. They are extremely similar, but not identical, to the figures underlying Figure 2.8, which looks over a long period and therefore focuses only on Great Britain (because Northern Ireland was not included in the HBAI data until 2002–03).

Figure 2.9. Percentage of population in each tenure type (GB)



Note: Social rented is defined as rented from a local authority or a housing association.
Source: Authors' calculations using the Family Resources Survey and Family Expenditure Survey, various years.

rapid. Fewer younger adults are moving into homeownership (see Section 3.2), which has in particular led to growth in the private rented sector. In addition, many in the older generations, who were more likely to buy their homes than their predecessors, have finished paying off their mortgages and have become outright homeowners. This is evident from Figure 2.9, which exhibits a lagged relationship between increases in owners with a mortgage and increases in outright homeowners.

These trends have only accelerated since the recession. The proportion of people in an owner-occupying household with a mortgage fell by 10.6% (5 percentage points) and the proportion of renters rose by 15.5% (4 percentage points) between 2007–08 and 2012–13.[27] It is worth noting the implication that falls in mortgage interest rates have done less to reduce average housing costs than would otherwise have been the case.

Nevertheless, the falls in mortgage interest rates have driven a large fall in average housing costs. Between 2007–08 and 2012–13 average housing costs in the UK fell by nearly 20%. This is entirely accounted for by reductions in housing costs in mortgage-paying owner-occupied households. It has acted to increase average AHC income by more than 3% over the period. In other words, without changes in housing costs, average AHC incomes would have fallen by 13%, rather than 10%, since 2007–08. Over the same period, the proportion of average (BHC) income spent on housing costs has fallen from 16.0% to 14.6%.

[27] These figures are for the UK as a whole. The numbers underlying Figure 2.9 are extremely similar, but not identical, because they are for Great Britain only (to allow for consistent comparisons over a long period, including years before 2002–03 in which Northern Ireland was not included in the FRS).

In summary, changes in housing costs have had an important effect on living standards since the recession. On average, this has acted to cushion the fall in real incomes. It has been driven entirely by historically large falls in mortgage interest payments caused by falls in interest rates; as a result, trends in housing costs have not generally been offering the same relief for renters, or indeed for those who own their homes outright. In addition, the proportion of people living in a mortgaged home – rather than in a rented home, or a home owner-occupied without a mortgage – has continued to decline, making the effects of falls in mortgage interest rates somewhat smaller than they would otherwise have been. All this has important implications for the changes in living standards among different groups, as explored further in subsequent chapters.

2.4 Living standards in the UK nations and English regions

Changes since the recession

We have seen that median BHC income in the UK is now 5.8% below its 2009–10 peak, but income falls have not been evenly distributed across the country. Here we look at how incomes, both BHC and AHC, have been changing since the recession in each nation and English region of the UK.

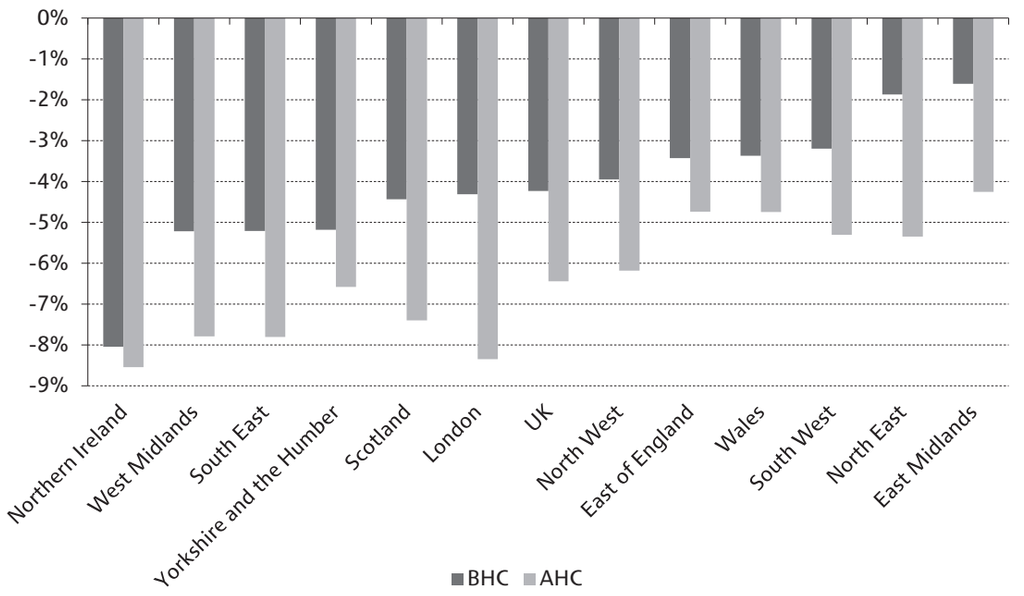
The sample size in the FRS is not large enough to look reliably at year-on-year changes at the sub-UK level. Therefore, we pool the three years before UK incomes began to fall (2007–08 to 2009–10) and the three years since (2010–11 to 2012–13) and we look at the changes between these two pooled three-year periods.

Figure 2.10 shows the real change in the level of median BHC and AHC incomes, with the nations and English regions ordered by the size of the proportionate fall in real BHC income, ranging from about 8% in Northern Ireland to less than 2% in the East Midlands.[28] Northern Ireland started from a relatively low base in the pre-recession period, with median BHC income already 6.5% below the UK as a whole; the recent falls have exacerbated this disparity, leaving Northern Ireland 10.2% below the UK as a whole. However, more generally there is no clear relationship between pre-recession income levels and the size of the fall since the recession. (We analyse income levels across regions and nations explicitly in Table 2.4 later.) For example, the South East has the highest median income and saw one of the largest falls in BHC income (5.2%), while one of the lowest-income regions – the North East – saw one of the smallest falls in median BHC income.

In general, the regions and nations that have seen the largest falls in BHC incomes have also seen the largest falls in AHC incomes. However, movement in housing costs has varied significantly across the UK and this is evident when comparing BHC and AHC income changes. Median AHC income in Northern Ireland fell by a similar proportion to that in the West Midlands, South East, Scotland and London, despite its median BHC

[28] This difference is statistically significant.

Figure 2.10. Real changes in median income by nation and English region, between 2007–08 to 2009–10 and 2010–11 to 2012–13



Source: Authors' calculations using Family Resources Survey, 2007–08 to 2012–13.

income falling by at least about 3 percentage points more than in any other region or nation. London had the sixth-largest proportionate fall in median income on a BHC basis but the second-largest on an AHC basis (over 8% – virtually the same as in Northern Ireland).

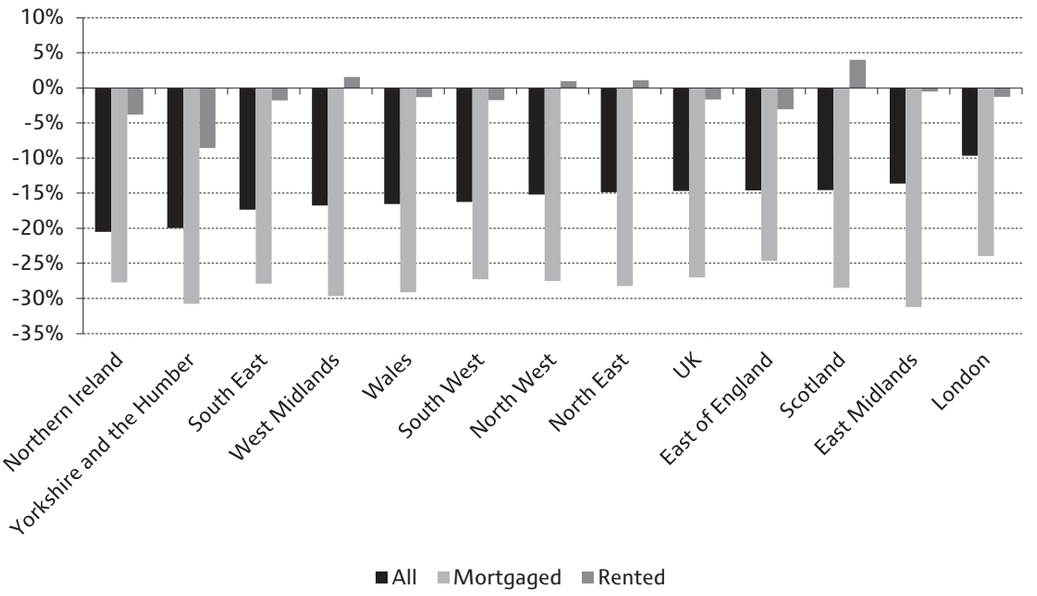
Figure 2.11 shows how changes in mean housing costs have varied across the UK, with nations and regions ordered by the size of the fall in housing costs. The figure also includes separate bars for housing cost changes in accommodation that is owner-occupied with a mortgage and rented. Note that, because we pool three-year periods in order to ensure sufficient sample sizes (see above), the fall in average housing costs across the UK as a whole is smaller – at 15% rather than 20% – than the figure cited in Section 2.3 when comparing the single years of 2007–08 and 2012–13. That is because housing costs began to fall in 2008–09 (see Figure 2.7). By pooling 2007–08 with 2008–09 and 2009–10 as our 'pre-recession' period, we therefore inevitably record smaller falls in housing costs.

Real housing costs have fallen in all nations and English regions, driven by sharp falls in mortgage interest rates (alongside stagnation, or small real falls, in rents). However, there is also considerable variation in the magnitudes of these falls, ranging from 20% in Northern Ireland and Yorkshire and the Humber to under 10% in London.[29]

Mortgage costs fell by proportionately less in London than in any other UK nation or region, but much of the difference in London is driven by differences in tenure

[29] This difference is statistically significant.

Figure 2.11. Real changes in mean housing costs by nation and English region, between 2007–08 to 2009–10 and 2010–11 to 2012–13



Source: Authors' calculations using Family Resources Survey, 2007–08 to 2012–13.

composition. First, there are fewer people in mortgaged owner-occupied housing in London (34%, compared with 39% in the rest of the UK). This means that London has benefited less from the fall in mortgagers' interest payments. Second, the HBAI data record a small fall in the proportion of people in London in accommodation that they own outright (without a mortgage) – of 7% (1.6 percentage points) – at a time when that proportion has been increasing in the UK as a whole. This is a reduction in the relative size of a group that has average weekly housing costs more than £90 lower than those of mortgage payers in London.

Current levels of average income

Table 2.4 shows where these changes leave the levels of median income across the UK. Using the standard HBAI measure of median BHC income, the South East and London are the highest-income regions or nations, and Northern Ireland and Yorkshire and the Humber have the lowest incomes.

However, it is important to also consider differences in the cost of living. Although one can account for geographic differences in housing costs using the HBAI data (by measuring incomes AHC), differences in the costs of other goods and services are unaccounted for in the official HBAI series. Here we use estimates of the relative level of the consumer price index (CPI) across regions and nations in 2010, produced by the Office for National Statistics. The ONS does not produce these regional indices on a regular basis, but adjusting for regional price differences based on differences in 2010 will give a far more accurate impression of variation in living costs across the country than making no adjustment at all for regional differentials. It is important to note that, because the index in question is the CPI, it ignores owner-occupied housing costs.

Table 2.4. Median BHC income in 2010–11 to 2012–13 by nation and English region, before and after adjusting for geographical price differences

	Assuming uniform prices	Assuming uniform prices (indexed: UK = 100)	Accounting for price variation (indexed: UK = 100)
South East	£509	114.5	111.9
London	£487	109.6	101.6
East of England	£477	107.3	106.1
South West	£456	102.6	103.1
Scotland	£447	100.6	100.9
East Midlands	£430	96.8	97.4
North West	£418	94.1	95.8
Wales	£413	92.9	94.4
West Midlands	£408	91.9	91.4
North East	£407	91.7	93.4
Yorkshire & Humber	£403	90.7	93.5
Northern Ireland	£399	89.8	91.5
UK	£444	100.0	100.0

Note: Incomes are measured before housing costs are deducted.
Source: Authors' calculations using Family Resources Survey, 2010–11 to 2012–13, and the relative CPI index from ONS (http://www.ons.gov.uk/ons/rel/cpi/regional-consumer-price-levels/2010/index.html).

These do vary somewhat across the country, and tend to be highest where house prices are highest (for example, London). House prices generally correlate with other prices across the UK, which would tend to moderate the impact of ignoring them here.

Table 2.4 underlines the importance of accounting for variation in prices. It increases the relative income of many of the regions or nations with lower median income, and reduces that of the highest-income regions – most markedly London, which falls from second to fourth place. In other words, real incomes tend to look less unequally distributed on a geographical basis once geographical variation in prices is accounted for.

2.5 Prospects for living standards

We have comprehensive data on household incomes only up to 2012–13. However, we have some indications of what to expect from future releases of HBAI data, for 2013–14 and beyond.

In 2013–14, real GDP grew by more than 2%.[30] This went alongside a 1.1 percentage point increase in the employment rate among 16- to 64-year-olds.[31] These early stages

[30] Real GDP figures are from the UK Economic Accounts (ONS series YBEZ). Data downloaded 6 June 2014. ONS data for GDP can be subject to revision.

of an economic recovery did not, however, feed through to average earnings, which at best rose only as fast as prices.[32] There was also acceleration in the cuts to benefits and tax credits – the second-largest source of household income after earnings, on average – implemented as part of the current government's fiscal consolidation. Most significantly, the majority of working-age benefits were increased by 1% in cash terms in April 2013, representing real-terms cuts.[33] There were also a number of other discretionary cuts, including reductions in council tax support and reductions in housing benefit entitlement for about one-third of recipients in the social rented sector, who are now deemed to be 'under-occupying' their homes.

According to the OBR's forecast,[34] average earnings growth in 2014–15 will be 2.4% in nominal terms – only slightly above forecast CPI inflation and below forecast RPI inflation. Looking further ahead, the OBR does not expect real average earnings to return to their 2009–10 levels until 2018–19 at the earliest. In addition, the further 1% nominal increases in most working-age benefits in April 2014 and April 2015 will see the rates of those benefits and tax credits continue to fall in real terms in 2014–15 and 2015–16. Given this combination of little real earnings growth and further benefit cuts, it seems likely that the UK is set for a period of only moderate growth in household incomes, as indicated by the projections in Browne, Hood and Joyce (2014).[35]

It is important to stress that the macroeconomy does appear to be turning a corner and the pace of the recovery could easily turn out to be different from current expectations. But, although what is to come looks set to be a clear improvement over the sharp income falls seen immediately after the recession, it will almost certainly be some time yet before we return to pre-crisis living standards.

2.6 Conclusion

Headline figures from the HBAI series show a large drop in living standards between 2009–10 and 2012–13 (the latest year of data), with cumulative falls of 5.8% in median income and 8.5% in mean income (with income measured before housing costs (BHC)). On this measure, average living standards in 2012–13 were no higher than in 2001–02.

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[31] 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 rate between April 2013 and March 2014 with the average rate between April 2012 and March 2013. Data downloaded 3 July 2014.

[32] Different measures of earnings growth disagree as to whether earnings continued to fall in real terms. The average weekly earnings measure (ONS series KAB9; downloaded 3 July 2014) suggests earnings growth was only 1.6% in nominal terms (comparing average earnings between April 2013 and March 2014 with average earnings between April 2012 and March 2013), whereas the Office for Budget Responsibility estimates that nominal earnings grew by 2.6% over the same period.

[33] This compares with annual inflation between 2012–13 and 2013–14 of 2.9% according to the RPI, 2.2% according to the RPIJ and 2.3% according to the CPI.

[34] Office for Budget Responsibility, 2014.

[35] Note that these projections were based on the OBR's macroeconomic forecasts from Budget 2013, and so do not reflect recent improvements in the macroeconomic outlook.

There is an important rider to this conclusion, however. To compare living standards over time, one needs to adjust incomes for changes in prices. The main HBAI figures do this using the RPI, but the RPI appears increasingly to overstate 'actual' consumer price inflation. The headline figures are therefore probably understating real income growth (and overstating recent falls). Using the new alternative RPIJ measure, which does not suffer from the key technical deficiency that affects the RPI, trends still look bad, but slightly less so. Real median income in 2012–13 is no higher than in 2005–06 according to the RPIJ (and no higher than in 2000–01 using the RPI).

Looking at the latest year of data (2012–13) in isolation, there is evidence that average incomes were flattening out after the sharp falls seen over the previous two years. This is consistent with what we already knew had been happening to employment and to real pay levels. Median income was essentially unchanged in 2012–13 (and using the preferable RPIJ measure of inflation, the HBAI data actually record a small but statistically insignificant real rise of 0.5%). Mean income still fell by 1.5%, but this year-on-year change will be artificially pulled down by the delaying of income for some high-income individuals, in response to the impending reduction in the top rate of income tax in April 2013.

Nevertheless, despite continued signs that the macroeconomic outlook is improving, the chances of the next releases of HBAI data showing a very rapid recovery in living standards look slim. And the falls in income associated with the recession came after a pre-recession period of only sluggish growth in living standards. Although we saw large falls in average incomes over some years in the 1970s and 1980s, these came during periods of significant income volatility and were sandwiched between even larger increases in incomes. That is why the lack of real income growth over such a prolonged period has not been seen since consistent records began in the early 1960s.

One factor that has acted to cushion the severity of real income falls for some has been the rapid decline in mortgage interest rates. Of course, this has not been an experience shared by renters, or indeed those who own their homes outright – groups that have continued to increase in prevalence recently, as fewer younger people get on the housing ladder and many homeowners in older generations finish paying off their mortgages. When measuring incomes on an after-housing-cost (AHC) basis, this creates significant variation in recent trends across the population – a theme explored further in subsequent chapters. For mortgage payers themselves, an important factor will be the likely climb in mortgage interest rates at roughly the same time as real (BHC) incomes start to recover the ground that they have lost.[36]

[36] This issue was looked at in recent work by the Resolution Foundation (Whittaker, 2014).

3. Inequality

Key findings

- There was little change in income inequality in the UK between 2011–12 and 2012–13. However, inequality remains significantly lower than in 2007–08: real (RPI-deflated) incomes measured before housing costs (BHC) fell by 6.2% at the 90th percentile and 4.5% at the median, and rose by 0.9% at the 10th percentile. As a result, the Gini coefficient fell from 0.36 to 0.34, lower than its 1990 level.
- The primary reason for the fall in inequality was that real earnings fell sharply while benefit entitlements remained relatively stable. Median income for non-working households (including pensioners) was 60% of that of working households in 2007–08, but 67% by 2012–13.
- The fall in income inequality was much smaller when incomes are measured after deducting housing costs (AHC). On that basis, incomes fell by 8.0% at the 90th percentile, 8.7% at the median and 6.4% at the 10th percentile. This is because the large falls in mortgage costs primarily benefited those towards the top of the income distribution. Housing costs fell by over 20% across the top half of the distribution, but by less than 10% in the second and third income deciles.
- Over recent years, the incomes of pensioner households have continued to increase relative to those of working-age households (both BHC and AHC). Median AHC income among pensioner households overtook that of working-age households in 2009–10, for the first time since records began in 1961. By 2012–13, it was 5% higher, having been 5% lower in 2007–08 and 20% lower as recently as 1992. The relative increase in pensioner incomes was in stark contrast to the fortunes of young adults, who saw by far the largest falls in income.
- This is despite the fact that recent changes in housing costs have tended to benefit younger adults more. Falling mortgage interest rates provided the largest boost to young homeowners, because they tend to have the most outstanding mortgage debt. Moreover, young renters are the most likely to rent from a private landlord, and private rents have fallen relative to social rents.
- However, it looks likely that younger adults will face higher housing costs in later life than their predecessors, because more will still be renting rather than owner-occupying with no outstanding mortgage. Recently, each successive birth cohort has had a lower homeownership rate than the last. The age-25 homeownership rate has halved in 20 years, falling to 21% of those born in the mid 1980s from 34% for the mid-1970s cohort and 45% for the mid-1960s cohort.
- There is good reason to think that the falls in income inequality since 2007–08 are currently being reversed. As earnings growth catches up with inflation, primarily boosting incomes for middle- and higher-income households, cuts to benefits and tax credits are reducing incomes primarily towards the bottom. In contrast, the increase in pensioner incomes relative to working-age incomes continues a much longer-term trend and may well prove more durable.

In our analysis of living standards in Chapter 2, we focused on trends in average incomes. However, the incomes of different households in the UK vary substantially; and in assessing the impact of the Great Recession, it is important to understand how the falls in incomes documented in the previous chapter have been distributed between households. This chapter examines the relative fortunes of different groups over the last few years.

In our discussions of income inequality, we adopt a relative notion of inequality. This means that, if all incomes changed by the same proportional amount, we would conclude that income inequality had remained the same. However, even having settled on a relative notion of inequality, there are many different measures of inequality, which give different weight to different parts of the distribution. For this reason, we analyse changes in income right across the income distribution, as well as summary measures of inequality such as the Gini coefficient.

In last year's report, we drew attention to a different dimension of inequality – namely, differences in incomes between different age groups in the population. Chapter 5 builds on that work by taking a closer look at the fortunes of those in their 20s over recent years. This chapter provides a broader picture of how and why relative incomes across the age spectrum have changed, with a focus on the differential impact of the Great Recession.

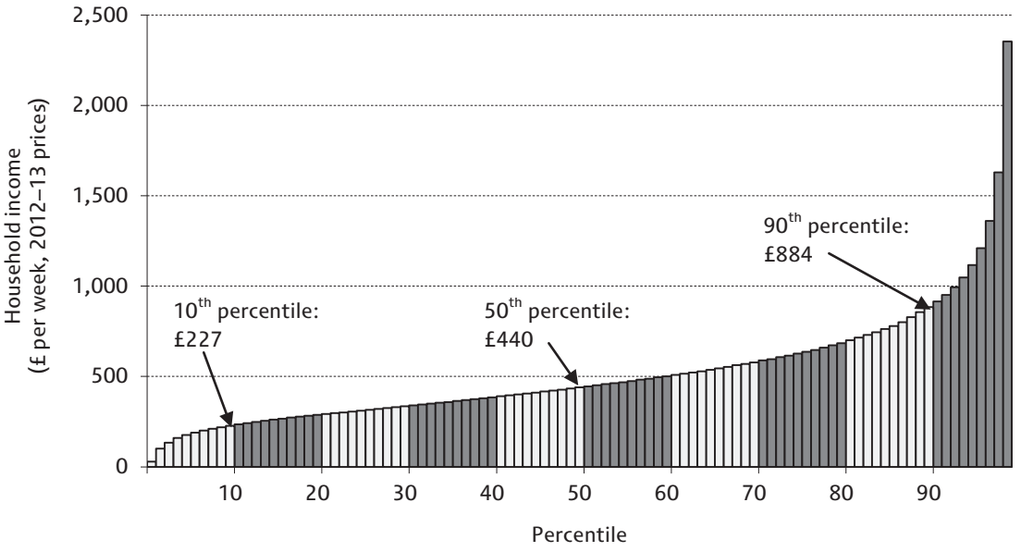
The chapter proceeds as follows. Section 3.1 looks at how changes in incomes have differed across the income distribution, both in the most recent year of data (2012–13) and since 2007–08, just before the recession began. In Section 3.2, we turn our attention to how changes in income have differed across age groups. In both sections, we explain the different trends in incomes through analysis of private incomes, housing costs, and the role of the tax and benefit system. Section 3.3 summarises what we know about the likely direction of future changes in inequality. Section 3.4 concludes.

3.1 Incomes across the income distribution

Figure 3.1 shows equivalised household income at each percentile point of the income distribution in 2012–13. This helps to illustrate the current level of inequality in the UK. For example, individuals at the median have just under twice the household income of those at the 10th percentile, and those at the 90th percentile have just over twice the household income of those at the median. To give a sense of monetary amounts, Table 3.1 shows the weekly net incomes that would put three example households at these points of the equivalised income distribution.

It is at the very top of the distribution that the differences in income are most stark. Individuals at the 90th percentile have twice the income of those at the median, but you only have to go another eight percentiles, up to the 98th percentile, for incomes to double again. Those at the 99th percentile have nearly three times as much as those at

Figure 3.1. Weekly net household income at each percentile point in 2012–13 (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, 2012–13.

the 90th percentile.[37] Even within the top 1%, there is huge inequality. Many discussions of inequality probably have in mind differences between the 'super-rich' (those well into the top 1%) and the rest of the population. That is no doubt important, but it does represent a focus on inequality between the very top and everyone else, rather than inequality within the vast majority of the population.

As with all household surveys, the HBAI data are not a robust source of detailed information on the distribution of income among the very richest individuals in the country, so it is important to note that we do not address that issue in any depth here. However, the HBAI methodology does attempt to get *average* incomes within approximately the top 1% of the income distribution right, by using information from personal tax records (see Appendix A).

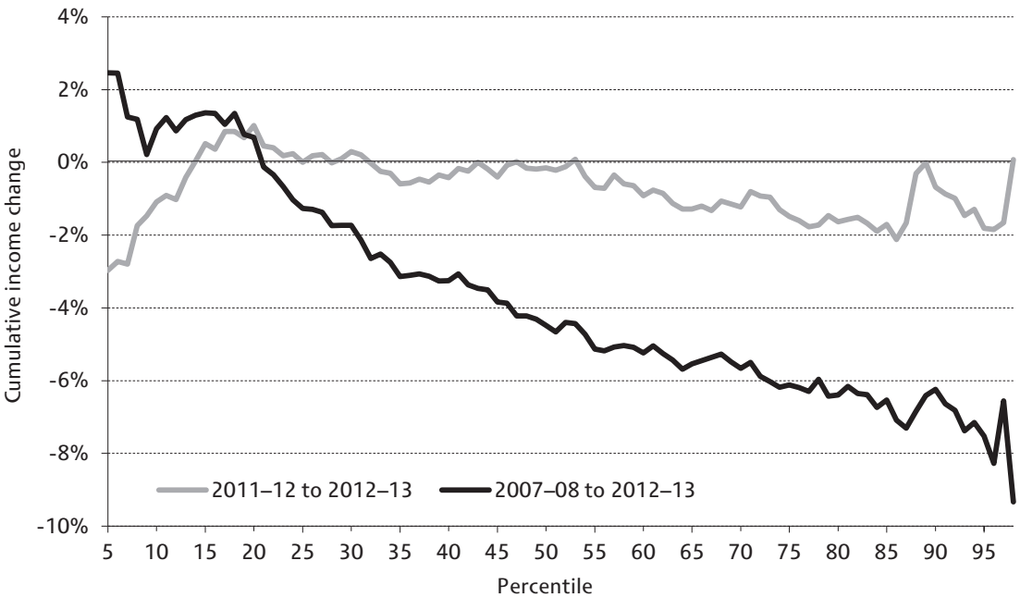
Table 3.1. Weekly income at different percentile points of the 2012–13 income distribution, by household type

Percentile	Single individual	Couple with no children	Couple with two children under 14
10th	£152	£227	£318
50th	£295	£440	£616
90th	£592	£884	£1,238

Source: Authors' calculations using Family Resources Survey, 2012–13.

[37] In absolute terms, this has the implication that the gap between the 90th and 98th percentiles (£745 per week) is bigger than that between the 10th and 90th percentiles (£657 per week).

Figure 3.2. Real income growth by percentile point, 2007–08 to 2012–13 (UK)

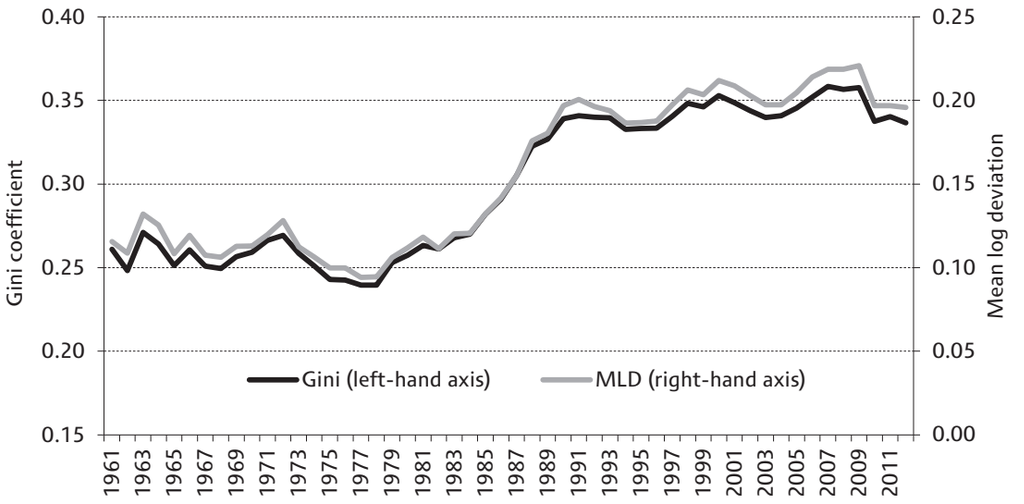


Note: Incomes have been measured before housing costs have been deducted. Percentiles 1–4 and 99 are excluded because of large statistical uncertainty.
Source: Authors' calculations using the Family Resources Survey, 2007–08, 2011–12 and 2012–13.

The clearest way to see how and why income inequality is changing is to compare changes in incomes at each percentile point of the distribution. Figure 3.2 presents this comparison, both for the most recent year of data (2011–12 to 2012–13) and for the period since the start of the Great Recession (2007–08 to 2012–13). Looking first at changes in the most recent year of data, we can see that if anything income inequality fell slightly across most of the distribution – incomes rose by 1.0% at the 20th percentile, fell by 0.2% at the median and fell by 1.6% at the 80th percentile. However, it is important not to put too much weight on a single year of data. In fact, changes in income in 2012–13 were not statistically significantly different from zero at any point of the distribution.

Comparing 2007–08 and 2012–13, the differences in how incomes have changed across the distribution are much more striking. Income at the 20th percentile was 0.7% higher in real terms in 2012–13 than in 2007–08, but it was 4.5% lower at the median and 6.4% lower at the 80th percentile. This largely reflects the very different trends in income from earnings and state benefits over that period. As was shown in Table 2.3, the cumulative real fall in households' average gross earnings across those five years was over 9%, while benefit entitlements were generally stable or rising in real terms (see Table 4.1). As will be discussed in more detail later in the chapter, the support provided by the tax and benefit system for incomes towards the bottom of the distribution – at a time when real earnings falls were affecting (primarily) those further up the distribution – was the primary reason for the falls in inequality seen over the last few years.

Figure 3.3. Gini coefficient and mean log deviation (GB)



Note: Income has been measured 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 Family Resources Survey and Family Expenditure Survey, various years.

To put the falls in inequality since 2007–08 in their long-run historical context we use summary measures of income inequality and track them over time. To examine changes over multiple decades on a consistent basis, we must look at incomes in Great Britain (GB) only (Northern Ireland was only included in the data from 2002–03 onwards).[38] Figure 3.3 shows the evolution of two common summary measures of inequality – the Gini coefficient and the mean log deviation – since 1961. Both condense the entire income distribution into a single number. The higher the number, the greater the degree of income inequality. As Figure 3.3 makes clear, the two measures record extremely similar trends in income inequality over the 50 years for which we have data. The Gini coefficient is the most popular summary measure of inequality, but changes in the mean log deviation measure are more easily decomposed into the contributions of changes within, and between, different population groups.[39] In the following, we use the Gini coefficient to discuss changes in overall inequality, and the mean log deviation when explaining those changes using decomposition analysis.

As you would expect given the pattern shown in Figure 3.2, the Gini coefficient fell very slightly in 2012–13, although not by a statistically significant amount. It is, however, significantly lower than its 2007–08 peak. At 0.337, the Gini coefficient in 2012–13 was in fact lower than in 1990. This reflects the fact that the recent rapid falls in inequality followed nearly 20 years of only moderate rises – in sharp contrast to the 1980s, which

[38] The fact that Northern Ireland represents only a small fraction of the UK population (around 3.0%) 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.

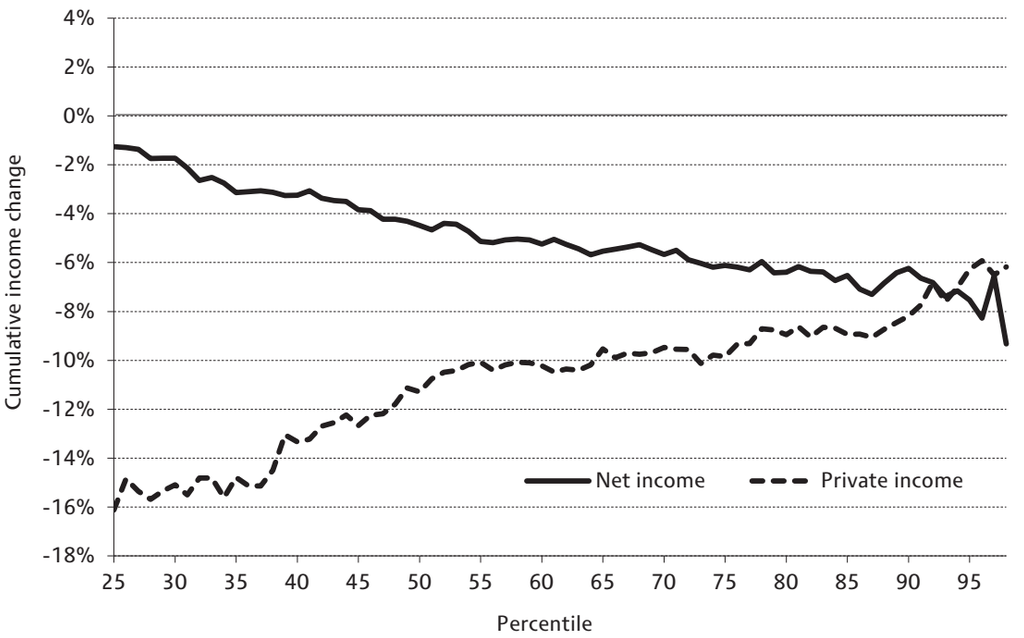
[39] The Gini coefficient cannot be satisfactorily decomposed by subgroup of the population whenever the ranges of incomes within at least two subgroups overlap. See Mookherjee and Shorrocks (1982) for more details.

saw rapid increases in income inequality, from 0.25 in 1979 to 0.34 in 1990. To give a sense of scale, this increase was more than four times as large as the decline in income inequality seen since the start of the recession.

The role of the tax and benefit system

One way to assess the role of the tax and benefit system in contributing to recent trends in inequality is to compare changes in private incomes with changes in net incomes. Private income is income measured before taxes are deducted and benefits are received by the household.[40] Hence, by comparing changes in the private income distribution with those in the net income distribution, we can get a sense of the extent to which the fall in inequality since the recession can be explained by the tax and benefit system. In interpreting this analysis, it is important to note that people at a given percentile of the net income distribution are not necessarily the same people as those at the same percentile of the private income distribution, because the tax and benefit system may 're-rank' people by shifting them up or down the net income distribution. However, households' positions in the two distributions are very highly correlated.

Figure 3.4. Real private and net income growth by percentile point, 2007–08 to 2012–13 (UK)



Note: The bottom 25% of both distributions has been omitted because private incomes are very low, and so subject to large year-on-year changes in percentage terms. The 99th percentile is excluded because of large statistical uncertainty.
Source: Authors' calculations using the Family Resources Survey, 2007–08 and 2012–13.

[40] The private income distribution should not be thought of as what the income distribution would be in the absence of taxes and benefits. The tax and benefit system creates incentives, which individuals respond to by changing their decisions, such as how much to work and save.

Figure 3.4 compares changes in private and net incomes since the recession at each percentile point of the distribution. We exclude the bottom 25% of the distribution, since households below that point have very low private incomes (around 10% of individuals have no private household income at all) and so the year-on-year percentage changes at each percentile point can be extremely volatile. The falls in net income since 2007–08 are much smaller than those in private income across the majority of the distribution. This is because the tax and benefit system acts as an 'automatic stabiliser' when private incomes are falling – as an individual's real earnings fall, for example, they will if anything pay a lower proportion of their earnings in direct tax (because we have a progressive direct tax system) and will potentially become eligible for (more) means-tested benefits. The key thing to note from Figure 3.4 is that private incomes actually became *more* unequal between 2007–08 and 2012–13, falling by 11.3% at the median and 8.2% at the 90th percentile (compared with falls in net income of 4.5% at the median and 6.2% at the 90th percentile). As discussed in last year's report, this primarily reflects an increase in earnings inequality: although real weekly earnings have fallen across the distribution, the falls have been larger for lower earners. Low-income households have not seen smaller falls in net incomes than high-income households as a result of greater resilience in their private incomes; rather, their incomes have been supported by the tax and benefit system to a greater extent than those of households further up the income distribution, as one might expect.

One consequence of the fact that earnings have fallen much more than benefits has been that households with no one in work fared better between 2007–08 and 2012–13 than households with someone in work. Over this period, median income fell by 6.6% for households with someone in work but rose by 4.9% for other households (5.2% for pensioner households with no one in work and 4.2% for working-age households with no one in work). As a result, the inequality between these two groups fell significantly. Median income for non-working households was 60% of that of working households in 2007–08, but 67% by 2012–13 (with the ratio rising from 68% to 77% for pensioner households and from 50% to 56% for out-of-work working-age households). In the context of these changes, it is not surprising that Adam and Browne (2013) find that changes in the macroeconomy (as opposed to tax and benefit reforms) have served to weaken work incentives in recent years.

How much of the overall fall in inequality can be explained by the reduced inequality between these groups? Using a decomposition of the change in the mean log deviation, we find that 40% of the total fall in inequality can be explained by lower inequality between working households and the rest of the population.[41] Some of this is due to the relatively benign changes to pensioner incomes since the recession (as discussed in the following section). But even focusing solely on inequality within the working-age population, 20% of the fall can be explained by lower inequality between working and workless households. The last time the relative fortunes of working and non-working households played such a significant role in explaining changes in overall income inequality was the mid 1980s, which exhibited the opposite pattern: Brewer, Muriel

[41] See Mookherjee and Shorrocks (1982) for details of the calculations, in particular equations 14a–d.

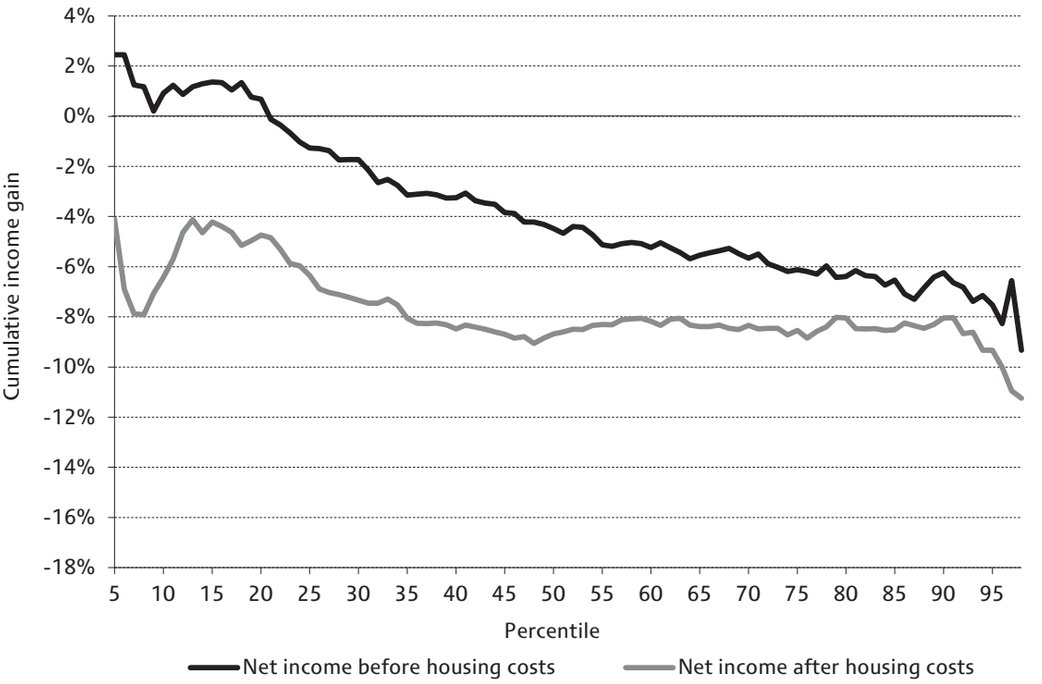
and Wren-Lewis (2009) found that about a third of the *increase* in income inequality between 1984 and 1988 was explained by greater inequality between households where the head is in full-time work and the rest of the population. That increase in inequality seems to have proved permanent; the same is unlikely to be true of recent falls, for reasons discussed in Section 3.3.

Housing costs

So far, we have examined changes in the distribution of income measured before housing costs are deducted (BHC). However, as discussed in Chapter 2, the period from 2007–08 to 2012–13 saw some dramatic changes in the amounts spent on housing. Across those five years, average housing costs for those in owner-occupied mortgaged housing fell by 37% and rents paid were broadly flat in real terms (with private sector rents falling), a break from their long-term upwards trend. Note that housing costs include mortgage interest payments but not capital repayments, on the basis that capital repayments represent the accumulation of an asset (they increase net housing wealth) rather than spending.

What implications did these changes have for income inequality on an after-housing-costs (AHC) basis? Figure 3.5 shows the cumulative percentage change in AHC incomes from 2007–08 to 2012–13 at each percentile point of the AHC income distribution,

Figure 3.5. Real net income growth by percentile point, before and after housing costs, 2007–08 to 2012–13 (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 2012–13.

alongside the changes in BHC income shown previously in Figure 3.2.[42] Falls in income were larger in proportionate terms on an AHC basis at every point of the distribution. This is despite the fact that housing costs for higher-income groups have fallen substantially (see Figure 3.6b). A large part of the explanation is that AHC incomes are, by definition, lower – so the same cash fall in income represents a larger percentage fall in AHC income.[43] Perhaps the more interesting finding is that inequality in AHC incomes has fallen much less than inequality in BHC incomes. While BHC incomes fell by 6.2% at the 90th percentile, 4.5% at the median and actually rose at the 10th percentile, AHC incomes fell by a relatively similar amount across most of the distribution: 8.0% at the 90th percentile, 8.7% at the median and 6.4% at the 10th percentile. As a result, the 90/10 ratio for AHC incomes only fell from 5.2 to 5.1 (compared with a fall from 4.2 to 3.9 for BHC incomes). The Gini coefficient for BHC income was lower in 2012–13 than in 1990, but the Gini coefficient for AHC income remained above its 2004–05 level.

The explanation for this difference is that those towards the bottom of the income distribution are much less likely to have benefited from the large falls in mortgage costs over recent years (see Section 2.3 for more detail). As Figure 3.6a shows, less than a fifth of those in the bottom (AHC) income quintile live in a household with a mortgage, compared with more than half of those in the top quintile. As a result, housing costs fell by more towards the top of the income distribution. Looking at Figure 3.6b, we see that while housing costs fell by over 20% across the top half of the income distribution, they fell by only 2.5% in the third decile and 7.3% in the second decile.[44] Larger falls in housing costs boosted the AHC incomes of high-income households relative to those of low-income households, and so counteracted some of the fall in inequality observed on a BHC basis.

Of course, the costs of non-housing goods and services can also change differently for different income groups. For example, energy costs are a proportionately larger item of spending for lower-income households on average. Hence, if they rise more quickly than general inflation – as in recent years – this also tends to hit lower-income groups harder than others. The FRS data do not record non-housing spending, so this cannot be accounted for using the FRS data alone. Adams, Hood and Levell (2014) use detailed expenditure data to look at the items that different types of households spend their money on, and combine these with observed changes in the prices of those items, to

[42] Note that the same individual may not be located at the same percentile point of the BHC and AHC income distributions.

[43] In some parts of the distribution, it can also reflect the fact that housing costs for those households have changed differently to average housing costs. For example, the housing costs of low-income households have risen relative to the average recently (see discussion below and Figure 3.6b), because fewer of those on low incomes have benefitted from sharp falls in mortgage interest rates. This variation in housing cost trends is accounted for only by AHC incomes. BHC incomes instead account just for average housing cost changes (by incorporating housing costs in the measure of inflation used to make real-terms comparisons over time).

[44] The larger falls in housing costs in the bottom decile are likely to be explained by the fact that many of the households in that decile are only temporarily poor, and so are less likely to be renting (and more likely to have a mortgage) than those immediately above them in the income distribution. Of those in the bottom decile, 27% have a mortgage, compared with less than 25% of those in the second decile.

derive inflation rates specific to different groups of households. They find that, once these group-specific inflation rates are used to compare incomes in real terms over time, the falls in real incomes since 2007–08 have been broadly similar across the income distribution – in contrast to the picture of falling inequality (particularly when

Figure 3.6a. Housing tenure by AHC income quintile, 2007–08 and 2012–13 (UK)

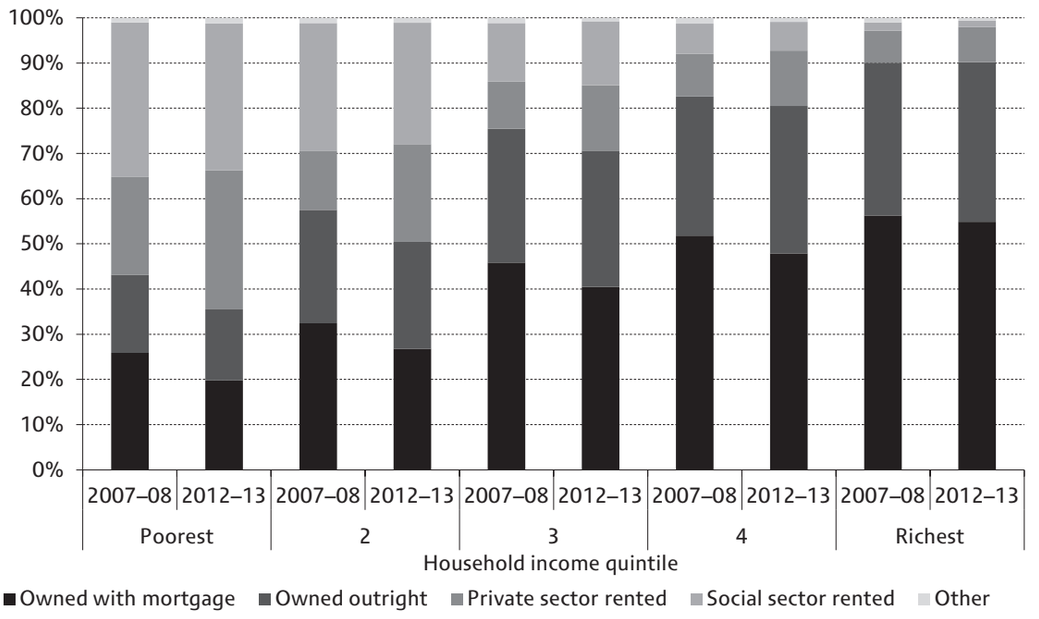
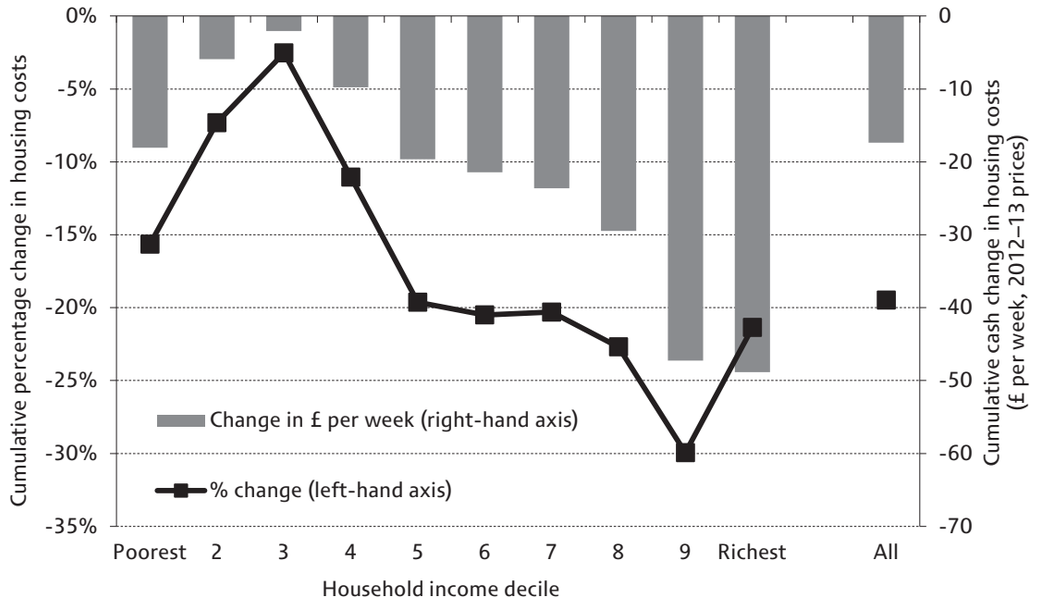


Figure 3.6b. Change in housing costs by AHC income decile, 2007–08 to 2012–13 (UK)



Note: Income quintile (decile) groups are derived by dividing all households into five (ten) equal-sized groups based on their equivalised AHC income.
Source: Authors' calculations using Family Resources Survey, 2007–08 and 2012–13.

measured before housing costs) seen when the average inflation rate is used for all households. Rises in the cost of food and energy, alongside the falls in mortgage costs, are key to this finding.

However, as discussed in Section 3.3, recent housing cost trends are unlikely to have such a large effect on inequality in the long run. As mortgage rates rise, this will act to unwind at least some of the differences in inflation seen over the last few years between high- and low-income groups.

3.2 Incomes across the age spectrum

So far in this chapter, we have seen that the changes in household incomes since 2007–08 were different for low- and high-income households. However, these are not the only groups who have had divergent experiences over the last few years. In this section, we examine how these income trends have varied with age, looking in particular at the contrasting fortunes of pensioners and young adults (a group analysed in much more depth in their own right in Chapter 5).

Figures 3.7a and 3.7b illustrate how equivalised household incomes vary across the age spectrum, on a BHC and AHC basis respectively.[45] Each figure shows median household income within each five-year age band as a percentage of median income for the population as a whole, allowing us to compare inequality between age groups over time. Equivalised household incomes are relatively high in early adulthood; lower at slightly older ages, once children are more likely to be in the household (as equivalisation attempts to account for the additional costs associated with them); higher as children leave and pay levels peak during the late working-age years; and then lower again in retirement.[46]

Looking first at the BHC trends in Figure 3.7a, we can see that between 2007–08 and 2012–13 the median household income of children rose slightly relative to the population as a whole, while the household incomes of working-age adults saw a relative fall. The decline is particularly noticeable for those in their 20s – a phenomenon to which we will return. In 2007–08, median income among 25- to 29-year-olds was 22% higher than for the population as a whole; by 2012–13, it was only 11% higher. In contrast, median incomes among those in or approaching retirement rose relative to the population as a whole. In 2007–08, median income among those aged 65 to 69 was 11% lower than for the population as a whole; by 2012–13, it was only 1% lower.

[45] It is important to understand equivalisation when interpreting differences in household income levels across age groups. It might seem surprising that young adults have tended to have higher median income than their older working-age counterparts in the past, because (unequivalised) earnings tend to rise with age. A key reason for this is that younger adults are less likely to have dependent children and to face the additional costs associated with them – costs which equivalisation attempts to account for.

[46] In principle, the differences in incomes at different ages could be entirely explained by differences between birth cohorts, rather than changing circumstances over the life cycle of given cohorts. However, the same pattern described above is observed within each cohort (see Hood and Joyce (2013)).

These different trends by age led to a significant increase in the relative incomes of the pensioner population. Median income among pensioner households was 17% lower than for working-age households in 2007–08; by 2012–13, it was only 7% lower. To what extent does this fall in inequality explain the fall in overall income inequality documented in the previous section? Using a decomposition of the change in the mean log deviation, we find that 15% of the total fall in BHC income inequality can be explained by lower inequality between pensioner and working-age households.

Figure 3.7a also shows that, in contrast to the falls in income inequality, the relative increase in pensioner incomes since 2007–08 continued a long-run trend. In 1978–80,

Figure 3.7a. Median income by age as a fraction of overall median income (BHC)

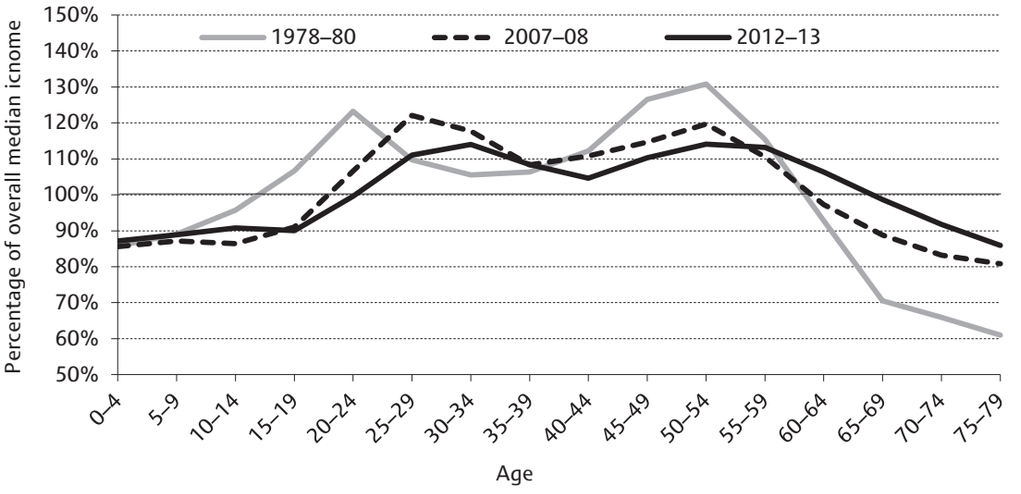
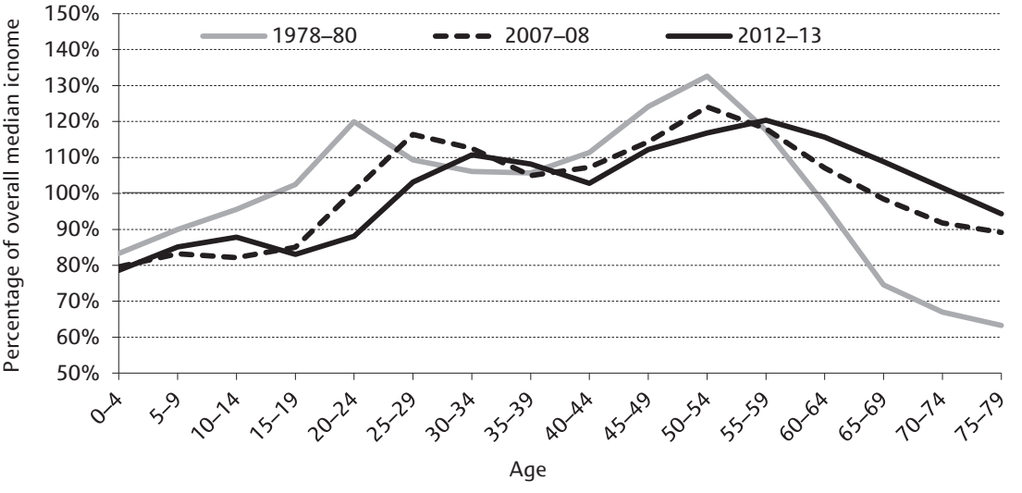


Figure 3.7b. Median income by age as a fraction of overall median income (AHC)



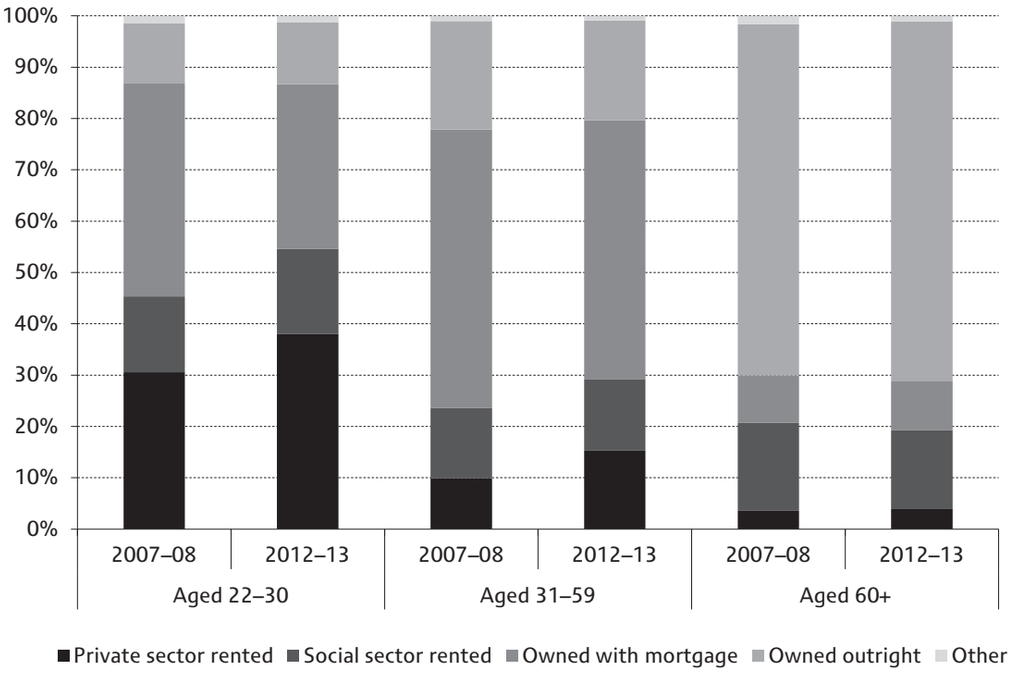
Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey, various years.

median income among those in their late 70s was only around 60% of median income in the population as a whole, compared with over 80% in 2007–08 and over 85% in 2012–13. This huge long-run improvement in pensioner incomes was analysed in detail in last year's report.[47]

Comparing Figures 3.7a and 3.7b, it is clear that accounting for variation in housing costs across age groups makes an important difference when comparing living standards. Again, the contrast is clearest between young adults and pensioners. On an AHC basis, median income among 25- to 29-year-olds in 2012–13 was only 3% higher than for the population as a whole (compared with 11% higher before housing costs). On the other hand, median AHC income among 65- to 69-year-olds was nearly 10% higher than for the population as a whole (compared with 1% *lower* before housing costs). In fact, median AHC income among pensioner households overtook that of working-age households in 2009–10, for the first time since records began in 1961. By 2012–13, it was 5% higher, having been 5% lower in 2007–08 and 20% lower as recently as 1992.

The key reason why accounting for housing costs makes such a difference when comparing incomes across the age spectrum is highlighted in Figure 3.8. About 70% of those aged 60 and over live in homes that are owned outright. By definition, these

Figure 3.8. Housing tenure by age



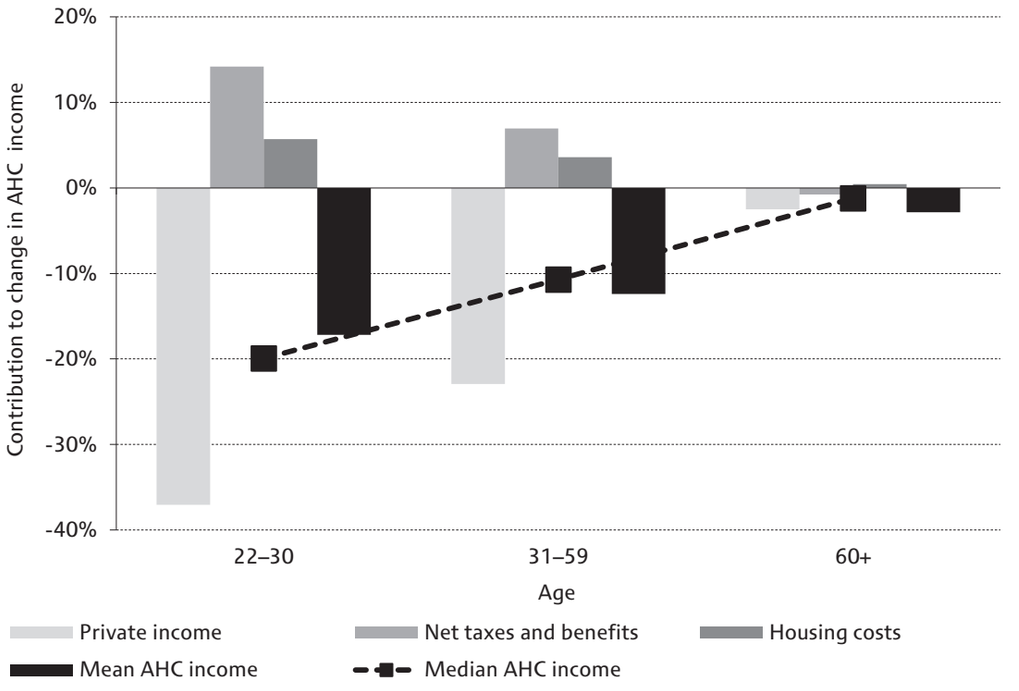
Note: Tenure status is defined at the household level, in line with housing costs. Some individuals in owner-occupied accommodation may not own the house themselves.
Source: Authors' calculations using the Family Resources Survey, 2007–08 and 2012–13.

[47] Chapters 5 and 6 of Cribb et al. (2013).

people pay neither rent nor mortgage interest, so they are a group for which the HBAI data record little if any housing costs.[48] In contrast, by 2012–13, over half of those aged 22–30, and almost 30% of those aged 31–59, were living in rented accommodation. The majority of younger renters rent from a private landlord, whereas 80% of renters aged 60 and over are in the (cheaper) social rented sector. These systematic differences in housing circumstances mean that there is a strong case for focusing on AHC incomes when comparing age groups. Note also that these differences have been becoming more pronounced. The proportion of those aged 22–30 in rented accommodation has been rising rapidly, from 45% to 55% in just five years between 2007–08 and 2012–13. Meanwhile, the proportion of those aged 60 and over who own homes outright has continued to rise, as a generation with a high homeownership rate reach this age. We take a more detailed look at trends in housing costs and tenure for different age groups later in this section.

We now contrast the divergent experiences of the three age groups compared in Figure 3.8 in more detail. Figure 3.9 shows large differences in the impact of the Great

Figure 3.9. Contributions to change in AHC incomes by age, 2007–08 to 2012–13



Note: All figures except median incomes are calculated for a subsample of households in HBAI, which excludes those with negative incomes. All incomes have been equivalised and are measured at the household level.
Source: Authors' calculations using the Family Resources Survey, 2007–08 and 2012–13.

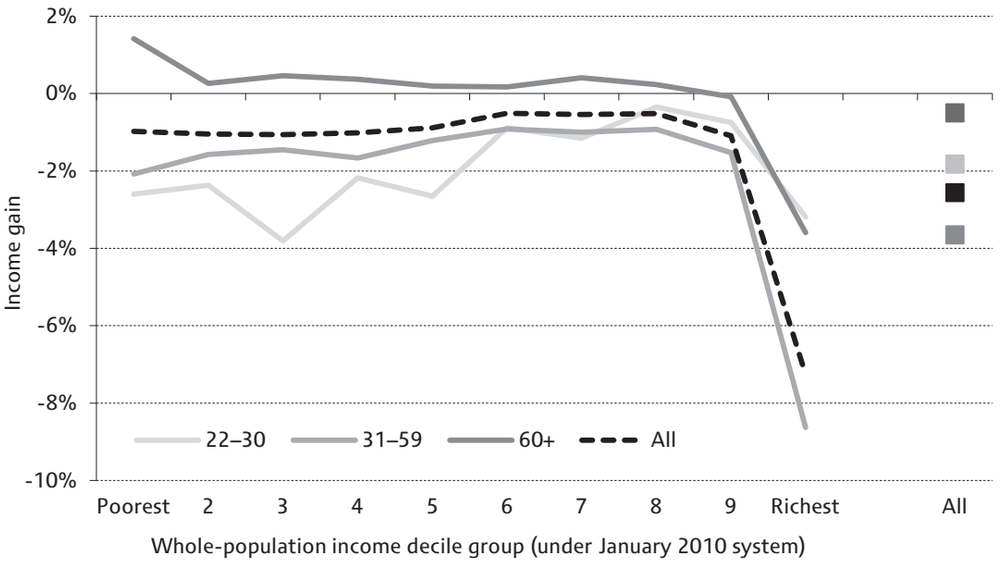
[48] As well as mortgage interest payments and rents, housing costs measured in HBAI include water rates, community water charges, council water charges, structural insurance premiums for owner-occupiers, and ground rents and service charges. However, measured housing costs do not include the cost of maintenance, repairs or contents insurance.

Recession on the incomes of these age groups. Among those aged 22–30, AHC incomes fell by 20% at the median and 17% at the mean, compared with falls of 11% and 12% respectively for the rest of the working-age population. On the other hand, average AHC income among those aged 60 and over was broadly unchanged.

Figure 3.9 also shows the contributions of changes in private incomes, net taxes and benefits, and housing costs to the change in mean net AHC income for each group.[49] It is clear that changes in private incomes were the key driver of the larger fall in income for younger adults and the smaller fall among those aged 60 and over. As shown in detail in Chapter 5, both employment and real earnings have fallen more for young adults than for the rest of the working-age population, explaining the much larger negative contribution of the change in private incomes for that group. Meanwhile, pensioners were largely unaffected by the substantial falls in real earnings, and so the falls in their private incomes were much smaller.

For working-age adults, the falls in private incomes were offset to some extent by changes in net taxes and benefits. It is important to note that these do not reflect

Figure 3.10. Impact of direct tax and benefit reforms introduced between January 2010 and January 2013, by income decile group and age



Note: Income decile groups are derived by dividing all households into 10 equal-sized groups based on their simulated income under the January 2010 tax and benefit system according to income adjusted for household size using the McClements equivalence scale. Decile group 1 contains the poorest tenth of the population, decile group 2 the second poorest, and so on up to decile group 10, which contains the richest tenth. Households are grouped according to the oldest individual in the household. Assumes full take-up of means-tested benefits and tax credits.
Source: Authors' calculations using TAXBEN, the IFS tax and benefit microsimulation model, run on uprated 2011–12 Family Resources Survey data.

[49] It is important to note that these contributions are *not* the percentage change in that income component, but the percentage change in net AHC income explained by that component. Since private incomes are larger than net incomes, the negative contribution of falling private incomes to the change in net income is larger than the percentage fall in private incomes.

changes to the tax and benefit system that benefited these groups, but rather the fact that as private incomes fall, direct taxes fall and eligibility to means-tested benefits increases. In other words, it was the *existence* of a tax and benefit system – rather than any changes to the system – that acted to cushion the large falls in private incomes for working-age individuals. In fact, discretionary cuts to working-age benefits and tax credits made since 2009–10 (shown in Figure 3.10) reduced this effect: without them, the cushioning impact of the tax and benefit system for working-age adults would have been larger. The fact that those aged 60 and over did not see a similar positive contribution from net taxes and benefits simply reflects the fact that their private incomes barely fell.

On the other hand, as can be seen from Figure 3.9, falling housing costs acted to increase AHC incomes for working-age adults between 2007–08 and 2012–13 (though this was nowhere near enough to offset the falls in their incomes before housing costs). This effect was actually larger for younger adults – a phenomenon that is explored and explained below. Pensioners, the majority of whom are owner-occupiers and have paid off their mortgage (see Figure 3.8), had very low housing costs to start with, so such costs had little impact on changes in their AHC incomes. The next subsection looks in more detail at how and why housing costs have changed for different age groups in recent years.

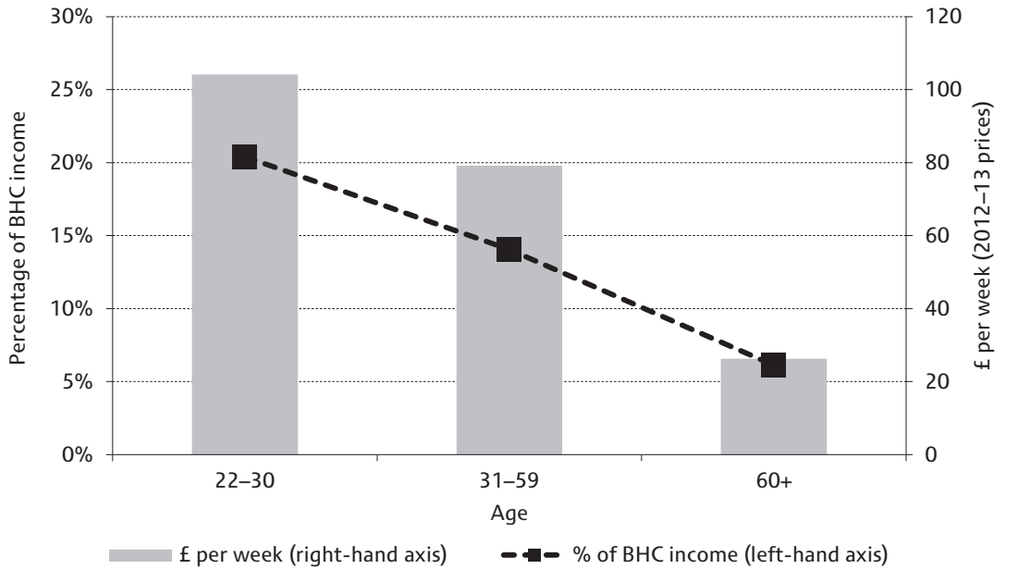
Housing costs across the age spectrum

Figure 3.11 shows how housing costs vary across the age spectrum, both in cash terms and as a share of BHC income. The HBAI data record housing costs at the household level, and these figures are then equivalised to account for household size (as elsewhere in this report, cash figures are given as the equivalent amounts for a childless couple). Just as with incomes (see Appendix A), an implicit assumption is that housing costs are shared equally between all members of the household. For example, the following analysis assigns mortgage interest costs to some young adults living with their parents (see Appendix C for further discussion, and analysis of the impact of this assumption). Note also that the decision to share a house with more people leads to a fall in equivalised housing costs – an example of the fact that the data do not capture any changes in the 'quality' of people's accommodation.

Housing costs are clearly highest for young adults, at an average of over £100 per week (more than 20% of their BHC income). In contrast, average housing costs among those aged 60 and over are about £25 per week, only 6% of their BHC incomes. This is largely explained by the fact that homeowners see falling housing costs across most of their adult lives, as their mortgage debt – and hence their mortgage interest payments – shrinks and they eventually own their home outright. Another contributing factor is that, among renters, the share in the (cheaper) social rented sector is higher for older individuals (see Figure 3.8).

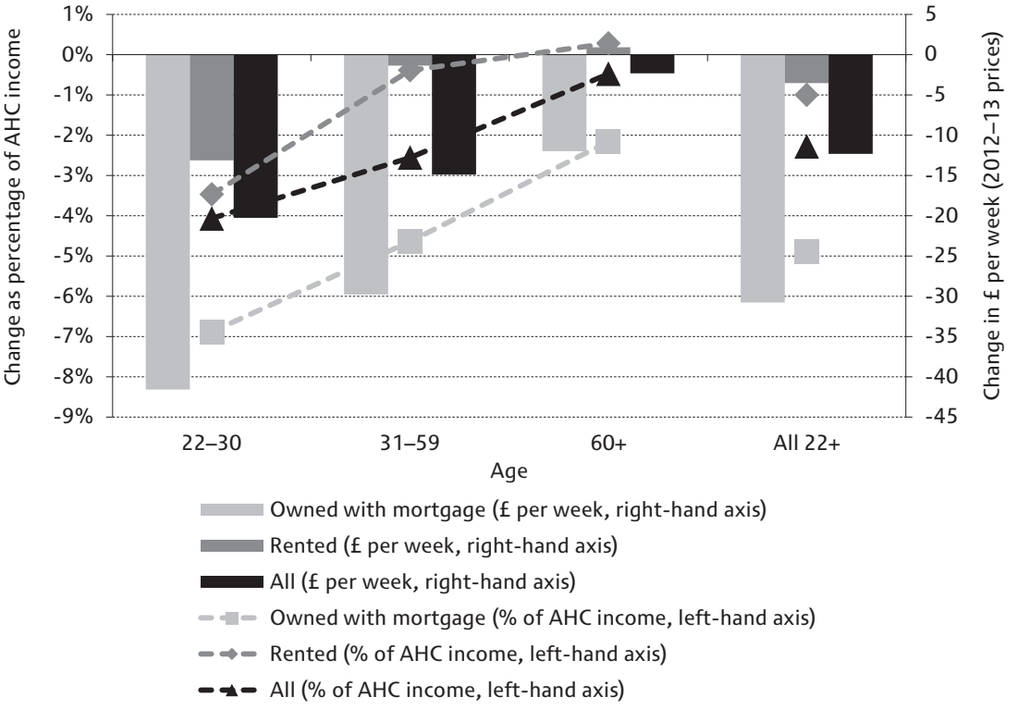
Figure 3.12 shows recent changes in housing costs for each of the three age groups discussed above, separating out those living in rented accommodation and those living in owner-occupied mortgaged housing. These two groups do not encompass the whole population (most of the remainder live in housing that is owned outright), but they do

Figure 3.11. Mean housing costs by age group, 2012–13 (UK)



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

Figure 3.12. Change in housing costs by age group and tenure, between 2007–08 to 2009–10 and 2010–11 to 2012–13 (UK)



Note: Tenure status is defined at the household level, in line with housing costs. Some individuals in owner-occupied accommodation may not own the house themselves.
Source: Authors' calculations using the Family Resources Survey, various years.

account for almost all housing costs. To ensure sufficient sample sizes within each group, we compare pooled 3-year sets of HBAI data (2007–08 to 2009–10 and 2010–11 to 2012–13) rather than single years. Because housing costs (unlike household incomes) began to fall in 2008–09, this comparison will identify somewhat smaller falls in housing costs than occurred between the single years of 2007–08 and 2012–13.

Looking first at those who live in owner-occupied mortgaged housing, the real fall in housing costs was largest for those aged 22–30, at over £40 per week on average (6.9% of their AHC incomes), compared with about £30 per week (4.6% of AHC income) for those aged 31–59 and only about £10 per week (2.2% of AHC income) for those aged 60 and over. This reflects the fact that low mortgage interest rates are of greatest benefit to those with high outstanding mortgage debt, and older adults are more likely to have already paid off part of their mortgage. According to the Wealth and Assets Survey, average outstanding mortgage debt in 2008–10 was about £120,000 for mortgagers aged 25–34, compared with £70,000 for mortgagers aged 55–64.[50]

Turning to those living in rented accommodation, changes in rents paid have also been different for those in their 20s and the rest of the adult population. While real rents have stayed roughly the same for adults aged over 30, they have fallen by about £13 per week on average for those aged 22–30 (3.5% of their AHC income). There are at least two potential reasons for this difference. First, as was shown in Section 2.3, real rents in the private sector were about £10 per week lower on average in 2012–13 than in 2007–08, while social rents were broadly unchanged. These changes are consistent with those recorded in other data sources.[51] Renters aged 22–30 were more likely to benefit from falling private rents: 70% of them were renting from a private landlord in 2012–13, compared with 52% of renters aged 31–59 and 20% of renters aged 60 and over (Figure 3.8). Second, the fall in rents paid by young adults may reflect the fact that they are choosing to spend less on housing in response to their sharply falling incomes. In fact, the share of BHC income spent on housing costs *rose* for 22- to 30-year-olds renters, from 27.6% in 2007–08 to 2009–10 to 29.3% in 2010–11 to 2012–13.

In summary, young adults have seen larger reductions in housing costs than other age groups since the start of the recession. Their housing costs fell by just over £20 a week (4.1% of AHC income) on average, compared with a fall of just over £12 (2.3% of AHC income) across the adult population as a whole. This might come as a surprise at a time when more young adults are remaining in the rented sector and hence not benefiting from low mortgage interest rates. The explanation is twofold. First, young adults who do have a mortgage have higher mortgage debt and hence higher mortgage interest costs than older mortgagers, on average, and so benefit the most from falls in mortgage

[50] These figures are averages across households (not individuals), with ages defined according to the age of the household reference person (the main respondent to the survey), so they are not directly comparable to other numbers here.

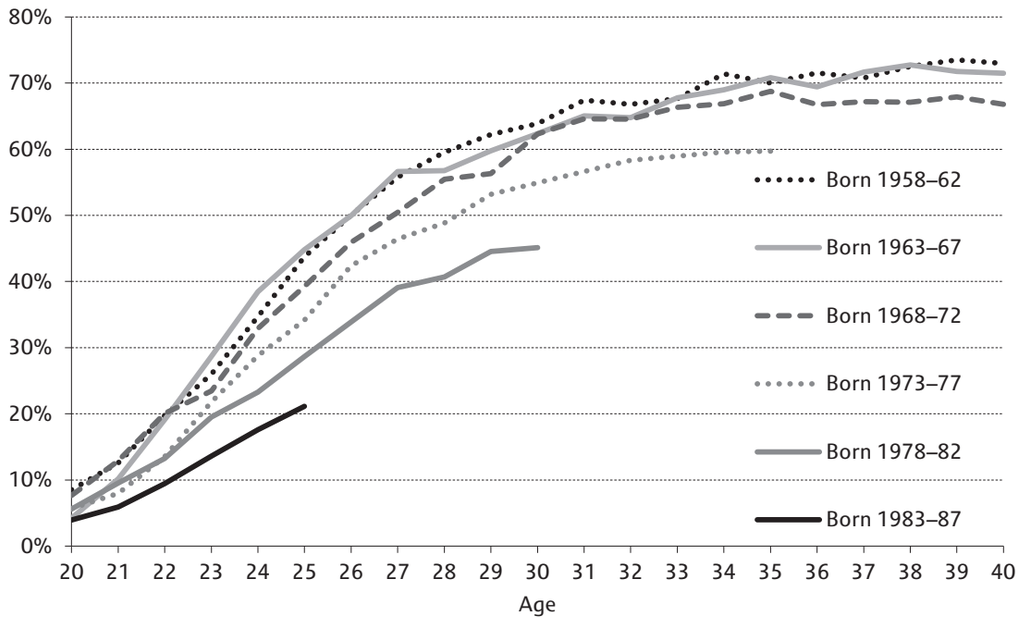
[51] The ONS index of private housing rental prices (see http://www.ons.gov.uk/ons/dcp171766_311546.pdf) also shows private sector rents rising by considerably less than Rossi inflation since 2007. Data from the English Housing Survey (see https://www.gov.uk/government/statistical-data-sets/social-and-private-renters) show a real fall of £12 in median private rents between 2008–09 and 2011–12, while social rents were unchanged.

interest rates. Second, a significant majority of the remainder are in the private (not social) rented sector, and private rents have fallen relative to social rents since 2007–08.

It is important to set this in its wider context, however. Although recent changes in housing costs have benefited those in their 20s more than the rest of the adult population on average, there is good reason to think that current generations of young adults will face higher housing costs in the long run. Figure 3.11 showed that housing costs tend to decline with age, and the key reason for this is that homeowners pay off their mortgages over time.[52] But over recent years, there has been a growing focus on the fact that successive generations have been finding it more difficult to buy their first home than in the past. For those who continue to rent, there will not be the same dramatic decline in housing costs over their lifetime.

Figure 3.13 shows the proportion of adults who own the home that they live in. In households where the home is owned, we consider only the head of the household and their partner (if applicable) as the owners. Hence, any adult offspring with whom the household head lives would not be counted as homeowners. This is important for young adults, many of whom live with homeowning parents (see Chapter 5). We use

Figure 3.13. Homeownership rates, by birth year and age



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

[52] The HBAI data would record homeowners making the same mortgage payments across the course of their mortgage term as having declining housing costs. This is because, as the amount of capital outstanding falls, less of the payment covers mortgage interest costs (which are included in housing costs) and more covers capital costs (which are excluded for reasons discussed earlier in the chapter).

'synthetic cohort' methods[53] to show the evolution of this homeownership rate with age, for people born at times ranging from the late 1950s (a cohort now approaching retirement) to the mid 1980s (a cohort now in their late 20s).

Starting with those born in the mid 1970s (now in their late 30s), successive birth cohorts have clearly had lower homeownership rates than the last. The gap between cohorts, when compared at the same age, has been evident right from young adulthood and has persisted beyond that. At age 35, 60% of individuals born in the mid 1970s owned a home, down from 70% for the cohort born a decade earlier. The homeownership rate also seems to have flattened out for this cohort, which casts significant doubt on whether it will ever reach the 70% mark of their predecessors.[54] The fact that this decline in homeownership started with the mid-1970s cohort is important to emphasise, as it shows that the phenomenon has not simply affected the most recent generations of young adults. Nevertheless, declines in homeownership across cohorts have since continued at approximately the same pace. The age-25 homeownership rate has halved in 20 years: 21% of those born in the mid 1980s owned a home at this age, compared with 34% for the mid-1970s cohort and 45% for the mid-1960s cohort.

In conclusion, homeownership has been declining rapidly, primarily affecting cohorts born from the mid 1970s onwards. This is not simply an effect of the recession, but represents a trend that has been ongoing for about two decades. If the evidence thus far from the 1970s and early 1980s generations is anything to go by, this is not simply a change in the timing of movements into homeownership (caused, for example, by delayed family formation): homeownership for those individuals has remained behind that of their predecessors throughout their adult lives to date. Instead, the data suggest that the ease or perceived desirability of owning a home is changing. Likely explanations include the rapid rise in real house prices since the mid 1990s, combined with the lack of income growth since the early 2000s (as described in Chapter 2). This is an important component to the story when thinking about the likely lifetime housing costs of different generations, in addition to the costs faced in the shorter term.

3.3 Prospects for inequality

As real earnings fell sharply and benefit rates remained relatively stable between 2007–08 and 2012–13, the incomes of low-income and pensioner households grew relative to the rest of the population, leading to falls in income inequality and large differences in household income trends across the age spectrum. But what will happen as the economy recovers and real earnings stabilise?

The change in inequality over the next few years will depend on a number of factors, some of which are highly uncertain. For example, how the pace of earnings growth

[53] The HBAI data provide only repeated cross-sections, meaning that we cannot follow the same individuals over time. However, we can still follow the income levels of a group of people defined by their year of birth, since we have a representative sample of each cohort in every year of data. See Section 5.1 for further explanation.

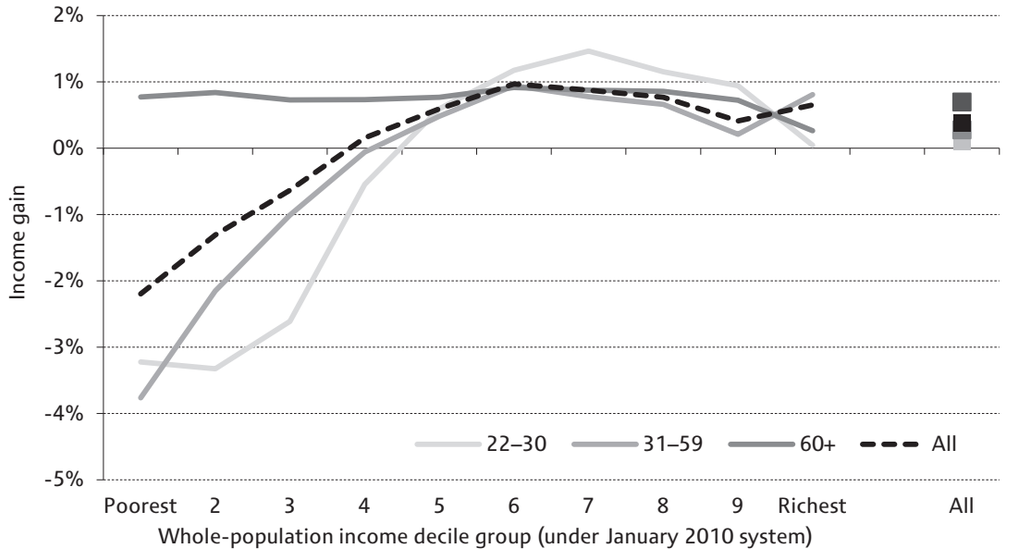
[54] Hood and Joyce (2013) look in more detail at the property wealth of individuals born between the 1940s and 1970s, as well as at a wide range of other economic outcomes.

varies across the earnings distribution will be an important determinant of how households towards the top of the income distribution (where the majority of high earners are found) fare compared with those towards the middle (where a larger share of income comes from lower earners).

One factor we can analyse with some precision is the effect of changes to the tax and benefit system on the incomes of different kinds of households. Figure 3.14 shows the impact on each income decile group of all direct tax and benefit reforms[55] introduced or planned between April 2013 and April 2015, both for the population as a whole and for each of the three age groups discussed in Section 3.2. Note that this excludes the phase-in of universal credit, which is now planned to barely start until 2016–17.

Looking first at the population as a whole, we can see that direct tax and benefit reforms between April 2013 and April 2015 will act to increase inequality, reducing incomes in the bottom three deciles but increasing them across the rest of the income

Figure 3.14. Impact of direct tax and benefit reforms introduced or planned between April 2013 and April 2015, by income decile group and age



Note: Income decile groups are derived by dividing all households into 10 equal-sized groups based on their simulated income under the January 2010 tax and benefit system according to income adjusted for household size using the McClements equivalence scale. Decile group 1 contains the poorest tenth of the population, decile group 2 the second poorest, and so on up to decile group 10, which contains the richest tenth. Households are grouped according to the oldest individual in the household. Assumes full take-up of means-tested benefits and tax credits. Analysis ignores the introduction of universal credit, which began in October 2013 but is not due to be complete until the end of 2017, and the introduction of personal independence payments, which replaced disability living allowance for new claimants from April 2013 but affects existing claimants only from October 2015 onwards.
Source: Authors' calculations using TAXBEN, the IFS tax and benefit microsimulation model, run on uprated 2011–12 Family Resources Survey data.

[55] Note that the impact of indirect taxes is excluded. This is because indirect taxes cannot have varying impacts across the distribution of HBAI-measured incomes, because all incomes are compared in real terms over time using a measure of prices that is the same for all households (so only average changes in the cost of living are accounted for).

distribution. This reflects the fact that while the reforms that affect high-income households were largely in place by 2012–13, cuts to benefits and tax credits, which primarily reduce the incomes of households towards the bottom of the distribution, accelerated from April 2013 (see Section 2.5 for further details). This provides good reason to think the falls in income inequality since the start of the Great Recession may well be swiftly reversed: as real earnings start to grow, boosting incomes primarily towards the top of the distribution, income from benefits will fall, reducing incomes primarily towards the bottom of the distribution. In fact, Brewer et al. (2013b) project that, as a result, BHC income inequality will return to approximately its 2007–08 level within the next few years.

What can we say about the impact of direct tax and benefit reforms on the incomes among different age groups? Figure 3.14 shows a stark contrast between households where someone is aged 60 and over, and the rest of the population. Reforms coming in between April 2013 and April 2015 increase the incomes of the former group in every income decile, and by 0.7% across the group as a whole.[56] On the other hand, younger households towards the bottom of the income distribution see their incomes reduced, with a slightly larger impact for households where no one is aged over 30. As a result, the overall giveaway for working-age households is substantially smaller (at 0.3% for 31- to 59-year-olds and 0.1% for 22- to 30-year-olds). It is worth noting that this difference is the result of active policy choices – for example, while increases in working-age benefits are limited to 1% in nominal terms until April 2016, the 'triple lock' ensures that the state pension will rise at least as fast as earnings. Partly as a result, there is no reason to expect the different trends in income across age groups to be reversed over the next few years – the relative gains made by the pensioner population may well prove permanent.

Earlier in this chapter (Section 3.1), we saw that the falls in income inequality since 2007–08 have been substantially smaller when incomes are measured after housing costs have been deducted, because the large falls in mortgage costs have primarily benefited households towards the top of the distribution, who are more likely to own their own home. Over the next few years, this process may well operate in reverse. As interest rates begin to rise, the consequent increase in mortgage costs will push down AHC incomes towards the top of the distribution, relative to those towards the bottom. As a result, AHC inequality looks likely to rise by less than BHC inequality over the next few years. The overall picture could therefore be one of little change in income inequality between 2007–08 and (roughly) 2015–16, whether incomes are measured before or after housing costs – but with the fall and rise of mortgage interest costs having made BHC inequality considerably more volatile in the intervening period.

[56] Changes to pensioner benefits look particularly generous relative to the inherited policy of earnings indexation of the state pension (over a period when that would have been less generous than price indexation). The differing effects shown between pensioner and working-age households are, however, driven largely by real-terms cuts to working-age benefits.

3.4 Conclusion

The effect of the Great Recession has not been evenly felt across different kinds of households. Most obviously, the dramatic falls in real earnings only hit households with someone in work, while benefit entitlements (an important source of income for many non-working households) were more stable. Since non-working households tend to be towards the bottom of the distribution, the relative increase in their incomes contributed significantly to a large fall in income inequality that left the Gini coefficient in 2012–13 lower than in 1990.

There are at least two important reasons, however, why that is not the end of the story. First, the fall in income inequality is much smaller when incomes are measured after housing costs have been deducted. This is because the large falls in mortgage costs over recent years have primarily benefited those towards the top of the distribution. More broadly, inflation has risen faster for those towards the bottom of the distribution: in addition to benefiting less from falling mortgage costs, they have been hit harder by rising food and energy prices. Once this is taken into account, real incomes look to have fallen by a similar amount across the distribution.

Second, it seems highly likely that the falls in income inequality will prove temporary. As the economy recovers, increasing real earnings will boost incomes towards the top of the distribution, while ongoing cuts to benefits and tax credits reduce incomes towards the bottom. While these trends will be somewhat mitigated by the impact of rising mortgage interest rates on (primarily) high-income households, income inequality may well return to its pre-crisis level within the next few years.

On the other hand, the relative increase in pensioner incomes seen over the course of the Great Recession and its aftermath looks unlikely to be reversed in the near future, partly as a result of active policy choices. Pensioners' recent gains were in stark contrast to changes for adults in their 20s, who were by far the worst affected by the Great Recession despite having actually benefited more than others from falling housing costs. The fortunes of that group of young adults are thus the subject of detailed investigation in Chapter 5.

4. Poverty

Key findings

- Official statistics show that 10.6 million individuals (16.8% of the population) were in absolute poverty in the UK in 2012–13, measuring incomes before housing costs (BHC) and using a poverty line equal to 60% of 2010–11 median income in real terms. This was a fall of 200,000 individuals (0.5 percentage points) since 2011–12. Measured after housing costs (AHC), 14.6 million (23.2%) were in absolute poverty, an increase of 600,000 individuals (0.8ppt).
- Measured BHC, absolute poverty is close to the pre-crisis level seen between 2004–05 and 2008–09; but on an AHC basis, absolute poverty is 3.0 million (3.6ppt) above its low point in 2004–05 and at its highest level since 2001–02.
- There were significant falls in relative poverty between 2007–08 and 2012–13, using a poverty line of 60% of median income. It fell by 1.3 million (2.8ppt) to 9.7 million (15.4%) BHC and by 300,000 (1.5ppt) to 13.2 million (21.0%) AHC. This was driven by pensioners and families with children. Low-income members of those groups get most of their income from state benefits, and benefit entitlements were much more stable than median income over this period.
- Recent poverty trends look less favourable on an AHC basis, because they account for variation in housing cost trends. Although on average housing costs have fallen sharply, they have fallen by less for low-income households.
- There is evidence that low living standards may be better detected by looking at the income available after housing costs have been paid. London has a BHC income poverty rate lower than the UK average, yet the highest rates of AHC income poverty and material deprivation. Child material deprivation has been rising since the start of the Great Recession, and it increased by 300,000 children (2.1ppt) in 2012–13 alone. Over the same period, the rate of absolute income poverty among children rose when measured AHC but fell when measured BHC.
- The proportion of individuals in arrears on household bills fell from a peak of 9.9% in 2009–10 to 8.1% in 2012–13 (after rising in the pre-recession years). This happened alongside large *falls* in incomes; but the peak in arrears aligns with the peak in redundancies and with rises in unemployment. This may be because arrears are more related to unexpected falls in income than to low levels of income per se.
- The government recently proposed combining indicators such as income, material deprivation and arrears into one index of child poverty. The analysis here serves as a reminder that such an index could conceal important differences between movements in its component parts and could be difficult to interpret.
- It is likely that future releases of HBAI data will show increases in income poverty among children and working-age adults. This is because cuts to the working-age social security budget as part of the fiscal consolidation were accelerated from April 2013. The outlook for pensioner poverty continues to look more favourable.

Previous chapters have looked at trends in average living standards and inequality for different groups. This chapter concentrates on those with low living standards. Our main focus remains on changes since the beginning of the Great Recession, although we put this in the context of longer-run changes. Detailed analysis of changes in poverty among different groups over the last 50 years was presented in chapter 6 of last year's report.[57]

There are two main income-based ways of measuring poverty. 'Absolute poverty' measures look at the number of people whose household income falls below a poverty line that is fixed in real terms over time. In line with the Child Poverty Act 2010 and the DWP's Households Below Average Income (HBAI) publication, we use an absolute poverty line fixed at 60% of 2010–11 median income in real terms. In contrast, 'relative poverty' counts the number of individuals whose household income is below 60% of the current income of the median individual (the person in the middle of the household income distribution). This indicator is a 'relative' measure, because the poverty line moves with median income each year. This has been the most widely used measure of poverty in the UK, and is one of the indicators that is used to measure progress against the government's commitments to reduce child poverty by 2020–21 under the 2010 Child Poverty Act.

If absolute poverty goes down or up, this suggests that the real incomes of low-income people are going up or down, whereas if relative poverty goes down or up, this suggests that the incomes of low-income people are growing faster or more slowly than the incomes of middle-income people. The two measures therefore reveal different kinds of information and it is reasonable to track both. When considering trends over long periods, a relative notion of poverty is likely to be important. It is unlikely that a society's view of what constitutes a minimum acceptable standard of living remains completely fixed over many decades. But this view may not be so sensitive to year-on-year changes in median income, and over shorter periods people's interest is arguably more in whether absolute living standards are changing. This chapter primarily focuses on short-run trends since the onset of the recession, so we start with a focus on absolute income poverty. However, we also consider relative income poverty in Section 4.4.

Poverty rates can be measured using incomes measured before housing costs (BHC) or after housing costs (AHC),[58] and we present both. The government reports the number of individuals in poverty rounded to the nearest 100,000; and it also reports changes in the (unrounded) numbers over time to the nearest 100,000. For consistency and ease of comparison, we follow these conventions.[59] The government reports poverty rates

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[57] Cribb et al., 2013.

[58] See Appendix A for a detailed discussion of income measures before and after housing costs are deducted.

[59] This can sometimes lead to numbers that can be confusing and difficult to interpret. For example, using the unrounded numbers, there were 10,796,453 people in poverty measured BHC in 1998–99 and 10,748,780 in 1999–2000. Rounded to the nearest 100,000, these would be 10.8 million and 10.7 million, respectively. Rounded to the nearest 100,000, the *change* in the number of people in

rounded to the nearest full percentage point. Here we depart from its methodology and round percentages to the nearest tenth (0.1) of a per cent. This allows us to be more precise and to report smaller changes in the proportion of people in poverty than the government, although very small changes are usually not statistically significant.

Figures in this chapter are presented for Great Britain only up to and including 2001-02 and for the whole UK from 2002-03 (i.e. largely the same way as they are presented in DWP's HBAI publication).[60] Due to this break in the series, and because the size of populations can change over time, when looking at longer-run poverty trends we will focus on the fraction of individuals who are in poverty rather than the number of individuals.

There are good reasons to track other indicators of, or proxies for, poverty or financial hardship.[61] First, factors besides income can affect living standards. Second, snapshot measures of income at one point in time cannot distinguish people with temporarily low incomes from people with permanently low incomes – yet the latter will often have much larger consequences for living standards.[62] Therefore, we also analyse some other measures of poverty or economic hardship provided by the Family Resources Survey (FRS) and HBAI data. In particular, we consider indicators of 'material deprivation' – which measure the extent to which families say they are unable to afford various commodities or services – and the proportion of people who say that they are in arrears with household bills, mortgage payments and rent.

The remainder of this chapter proceeds as follows. Section 4.1 examines recent trends in absolute income poverty and how these have varied according to demographic group and work status. Section 4.2 looks at trends in material deprivation and being in arrears on household bills, and compares these with trends in income poverty. Section 4.3 analyses how the prevalence of low living standards has changed since the beginning of the recession in the constituent nations and regions, and compares the levels of poverty and deprivation across the UK. Section 4.4 examines recent changes in relative income poverty, while Section 4.5 considers the prospects for poverty in the years ahead. Section 4.6 concludes.

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poverty measured BHC between the two years (47,673) is zero, however. The level of poverty has fallen but the change in poverty was zero. To avoid confusion, we highlight other such examples as they arise.

[60] The size of the discontinuity caused by the inclusion of Northern Ireland is small: the risk of relative poverty (BHC) in 2012–13 in the UK was 15.4% measuring incomes BHC and in Great Britain it was 15.5%. Northern Ireland makes only a small difference to poverty rates primarily because only 3% of individuals in the UK live in Northern Ireland.

[61] The government has recently consulted on how to use various indicators, including income-based ones, to measure child poverty (though it has yet to draw any conclusions).

[62] This has led to a widespread view in the economics literature that living standards are better measured by households' consumption than by their current income (see Brewer and O'Dea (2012)).

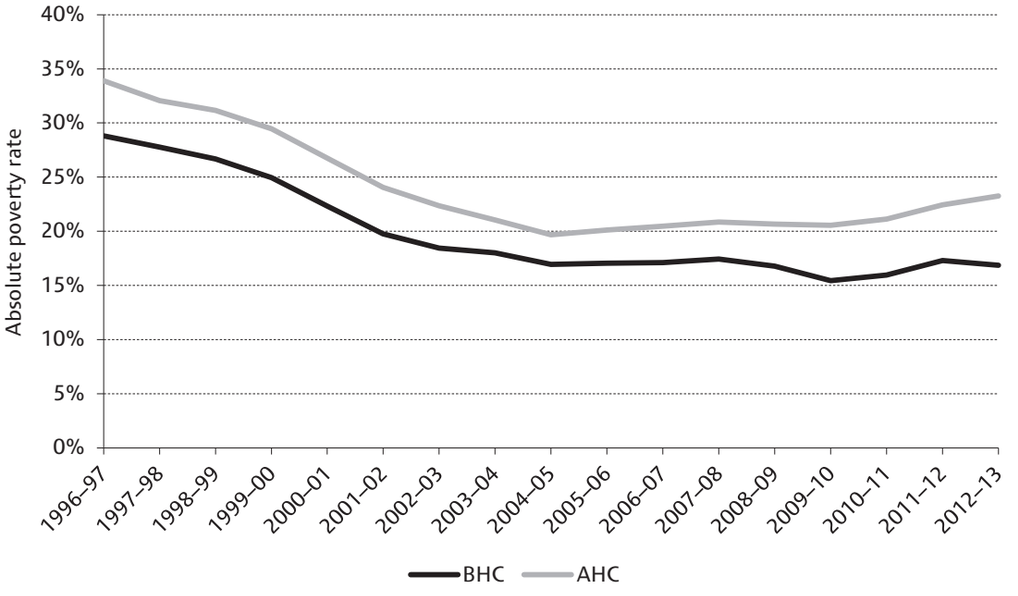
4.1 Absolute income poverty

On a before-housing-costs (BHC) basis, there were 10.6 million individuals (16.8% of the population) in absolute poverty in the UK in 2012–13 using a poverty line of 60% of 2010–11 median income in real terms. This was a fall of 200,000 individuals (0.5 percentage points) since 2011–12. Measured after housing costs (AHC), 14.6 million (23.2%) were in absolute poverty in 2012–13, which is an increase of 600,000 individuals (0.8ppt) compared with 2011–12. None of these changes was statistically significant.

Figure 4.1 puts this in recent context. Measured both BHC and AHC, absolute poverty has risen since 2009–10 (and both changes are statistically significant). On a BHC basis, this has only returned it to approximately the pre-crisis level seen in the mid-2000s. On an AHC basis, though, absolute poverty remains above the level seen in the mid-2000s.

Recent trends in absolute poverty are clearly sensitive to the treatment of housing costs. It is important to understand how housing costs can cause BHC and AHC poverty measures to move differently. Measured BHC, the absolute poverty line is fixed in real terms over time using a price index that accounts for *average* housing costs. Measured AHC, changes in housing costs are instead accounted for by subtracting each household's actual housing costs from its income. As a result, if the housing costs of low-income households rise faster, or fall less quickly, than average housing costs, the AHC measure will account for this and the BHC measure will not. This will cause trends in AHC poverty to look less favourable than trends in BHC poverty, as has happened recently. As shown in the previous chapter, the housing costs of high-income

Figure 4.1. Absolute poverty rates



Note: Figures are presented for GB up until 2001–02 and then 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.

individuals have fallen sharply over recent years while the housing costs of lower-income individuals have been much more stable (see Figure 3.6b).[63]

Looking further back, Figure 4.1 makes clear that absolute poverty remains substantially lower than it was in the late 1990s. This is due to sharp falls between 1996–97 and 2004–05: from 28.8% to 17.0% measured BHC and from 33.9% to 19.7% AHC. The late 1990s and early 2000s was a period of rapid income growth across the income distribution, and those towards the bottom saw some of the strongest increases.[64] After that, growth in average incomes stagnated and falls in absolute poverty also slowed, or ceased altogether.

Absolute poverty and inflation

As discussed in Chapter 2, a price index based on the RPI is used to adjust for inflation when comparing incomes across years in HBAI; but there are concerns that the RPI systematically overstates the true level of inflation.[65] This matters for the measurement of absolute poverty: we need to compare households' incomes to a poverty line kept at a fixed *real* level.[66] Overstating inflation implies raising the absolute poverty line too quickly in cash terms over time, and hence overstating rises (or understating falls) in absolute poverty.

An annex in the DWP's HBAI publication shows the rate of absolute poverty (BHC) since 1997–98 using the headline HBAI measure as well as variants that use the RPIJ and CPIH to uprate the absolute poverty line over time (see Section 2.1 for further discussion of alternative inflation measures).[67] It begins in 1997–98 because the RPIJ series does not go back beyond 1997. The CPIH series is available only from 2005.[68] Between 1997–98 and 2012–13, absolute poverty fell from 28% to 17% using the official measure, but from 31% to 16% when using RPIJ. Similarly, using the CPIH since 2005–06, one would conclude that absolute poverty trends have been more favourable than according to the headline measure. Over short periods, the differences in trends tend to be considerably smaller, as differences in inflation measures have less time to accumulate.

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[63] The existence of housing benefit for low-income renters can also be important in this context. If rents change for low-income households, housing benefit entitlements will mechanically change with them. The net impact on AHC income can therefore be small or zero, but BHC income will rise because it will incorporate the housing benefit increase while ignoring the rent increase. However, as real rents have been relatively stable in recent years (see Section 2.3), this is unlikely to have been the primary reason for different trends in AHC and BHC poverty of late.

[64] See Cribb, Joyce and Phillips (2012).

[65] See, for example, Levell (2014).

[66] In contrast, the *relative* poverty line is 60% of contemporaneous median income in each year, so no adjustment for inflation over time needs to be made.

[67] Department for Work and Pensions, 2014.

[68] Only poverty measured BHC is considered, because the analogous alternative inflation indices excluding housing costs are not available.

The big picture, however, is relatively robust to the choice of inflation measure. Absolute poverty fell rapidly in the late 1990s and early 2000s; fell much more slowly (or not at all) in the immediate pre-recession years; and continued to change little between the beginning of the crisis and 2012–13.

Absolute poverty by demographic group

The overall trends in absolute poverty mask large variation across demographic groups. This subsection separately examines the trends in the poverty rates of pensioners (defined as individuals over their state pension age), children and working-age adults without dependent children (for whom we use the term 'working-age non-parents' or 'working-age childless'[69]).

There were no statistically significant changes in absolute poverty for any family type in 2012–13. Absolute poverty (measured BHC) among working-age non-parents fell by 1.1ppt, while the child and pensioner poverty rates were broadly unchanged. Measured AHC, the absolute poverty rate among children rose by 1.1ppt, while pensioner and working-age non-parent poverty were stable.

Figures 4.2a and 4.2b put this in longer-term context, displaying the absolute poverty rates since 1996–97. Since the recession began, trends in pensioner poverty have been the most favourable. Absolute pensioner poverty fell by 3.8ppt (BHC) between 2007–08 and 2012–13 and was broadly unchanged measured AHC. At the same time, absolute poverty fell by 2.0ppt (BHC) among children and rose by 1.5ppt (BHC) among working-age non-parents. Absolute poverty measured AHC rose among both groups.

Looking further back, to 1996–97, reveals large differences in trends between groups. Pensioners and families with children have seen large falls in absolute poverty – mostly between 1996–97 and 2004–05 – while working-age non-parents have seen little overall change, with small falls up to 2004–05 and small rises since. Because pensioners and families with children used to have substantially higher poverty risks than the working-age childless, this has resulted in a convergence in poverty risks between the major demographic groups. The 'catch-up' of pensioners has been particularly dramatic: absolute pensioner poverty has halved since 1996–97 on a BHC basis and fallen by two-thirds on an AHC basis. When measured after housing costs, pensioners now have the lowest risk of poverty of all the groups.

In part, this reflects the continuation of even longer-term trends, discussed in detail in last year's report.[70] Pensioner incomes had already been catching up rapidly with those of the rest of the population for much of the period since the early 1970s, with rises in income from occupational pensions being a key factor. But since 1996–97, pensioners and families with children also both benefited from very substantial increases to their benefit and tax credit entitlements under the previous Labour governments. Research

[69] This includes people who have offspring who are not their dependents (i.e. who live in a different household or are now adults).

[70] Chapter 6 of Cribb et al. (2013).

Figure 4.2a. Absolute BHC poverty rates, by family type

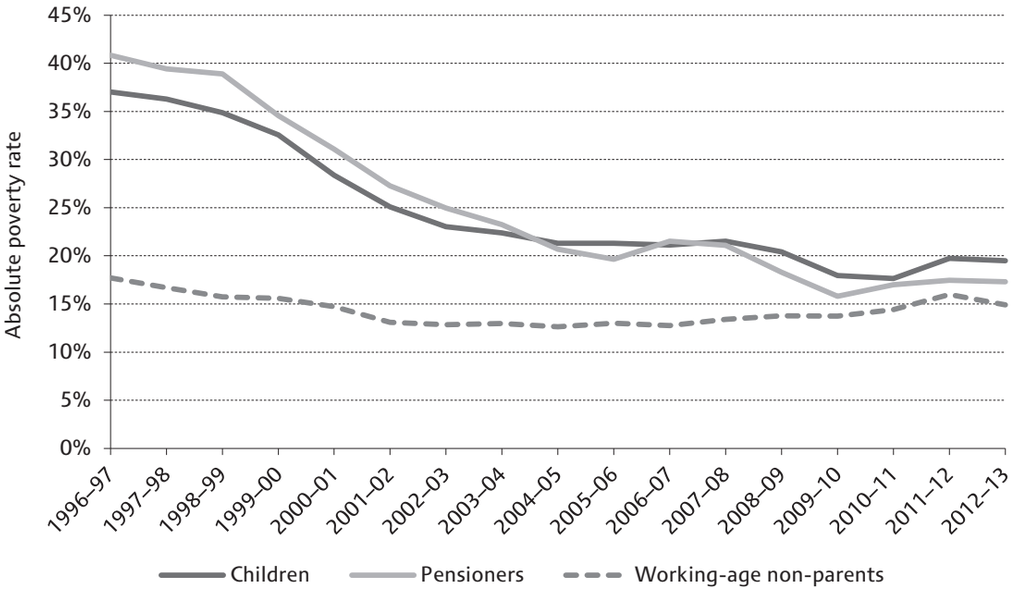
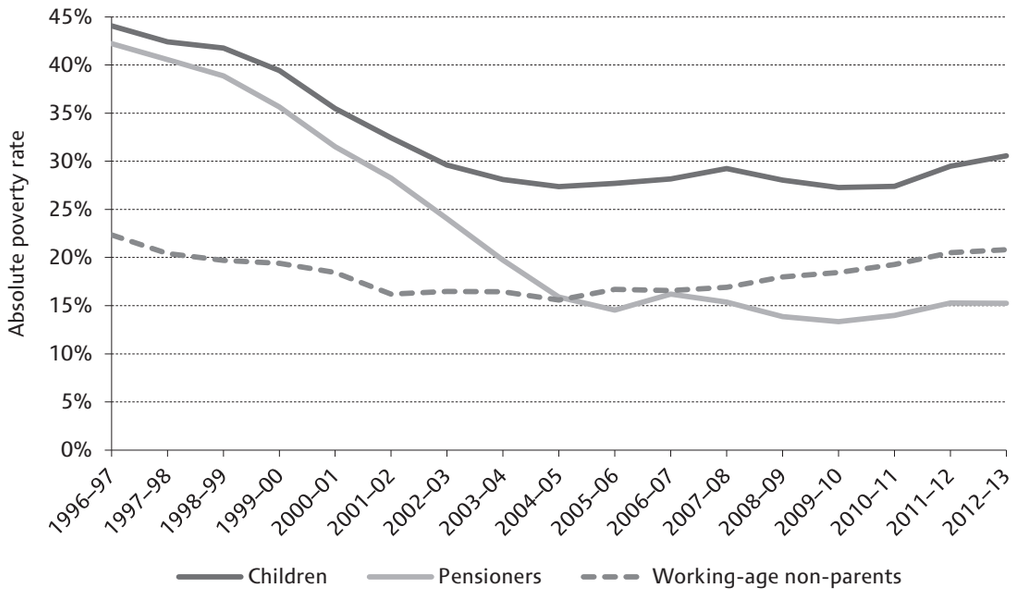


Figure 4.2b. Absolute AHC poverty rates, by family type



Note: Figures are presented for GB up until 2001–02 and then 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.

at IFS has demonstrated that Labour's direct tax and benefit reforms reduced income poverty significantly among those groups, whilst doing very little to affect the poverty rates of the working-age childless.[71]

Absolute poverty by work status

One feature of poverty trends in recent history has been the increase in the proportion of people in poverty who are in working households. We looked in detail at this shift in last year's report.[72] Key factors have been rises in the risk of in-work poverty among adults without children, due to rises in earnings inequality before 1996–97 and slow earnings growth since then; and a large fall in out-of-work poverty risk for families with children, due to large increases in benefit entitlements for that group since 1996–97. Here we highlight the implications of the recent recession for the incidence of poverty by family work status. We consider only working-age individuals.

Figure 4.3 shows absolute poverty rates for working households and households with no one in paid work. We also split working households into those that contain only part-time worker(s) and those that have at least one full-time worker (so that there are three mutually exclusive groups in total). As we would expect, households with someone in paid work, and particularly full-time work, are less likely to be in poverty.

Between 2007–08 and 2012–13, working-age absolute BHC poverty in workless households fell by 2.4ppt, while absolute BHC poverty in working households rose by 1.1ppt (Figure 4.3a). Measured after housing costs, absolute poverty rose among both groups (Figure 4.3b), but by more for working households (rising from 13.6% to 16.9%, compared with 62.4% to 65.1% for workless households). This general pattern is consistent with the observation made in previous chapters: the major income source that fell the most in real terms over this period was employment income; benefit income, which accounted for 74% of the net BHC income of workless working-age households in 2012–13, was stable in comparison.

Looking back further, it is clear that poverty rates in households without full-time workers have fallen significantly. Much of this was due to large real rises in benefit and tax credit entitlements in the late 1990s and early 2000s – including in-work tax credits for low earners, many of whom are part-time – which on average are more important to households with less earned income. The national minimum wage, introduced in 1999 and increased quickly up until the mid 2000s, was also a factor and disproportionately benefited part-time workers.[73]

It is also important to remember that the relative sizes of the groups in Figure 4.3 have changed significantly over time. This has important impacts on overall poverty rates because, as the figure shows, poverty rates vary greatly by work status. The proportion of working-age individuals living in workless households fell by about one-quarter

[71] Joyce and Sibieta, 2013.

[72] Chapter 6 of Cribb et al. (2013).

[73] See Brewer, May and Phillips (2009).

between 1996–97 and 2006–07, from 15.5% to 11.9% (though it has since risen back somewhat, to 13.0% in 2012–13), which acted to reduce poverty. The proportion of children living in a workless family also declined by about one-quarter between 1996–

Figure 4.3a. Absolute BHC poverty rates, by household work status (working-age only)

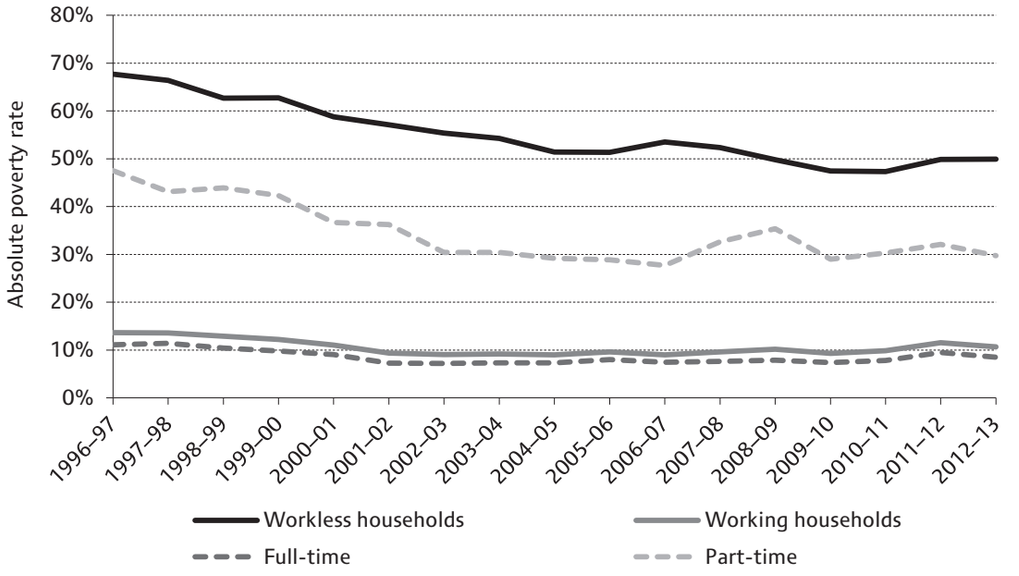
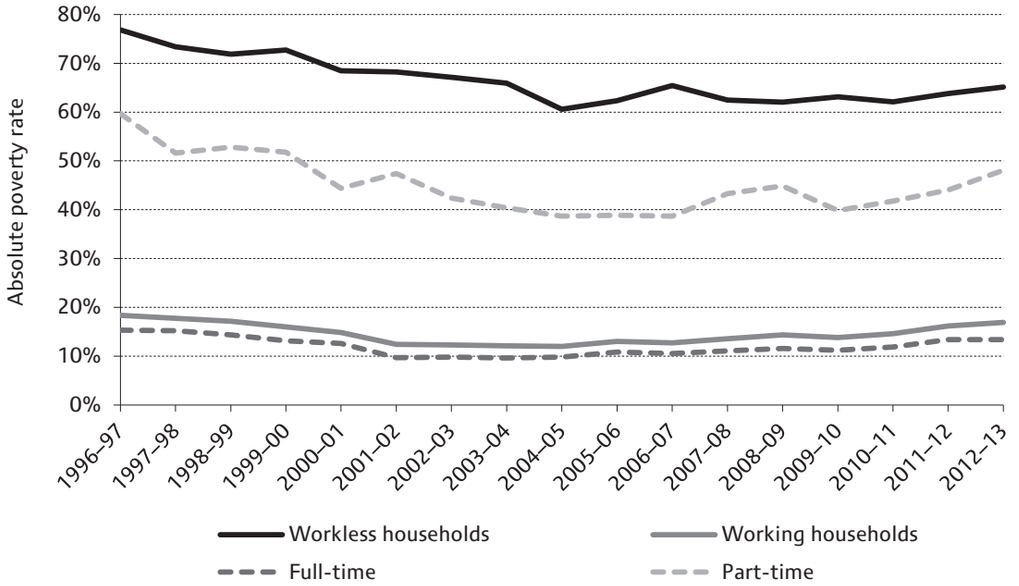


Figure 4.3b. Absolute AHC poverty rates, by household work status (working-age only)



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. 'Full-time' represents households that have at least one person working full-time. 'Part-time' represents households with at least one person working part-time and no one working full-time.
Source: Authors' calculations using Family Resources Survey, various years.

97 and 2006–07, from 21.2% to 15.5% (and remained at a similar level, of 15.8%, in 2012–13). Joyce and Sibieta (2013) showed that this had significant impacts on child poverty – though much smaller impacts than falls in poverty among workless families with children.

In summary, between 2007–08 and 2012–13, rises in absolute poverty were concentrated among working households. This was essentially due to the fact that earned income was the source of income that fell most substantially over that period. The narrowing of the gap between working and workless families actually resumes a trend seen in the late 1990s and early 2000s, when rapid increases in benefits disproportionately affected out-of-work households (for whom they are by far the most important income source).

The role of benefit entitlements

The majority of the net income of individuals around the poverty line comes from benefits and tax credits. Entitlements to benefits have changed over time, and they have changed differentially for different types of people. For these reasons, we can learn a lot about the poverty trends outlined in this section by looking at changes in benefit entitlements.

Table 4.1 shows recent year-on-year growth rates in cash-terms entitlements to benefits and tax credits for some key example family types likely to be in or close to poverty. All the major benefits and tax credits are incorporated in this analysis, with the exceptions of housing benefit and council tax benefit (as entitlements to these depend on rent and council tax levels). The table also compares changes in nominal entitlements with year-on-year changes in prices. Numbers in bold mark instances where entitlements grew faster than prices, as measured by the RPI (which is approximately equal to the price index used to uprate the BHC absolute poverty line in the HBAI series[74]) and the Rossi index (which is used to uprate the AHC absolute poverty line).

Between 1996–97 and 2004–05, benefit entitlements for the example families with children and low-income pensioners grew markedly in real terms. Key factors were the inception and subsequent expansion of the tax credit system, and the introduction of pension credit. Meanwhile, the single jobseeker without dependent children clearly stands out as having seen the lowest increase in nominal entitlements. All this chimes with the poverty trends observed at this time: sharp falls in absolute poverty for families with children and (particularly) pensioners, but little change for working-age adults without dependent children.

Between 2007–08 and 2012–13, the table shows that benefit entitlements for each example family grew at least as quickly as RPI inflation. This is in stark contrast to what happened to real employment incomes over this period (see Chapter 2), which helps to

[74] The only difference between RPI inflation and the inflation rate used to deflate income BHC in HBAI is that council tax payments are not included in the basket of goods used to construct the index used in HBAI, because they are deducted from HBAI incomes.

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	RPI	Rossi	Relative poverty line (BHC)	Relative poverty line (AHC)
Total change											
1996–97 to 2012–13	**140%**	**92%**	**108%**	48%	**76%**	**119%**	**113%**	59%	54%	79%	78%
2007–08 to 2012–13	**29%**	**25%**	21%	20%	23%	19%	20%	17%	24%	12%	14%
Annualised change											
1996–97 to 2004–05	**6.9%**	**4.5%**	**5.8%**	1.9%	**3.4%**	**6.3%**	**5.9%**	2.6%	1.7%	4.5%	4.5%
2004–05 to 2007–08	3.1%	2.7%	3.2%	2.1%	3.1%	**4.0%**	**4.0%**	3.5%	2.6%	4.0%	3.4%
2007–08 to 2012–13	**5.2%**	**4.5%**	3.8%	3.7%	4.2%	3.6%	3.6%	3.2%	4.4%	2.4%	2.6%
2008–09	**7.0%**	**5.4%**	**6.2%**	2.3%	3.9%	**4.8%**	**4.6%**	3.0%	4.5%	3.8%	3.1%
2009–10	**6.4%**	**6.1%**	**5.5%**	**6.3%**	**5.0%**	**4.6%**	**4.7%**	0.5%	3.2%	0.9%	3.5%
2010–11	2.2%	2.0%	1.9%	1.8%	2.5%	1.9%	1.9%	5.0%	5.4%	2.1%	1.7%
2011–12	**6.1%**	5.0%	4.1%	3.1%	4.6%	2.8%	3.1%	4.8%	5.7%	2.0%	2.0%
2012–13	**4.3%**	**4.1%**	1.7%	**5.2%**	**5.2%**	**3.8%**	**3.8%**	3.1%	3.3%	3.0%	2.5%
2013–14	0.9%	0.8%	0.6%	1.0%	2.5%	1.8%	1.9%	2.9%	3.0%	n/a	n/a
2014–15	1.0%	1.0%	1.0%	1.0%	2.7%	2.0%	2.0%	2.7%	2.6%	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. 'RPI' and 'Rossi' measure changes since the previous year in the annual averages of the RPI all-items and Rossi indices respectively. For 2013–14 and 2014–15, these inflation measures are forecasts from the supplementary economic tables in the Office for Budget Responsibility's *Economic and Fiscal Outlook: March 2014*. Values in bold are greater than both the change in RPI and the change in Rossi over the same period. For further details, contact the authors.

Source: Authors' calculations.

explain why absolute poverty was much more stable than average incomes and why in-work poverty rose relative to out-of-work poverty.

Looking at the latest year of HBAI data (2012–13) in isolation, the table shows that real benefit entitlements for most of the family types grew in real terms. This is because inflation was falling but benefits are uprated at the start of a financial year in line with the previous September's inflation rate. As a result, the standard nominal increase in benefit rates of 5.2% in April 2012 was significantly higher than the rate of inflation in 2012–13.[75] The clear exception in the table is the part-time working lone parent, who saw a cash increase in entitlement of only 1.7%. This is because working tax credit (as well as child benefit) was frozen in nominal terms in 2012–13.

There are a number of reductions to social security entitlements being implemented and some are not captured in the table. There are two in particular that were being introduced during 2012–13 and which are significant for some families – and they probably help to explain why absolute poverty did not fall in 2012–13, despite falling inflation boosting the real values of many benefits.

First, a package of cuts to housing benefit entitlements, affecting about 900,000 low-income tenants in the private rented sector, was rolled out to existing claimants between January and December 2012. The impact of these changes on any given family depends on a number of factors – including their rent, the area in which they live and details of their family type – but the government expected this to reduce housing benefit for affected families by an average of about £12 per week.[76]

Second, revised 'sanctions' regimes were introduced for two out-of-work benefits – jobseeker's allowance (JSA) from October 2012 and employment and support allowance (ESA) from December 2012. In the case of JSA (for which the number of sanctions has been greatest), payments can be withdrawn for a period of between 4 and 156 weeks, depending on the severity of the failure to comply with conditionality requirements (such as to attend a training scheme or a job adviser interview) and the number of previous 'failures'.[77] Sanctions can be very significant for the incomes of those affected: in 2012–13, they would have meant an immediate loss of £71 per week for a single JSA claimant and £111.45 per week for a couple, for the period of the

[75] The 5.2% uprating was based on the rate of CPI inflation in September 2011. CPI inflation is now the default uprating assumption for most benefits and tax credits. (Were RPI still used, the default increase in April 2012 would have been even higher, at 5.6%.)

[76] See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214327/lha-impact-nov10.pdf. In principle, the impacts on tenants' AHC incomes could be smaller if the cut to housing benefit also causes landlords to reduce rents. Early evidence, from research at IFS as part of the independent evaluation of the reforms, suggests that the reforms had had little impact on rental values (Brewer et al., 2013a).

[77] Failures range from low-level ones such as failing to attend an adviser interview, to more serious ones such as failing to be available for work or refusing to accept an appropriate job offer. Over half (53%) of adverse decisions since October 2012 are for low-level failures – see table 1.5 of https://www.gov.uk/government/publications/jobseekers-allowance-and-employment-and-support-allowance-sanctions-decisions-made-to-december-2013. For more details on the new JSA (and ESA) sanctions regime, see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/238839/jsa-overview-of-revised-sanctions-regime.pdf.

Table 4.2. Number of new JSA sanctions applied and JSA caseload

	Number of new JSA sanctions applied (thousands)	Number of individuals affected by JSA sanctions (thousands)	JSA caseload (thousands)
2007–08	326	307	786
2008–09	361	342	1,029
2009–10	484	459	1,481
2010–11	739	671	1,368
2011–12	623	569	1,489
2012–13	822	726	1,478
Year to October 2012	769	689	1,506
Year to October 2013	862	750	1,398

Note: All numbers are rounded to the nearest thousand. The numbers of sanctions applied are the total of monthly adverse decisions over the 12 months indicated. The annual JSA caseloads are the average over the months May, August, November and February in the indicated year.
Source: Authors' calculations using Department for Work and Pensions data from https://stat-xplore.dwp.gov.uk/ and http://tabulation-tool.dwp.gov.uk/100pc/jsa/ccdate/ccsex/a_carate_r_ccdate_c_ccsex.html.

sanction.[78] They also affect people who are likely to have little or no private income, and are therefore towards the bottom of the income distribution.

The number of individuals affected by sanctions is now quite substantial. Table 4.2 shows the total number of new JSA sanctions applied, and the number of distinct individuals these applied to, in each year between 2007–08 and 2012–13. For reference, we also show the total JSA 'caseload' (the number of JSA claimants) over time. In 2012–13, there were more than 820,000 JSA sanctions (affecting almost 730,000 individuals). This was two-and-a-half times the level prior to the recession in 2007–08, although the JSA caseload as a whole had almost doubled over the same period as well. Perhaps more significantly, it represents a rise of one-third in just one year since 2011–12, over a period when the JSA caseload actually fell by 0.7%. Given that the revised JSA sanctions regime was introduced in October 2012, we also compare the sanctions in the 12 months up to and after October 2012. The number of new sanctions applied rose from 769,000 to 862,000 – an increase of 12% while, with unemployment falling rapidly, the JSA caseload fell by 7%.

Summary

Official figures show absolute poverty broadly flat overall between 2007–08 and 2012–13 when measured BHC, but increasing when measured AHC. This discrepancy is due to the fact that the housing costs of low-income households have not fallen by as much as average housing costs, because there are fewer low-income people with mortgages benefiting from sharp falls in interest rates.

[78] For JSA claimants aged over 25 and 18 respectively.

Over longer periods, absolute poverty has fallen substantially, though the exact details are sensitive to the measure of inflation used to uprate the poverty line. The fall in absolute BHC poverty between 1997–98 and 2012–13 was 10.9ppt using the headline indicator based on the flawed RPI measure of inflation, but 13.4ppt when using the improved RPIJ measure. The big picture is robust to the choice of inflation measure though. Absolute BHC poverty fell rapidly in the late 1990s and early 2000s; fell much more slowly (or not at all) in the immediate pre-recession years; and continued to change little between the beginning of the crisis and 2012–13.

Variation in absolute poverty trends across different population groups since the recession has tended to continue longer-term themes. Trends for pensioners have been among the most favourable. Rises in absolute poverty among those of working age have been concentrated among working families. Much of this is explained by looking at trends in earned income relative to the generosity of state benefits. Up to 2012–13, since the beginning of the recession the story had largely been one of relatively stable benefit entitlements and sharply falling earnings. Looking further back, in particular to the late 1990s and early 2000s, the story was more about large benefit increases for pensioners and families with children.

4.2 Material deprivation and arrears on household bills

For some households, income-based measures of poverty may not accurately detect low living standards. First, there will be aspects of material hardship that are affected by things other than just income (for example, wealth or specific costs incurred such as those associated with health or disability). Second, in many cases, temporary income fluctuations – such as volatile self-employment profits or because of short-term unemployment – would have less impact on living standards than permanent ones, because people might choose to accumulate or run down their savings (or borrow) when incomes are temporarily high or low.[79]

This section therefore looks at non-income-based indicators of deprivation or financial difficulties provided by the FRS data.

Material deprivation

Two indices of material deprivation are used in the official HBAI publication – one for children and one for pensioners.[80] These indices categorise an individual as living in a materially deprived family if the adults in the family say they cannot afford certain items. The 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

[79] A further issue is that income poverty is measured using equivalised income to account for the higher costs associated with bigger household sizes. This adjustment is an estimate of costs and so is not perfect, which inevitably leads to the extent of poverty being over- or under-stated in some families.

[80] Pensioners here are not defined as being over the state pension age, but instead as individuals aged over 65.

item is given in calculating people's overall material deprivation 'score'. Families are categorised as materially deprived if their score exceeds a certain threshold.[81]

The items that families with children are asked about relate to varying degrees of deprivation, from the relatively severe (for example, whether they can afford a warm winter coat for each child) to the less severe (such as whether they can afford to go on holiday for a week each year). 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.[82] The child and pensioner measures are therefore capturing different things and it is not meaningful to compare the measured deprivation levels of children and pensioners.

Table 4.3 shows child deprivation rates over time. Material deprivation questions have been asked to families with children since 2004–05, but a new suite of questions was introduced in 2010–11. Therefore, levels of child deprivation after 2010–11 should not be directly compared with levels before 2010–11. As Table 4.3 shows, the change in items led to a reduction in the measured child material deprivation rate of 4.4 percentage points in 2010–11.

Child material deprivation has generally been on an upwards trajectory since 2006–07 (once one allows for the break in the series caused by the change of items in 2010–11). In the latest year of data, for 2012–13, there was an increase in the child material

Table 4.3. Child material deprivation in the UK

	%	Million
2004–05	25.8	3.3
2005–06	24.9	3.2
2006–07	24.4	3.2
2007–08	25.8	3.4
2008–09	27.5	3.6
2009–10	27.6	3.6
2010–11 (old items)	26.7	3.5
2010–11 (new items)	22.3	3.0
2011–12	22.0	2.9
2012–13	24.1	3.2

Note: The set of items used to calculate material deprivation scores changed 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.

[81] More details and discussion of the measurement of material deprivation can be found in chapter 6 of Cribb, Joyce and Phillips (2012). Note that the child material deprivation measure is not reported on its own in DWP's HBAI publication (a composite measure of material deprivation and relative low income is used instead).

[82] 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'.

Table 4.4. Pensioner material deprivation in the UK

	%	Million
2009–10	9.6	0.9
2010–11	8.7	0.9
2011–12	8.1	0.8
2012–13	8.4	0.9

Source: Authors' calculations using the Family Resources Survey, 2009–10 to 2012–13.

deprivation rate of 2.1 percentage points, from 22.0% to 24.1% (an increase of 0.3 million children). This rise is statistically significant and the largest increase in child material deprivation since the series began in 2004–05.

These patterns look broadly similar to the absolute AHC income poverty trends among children outlined in Section 4.1. Those also showed increases since the mid 2000s, including a rise of 1.1ppt in 2012–13 alone. It is noteworthy that the patterns look less similar to those for absolute BHC income poverty, which has declined slightly among children since the mid 2000s and was flat in 2012–13. This is suggestive that it is the income available after housing costs have been paid for that is more important for the living standards of low-income individuals than total income.[83]

Table 4.4 shows pensioner material deprivation rates over time. Pensioner material deprivation questions have been included only since 2009–10. Since then, pensioner deprivation has fallen from 9.6% to 8.4% (a reduction of 50,000 pensioners), though this change is not statistically significant. Pensioner deprivation reached a trough of 8.1% in 2011–12 before a very small (and statistically insignificant) rise of 0.3ppt was recorded in the latest year of data, for 2012–13.

The small overall fall in pensioner deprivation since 2009–10 is a slight contrast to the small but statistically significant overall rise in absolute income poverty among pensioners over the same period. Research at IFS has shown previously that the relationship between material deprivation and low income is much weaker for pensioners than for children, perhaps because the methodology allows health and social constraints – as well as monetary ones – to be reasons for pensioners lacking an item.[84] In addition, income poverty among pensioners remains substantially lower than it has been in much of recent history, and small short-run fluctuations in income may not translate into changes in material deprivation.

Arrears on household bills

The FRS also records whether families are in arrears on household bills. Using these data, we look at the proportion of people whose family is in arrears on any of the

[83] This is particularly true for recipients of housing benefit, which is included in total income but is solely for the purpose of paying housing costs. A rise in housing benefit to cover an increase in housing costs would lead to a fall in poverty measured BHC but no change in the underlying living standards of low-income individuals.

[84] Jin et al., 2011.

following household bills: electricity, gas, other fuel, council tax (or rates in Northern Ireland), insurance policies, telephone, television rental and other hire-purchase schemes. Although arrears on different bills can (and do) vary in different ways over time and across different groups, it is worth noting that none of the patterns highlighted in this subsection is driven by any single type of household bill.

The percentage of people in arrears on household bills is lower than the percentage counted as in absolute income poverty. At 8.1% in 2012–13, it is about half the BHC absolute poverty rate and about one-third of the AHC absolute poverty rate.

It is also important to note that the relationship between income and the likelihood of being in arrears is by no means perfect. This is not surprising because they are measuring distinct concepts. Income poverty is defined as having a low current income, and being in arrears is a sign of difficulty in meeting expenditure commitments. We might expect arrears to result from unexpected declines in income (such as being made redundant) or unexpected rises in costs.[85] Someone with a permanently low income and stable (low) expenses could avoid arrears, while someone with a higher income who incurs unexpected expenses could fall into arrears. The levels of savings that families have to fall back on are also likely to affect the probability of them falling into arrears, whatever their current income.

Figure 4.4 shows how arrears in bills relate to levels of household income (both BHC and AHC). Splitting the population into five equally-sized groups ('quintiles') based on BHC household income in 2012–13, 18.0% of the poorest quintile are in arrears on at least one of their bills, compared with 12.2% in the second, 6.7% in the middle quintile, 2.7% in the fourth and 0.6% in the highest income quintile. Although it is not surprising that the proportion in arrears should be lower in higher income groups, it is perhaps surprising that 6.7% of the middle quintile are behind on at least one bill. However, when measured AHC, the proportion in arrears on bills rises in the bottom quintile (to 20.6%), while it falls in the higher quintiles of the distribution. This suggests that AHC income better predicts these financial difficulties, perhaps because housing costs form a large proportion of expenditure (particularly for the poor) and are – in the short run – relatively inflexible.

Table 4.5 shows how the proportion of individuals in arrears varies by family type and how this has changed since the questions on arrears were introduced into the FRS in 2004–05.[86] Individuals in families with children are the most likely to be in arrears on at least one household bill (13.0% in 2012–13) and pensioners are the least likely

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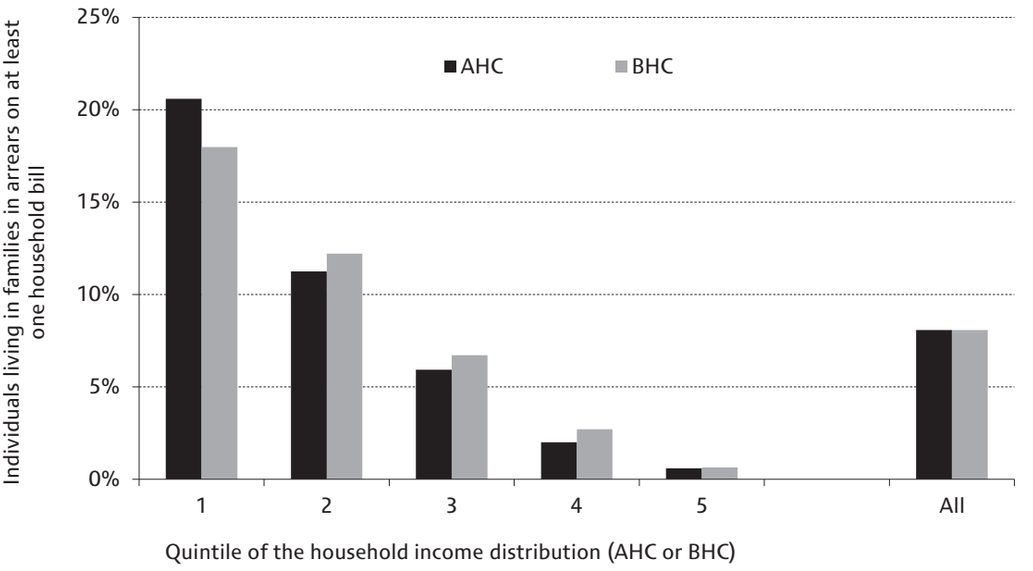
[85] Bridges and Disney (2004) find some evidence that non-payment of utility bills is used as a means of deferring expenditure to the future. Arrears on utility bills, which will often escape interest, may be a relatively cheap way of (effectively) borrowing, especially if terminal provisions (such as withdrawal of the service) are avoided by 'cycling' utility bill non-payment.

[86] In each year, a small proportion of people do not answer these questions on bills in arrears: only 4% in 2012–13, for example. We measure those who are in arrears as a percentage of those who answer the questions. Since 2004–05, the proportion of working-age non-parents who do not answer the questions has increased from 4.5% to 9.6%, with little change for other family types. However, the trends in financial hardship for those working-age non-parents who do answer the questions look similar to those for other family types.

Figure 4.4. Percentage of individuals in arrears on at least one household bill, by quintile of household income distribution (AHC and BHC), 2012–13



Note: Percentage behind on at least one bill is calculated as a percentage of those who respond to questions on arrears.
Source: Authors' calculations using the Family Resources Survey, various years.

Table 4.5. Percentage of individuals in arrears on at least one household bill, by family type

	Families with children	Working-age non-parents	Pensioners	All
2004–05	14.7%	5.6%	1.4%	8.9%
2005–06	15.3%	6.2%	1.6%	9.4%
2006–07	15.5%	6.2%	1.7%	9.4%
2007–08	15.4%	5.9%	1.6%	9.3%
2008–09	15.9%	6.2%	1.6%	9.6%
2009–10	16.0%	6.8%	1.5%	9.9%
2010–11	14.2%	6.5%	1.4%	9.0%
2011–12	13.2%	5.8%	1.5%	8.3%
2012–13	13.0%	5.6%	1.5%	8.1%
In 2012–13:				
Behind on mortgage/rent	3.9%	1.6%	0.2%	2.3%
Behind on non-mortgage loans	3.4%	1.1%	0.2%	2.0%

Note: Percentage behind on at least one bill is calculated as a percentage of those who respond to questions on arrears.
Source: Authors' calculations using the Family Resources Survey, various years.

(1.5%). In 2012–13, new questions were added asking about arrears with mortgage and rent payments and (non-mortgage) debt repayments. The table shows that families with children were also the most likely, and pensioners the least likely, to be in arrears on these items.

The proportion in arrears grew during the late 2000s, and then fell from its peak of 9.9% after 2009–10. It is now lower than it was when the series began in 2004–05 (this difference is statistically significant). These trends are driven primarily by families with children – the most likely to be in arrears. But arrears in 2012–13 are also essentially the same as in 2004–05 for pensioners and for working-age non-parents, having risen after 2004–05 and fallen back since in both cases. These changes in arrears over time seem to bear little relation to changes in absolute income poverty, or to real incomes more generally. They do correlate more closely with changes in unemployment and levels of redundancies. For example, redundancies dropped off sharply after a large spike in 2009. In line with the discussion above, this suggests that arrears may be driven more by unexpected shocks to incomes than to the level of people's incomes per se. The correlation with redundancies is not perfect either, however: the number of redundancies was generally flat or falling very slightly between 2004 and 2008, whilst arrears were rising.[87]

Looking to future releases of HBAI data, for 2013–14 and beyond, it is worth noting that specific welfare reforms might be expected to have impacts on the numbers of people in arrears. First, reductions to council tax support were implemented in 80% of English local authorities in April 2013. Research at IFS has shown that areas that made substantial cuts to support saw big increases in the number of people coming to Citizens Advice Bureaux with queries about council tax debts.[88] Second, further reductions to housing benefit were implemented from April 2013. Evidence from earlier cuts to housing benefit, in 2011 and 2012, suggested that some tenants had fallen into rent arrears as a result.[89]

In conclusion, this analysis is a reminder that low incomes and arrears are conceptually distinct and there is no necessary reason why they should move together. This has important policy implications. The government has recently suggested defining a multidimensional measure of child poverty which aggregates a series of measures associated with poverty or hardship into one index. Among the suggested dimensions were income and 'unmanageable debt', of which the government considered 'arrears on current bills and payments' to be a 'strong objective indicator'.[90] IFS researchers argued that the various measures being proposed were conceptually distinct and, as a result, an index that aggregated them would be difficult to interpret and could mask

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[87] For data on redundancies, see ONS series BEIR, available at http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Redundancies#tab-data-tables.

[88] Adam et al., 2014.

[89] Beatty et al., 2013.

[90] See page 26 of HM Government (2012).

important variation in the movements of different components of the index.[91] The analysis here provides a useful empirical illustration of that concern.

4.3 Poverty and deprivation by nation and English region

In this section, we look at poverty and deprivation at the level of the nations and regions of the UK. We focus first on how trends in absolute income poverty have varied across the country since the onset of the recession, and where this leaves different parts of the UK in terms of levels of income poverty. We then compare this with what the material deprivation information in the FRS tells us about the prevalence of low living standards in different areas. We analyse pooled three-year sets of HBAI data so that the sample sizes allow for robust conclusions to be drawn at the sub-UK level.

Table 4.6 shows absolute BHC poverty in 2007–08 to 2009–10 (before incomes generally began to fall) and in 2010–11 to 2012–13, for each nation and English region, ordered by their current (BHC) poverty rate.

There is no clear geographical relationship between the level of absolute poverty and the trends in poverty since the recession (mirroring the finding for median incomes shown in Section 2.4). For example, on a BHC basis, the South East still had the lowest

Table 4.6. Absolute BHC poverty rates by nation and English region

	Absolute poverty (BHC)			*Absolute poverty (AHC)*		
	2007–08 to 2009–10	**2010–11 to 2012–13**	**Change (ppt)**	**2007–08 to 2009–10**	**2010–11 to 2012–13**	**Change (ppt)**
South East	11.5%	12.8%	1.2	16.7%	18.8%	2.1
East of England	14.2%	13.6%	–0.5	18.6%	18.7%	0.1
South West	14.3%	14.7%	0.3	18.2%	19.6%	1.4
Scotland	15.9%	15.5%	–0.4	17.5%	18.8%	1.4
London	16.2%	16.3%	0.1	27.0%	29.1%	2.1
East Midlands	18.7%	16.8%	–1.9	20.6%	20.6%	0.1
North West	17.9%	18.4%	0.5	21.5%	23.4%	1.9
North East	19.6%	18.9%	–0.8	22.0%	22.8%	0.8
West Midlands	20.3%	19.1%	–1.2	22.9%	24.2%	1.3
Wales	19.1%	20.5%	1.4	21.5%	24.4%	2.9
Yorkshire and the Humber	19.1%	20.6%	1.6	21.9%	24.0%	2.1
Northern Ireland	18.9%	21.3%	2.4	18.8%	21.7%	2.9
United Kingdom	16.5%	16.7%	0.2	20.7%	22.3%	1.6

Note: The absolute poverty line is defined as 60% of median income in 2010–11. The three years 2007–08 to 2009–10 and 2010–11 to 2012–13 have been pooled to increase sample sizes at the regional level.
Source: Authors' calculations using Family Resources Survey, various years.

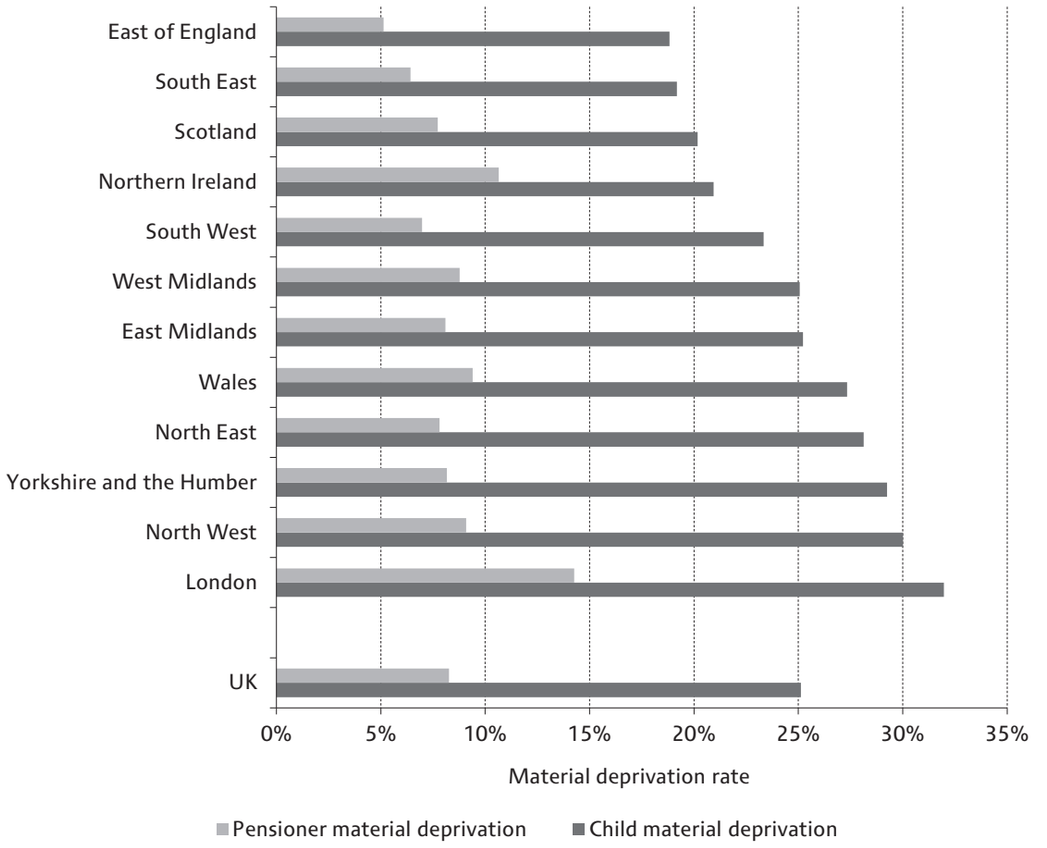
[91] Browne et al., 2013.

poverty rate in the UK in 2010–11 to 2012–13 (12.8%), despite having had one of the biggest increases in absolute poverty since 2007–08 to 2009–10, while Northern Ireland had the highest rate of poverty and had seen the largest increase of all during the recession (leapfrogging the North East, the West Midlands, Wales, and Yorkshire and the Humber).

There is, in general, a relationship between median income trends across the UK (shown in Section 2.4) and trends in absolute poverty: regions that saw the biggest falls in median income tended to see the biggest rises (or smallest falls) in poverty too. The West Midlands and Wales are notable exceptions. The West Midlands saw the second-biggest fall in median income (BHC) but the second-largest fall in the absolute BHC poverty rate, whereas Wales had the fourth-smallest fall in median income and the third-largest rise in BHC poverty.

Comparing the AHC numbers with the BHC numbers highlights two further points. Poverty trends in every single region and nation have been worse on an AHC basis than on a BHC basis, just as for the UK as a whole. This is because the housing costs of low-income individuals increased relative to average housing costs (which have fallen very

Figure 4.5. Child and pensioner material deprivation rates in 2010–11 to 2012–13, by nation and English region



Note: The three years 2010–11 to 2012–13 have been pooled to increase sample size at the regional level.
Source: Authors' calculations using Family Resources Survey, 2010–11 to 2012–13.

substantially with mortgage interest rates), and this is accounted for only by AHC measures. Second, poverty rates can compare quite differently across regions once variation in housing costs is accounted for. The most important example is London. This has the fifth-lowest poverty rate on a BHC basis, but has the highest poverty rate by far once its higher housing costs are accounted for using an AHC measure, with an absolute poverty rate almost 5 percentage points higher than Wales (the next highest).

An alternative gauge of how the prevalence of low living standards now varies across the UK is the material deprivation information analysed in Section 4.2.[92] Figure 4.5 compares the measures of material deprivation for children and for pensioners in 2010–11 to 2012–13. Regions and nations are ordered by their rate of child material deprivation.

Material deprivation gives a similar impression to absolute AHC income poverty in identifying areas with the highest and lowest prevalence of low living standards. London has the highest level of both child material deprivation (32%, compared with a UK average of 25%) and pensioner material deprivation (14%, compared with a UK average of 8%). At the other end of the spectrum, the East of England and the South East have the lowest child and pensioner deprivation rates. Scotland has the third-lowest child deprivation rate, and its pensioner deprivation rate is also below the UK average. This is all in line with the areas' rankings with respect to absolute AHC income poverty. There are outliers though, and the level of pensioner deprivation is not always well predicted by the level of child deprivation. For example, Northern Ireland has the second-highest pensioner material deprivation rate after London, but a child material deprivation rate substantially below the UK average (the fourth lowest).

4.4 Relative income poverty

As discussed in the introduction to this chapter, absolute poverty is defined by a poverty line that is fixed over time, whereas relative poverty is defined by a poverty line contingent on the median income in that year. The most common relative poverty line used, and the one adopted here, is equal to 60% of contemporaneous median income. This means that changes in relative poverty depend on how the incomes of low-income households change relative to middle-income households. In recent years, when median income has fallen sharply (see Chapter 2), relative poverty has therefore fallen for groups of low-income households whose incomes have fallen less sharply than median income.

In 2012–13, 9.7 million individuals (15.4%) were in relative poverty in the UK when measured before housing costs and 13.2 million individuals (21.0%) were in relative poverty when measured after housing costs. These numbers are essentially unchanged

[92] An alternative approach would be to adjust BHC incomes in each region or nation in line with its average price level, as in Section 2.4 when looking at average incomes, and then to compare absolute poverty rates. However, this approach does not account for differences in costs between low- and higher-income families. In the case of housing, we have shown this to be potentially important. Our preferred approaches are therefore to use both BHC and AHC income measures, and to use the material deprivation information.

since the previous year: a 0.3ppt fall (100,000 individuals) measured BHC and a 0.1ppt rise (100,000 individuals) measured AHC. Neither of these changes was statistically significant.

In contrast to absolute poverty, relative poverty fell between 2007–08 and 2012–13, as the relative poverty line fell with median income but the incomes of low-income households fell less quickly (see Chapter 3). Relative BHC poverty in 2012–13 was

Figure 4.6a. Relative BHC poverty, by demographic group

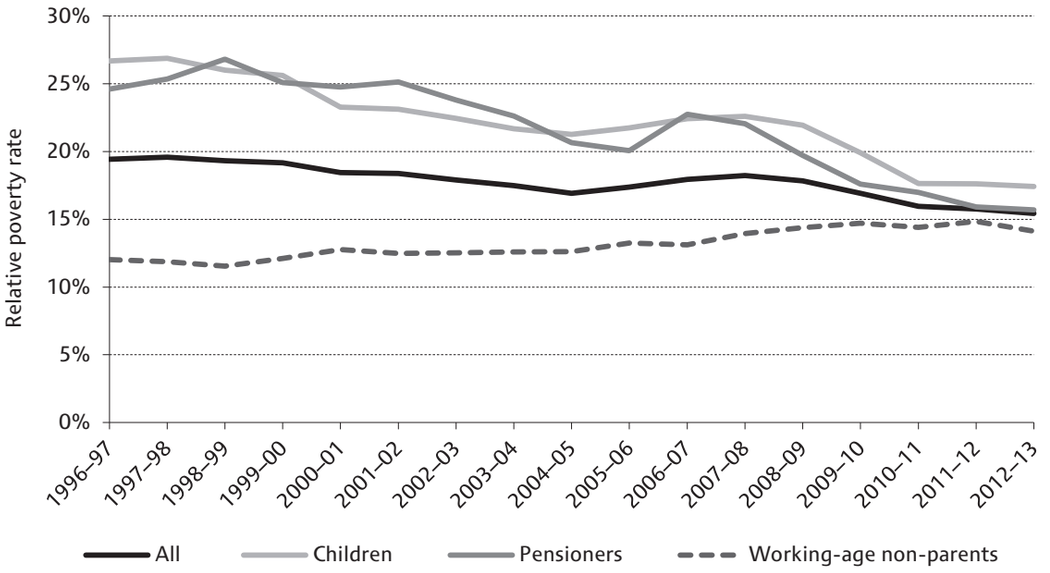
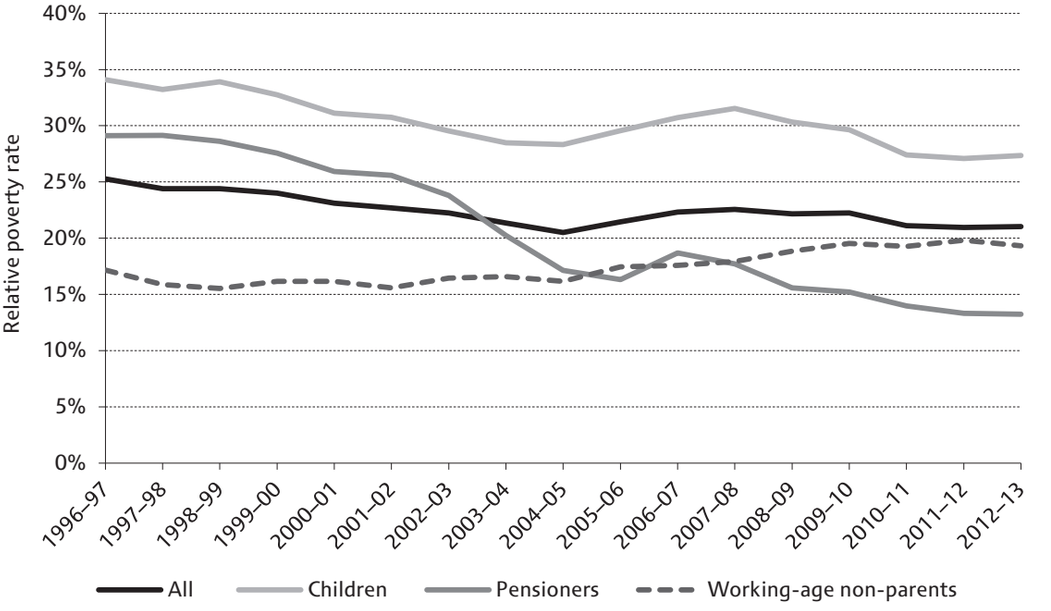


Figure 4.6b. Relative AHC poverty, by demographic group



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.

2.8ppt below its level in 2007–08, while relative AHC poverty fell by 1.5ppt over the same period. Both reductions are statistically significant.

Figure 4.6 shows how these changes have varied by demographic group and puts them in the context of trends since 1996–97. It shows that relative BHC poverty is at its lowest in recent history – in fact, the last time it was lower was in 1985. In 2010–11, 2011–12 and 2012–13, relative AHC poverty was at approximately the same level as its recent low-point in 2004–05, and lower than in every other year since 1986.

Relative pensioner poverty has been falling almost continuously over the period and it has fallen by more than one-quarter since 2007–08 alone: from 22.1% to 15.7% BHC and from 17.7% to 13.2% AHC. Rapid reductions in pensioner poverty are one of the most striking changes in the distribution of income in recent decades and were analysed in detail in Chapter 6 of last year's report.[93] Important factors are rises in private pension provision and, since the late 1990s, large increases in pensioner benefit entitlements. Since the start of the recession, the stability of pensioner benefits relative to the earnings of workers – to which median income, and hence the relative poverty line, is very sensitive – has been key to the story, as the large majority of the incomes of low-income pensioners comes from benefits.[94]

Relative child poverty has also fallen substantially in recent years, though there have been a number of distinct 'sub-periods'. It fell rapidly between 1996–97 and 2004–05, rose between 2004–05 and 2007–08, and then fell significantly again during and since the recession between 2007–08 and 2012–13 (from 22.6% to 17.4% BHC and from 31.5% to 27.4% AHC). These changes were driven very heavily by trends in the benefit and tax credit entitlements of low-income families with children, with large discretionary increases in the late 1990s and early 2000s, and by much more stability in these entitlements than in median income (and hence the relative poverty line) during and immediately after the recession.[95]

Working-age non-parents were the only major demographic group not to see a fall in relative poverty between 2007–08 and 2012–13 (although there was a fall when looking just at the change between 2011–12 and 2012–13; however, this was not significant). This is a group who are, on average, more reliant on earnings and less reliant on benefits than children and pensioners, even when focusing only on low-income groups. In 2012–13, benefits made up 88% of household income for the poorest 30% of pensioners, 62% for the poorest 30% of children and 38% for the poorest 30% of working-age non-parents. This helps to explain why they benefited less from the rise in benefits relative to earnings during the recession. In addition, working-age adults without dependent children are relatively likely to be young adults, and we show in Chapter 5 that adults aged under 30 saw the largest falls in wages and employment rates during the recession.

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[93] Cribb et al., 2013.

[94] See table 4.4 of Cribb et al. (2013).

[95] See Table 4.1 of this report and Joyce and Sibieta (2013).

The big picture is a remarkable convergence in the relative poverty rates of the major demographic groups when measured BHC, as pensioners and children have rapidly 'caught up' with the working-age childless. On an AHC basis, pensioners – most of whom own homes without a mortgage or rent social housing, and hence have relatively low housing costs – now comfortably face the lowest poverty rate of all the groups.

4.5 Prospects for poverty

Between 2007–08 and 2012–13 (the latest year of data), real benefit levels were much more stable than employment income, which fell sharply. In contrast, in future releases of HBAI data for 2013–14 and beyond, the impacts of the social security cuts being implemented as part of the fiscal consolidation should become increasingly apparent. Given how sensitive income poverty is to benefit levels (because most of the household income of low-income people comes from benefits, on average), it is reasonable to expect trends in income poverty to look worse in future HBAI releases than has been the case hitherto – at least for working-age individuals (where social security cuts are being heavily concentrated).

These cuts were accelerated significantly in April 2013. A three-year policy of increasing most working-age benefits and tax credits by 1% in cash terms (i.e. by less than inflation) began then and other more specific cuts were implemented, including real reductions to housing benefit entitlements for many private and working-age social tenants, and reductions to working-age council tax support in 80% of English local authorities.[96]

Figure 4.7 shows the estimated distributional impact of direct tax and benefit changes taking effect between April 2013 and April 2015.[97] Note that this excludes the phase-in of universal credit, which is now planned to barely start until 2016–17. The figure shows that the changes tend to hit low-income households with children the most as a proportion of income. Those in the bottom three income deciles are set to lose between 1.9% and 3.7% of their net income from the changes, on average. This is driven by the combination of three facts: the working-age social security budget is being cut; low-income households get much more social security than high-income households; and households with children get a larger share of their income from social security than other working-age households.

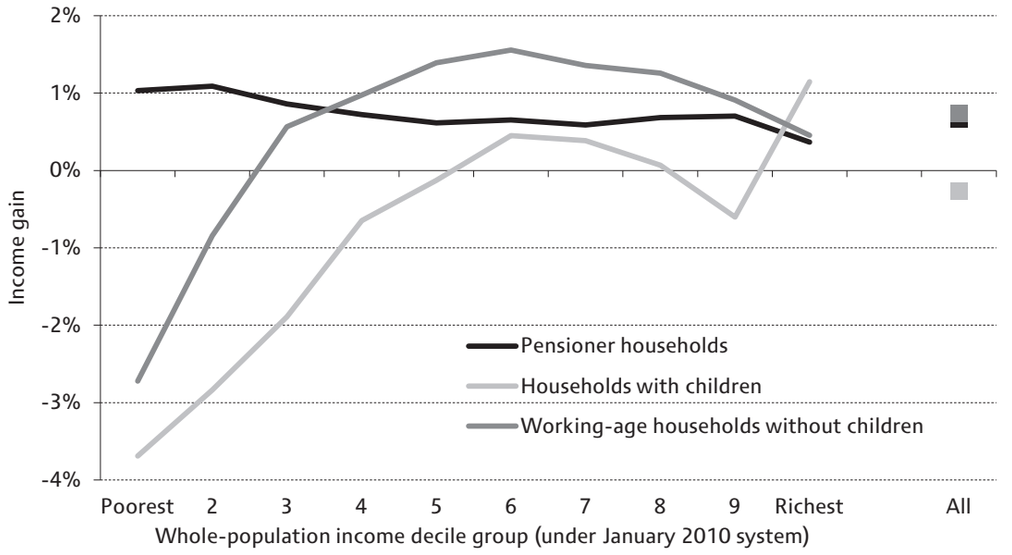
In light of this, the most recent projections of poverty among children and working-age adults produced by IFS researchers come as little surprise: absolute and relative income poverty are set to increase after 2012–13 among both families with children and working-age adults without children.[98] Those projections were produced before

[96] Adam et al., 2014.

[97] Note that the impact of indirect taxes is excluded. This is because indirect taxes cannot have varying impacts across the distribution of HBAI-measured incomes, because all incomes are compared in real terms over time using a measure of prices that is the same for all households (so only average changes in the cost of living are accounted for).

[98] Browne, Hood and Joyce, 2014.

Figure 4.7. Impact of direct tax and benefit reforms introduced or planned between April 2013 and April 2015, by income decile group and household type



Note: Income decile groups are derived by dividing all households into 10 equal-sized groups based on their simulated income under the January 2010 tax and benefit system according to income adjusted for household size using the McClements equivalence scale. Decile group 1 contains the poorest tenth of the population, decile group 2 the second poorest, and so on up to decile group 10, which contains the richest tenth. Assumes full take-up of means-tested benefits and tax credits. Analysis ignores the introduction of universal credit, which begins in October 2013 but is not due to be complete until the end of 2017, and the introduction of personal independence payments, which replaced disability living allowance for new claimants from April 2013 but only affects existing claimants from October 2015 onwards.
Source: Authors' calculations using TAXBEN, the IFS tax and benefit microsimulation model, run on uprated 2011–12 Family Resources Survey data.

the 2013 Autumn Statement and the 2014 Budget, and the details will thus have changed a little (mostly in light of changes to the macroeconomic outlook). But the key findings of that work were driven by cuts to working-age social security, the plans for which have changed very little since the projections were produced.

Of most immediate relevance for policy is the dramatic mismatch between the outlook for child poverty and the government's legally-binding commitment to reduce relative and absolute (BHC) income poverty among children to 10% and 5% respectively by 2020–21.[99] This was always extremely ambitious, but given the likely upwards trajectory of child poverty in the years ahead, it looks inconceivable that the targets could be achieved (or even got close to). There are two possible constructive ways forward: the government could reveal a credible plan for meeting the targets that it has signed up to; or it could set different targets that would reflect its view of what is both desirable and achievable, and set out how it plans to meet those. Neither possibility was included in the recent Child Poverty Strategy for the next three years.[100]

[99] Child Poverty Act 2010.

[100] HM Government, 2014.

Figure 4.7 also shows that low-income pensioners, by contrast, actually gain slightly from the direct tax and benefit reforms overall. This reflects two things. First, most of the welfare cuts are to working-age benefits and tax credits (and pensioners have been explicitly protected from some cuts that would otherwise have affected both pensioners and non-pensioners: cuts to council tax support in England, the overall household benefits cap, and cuts to housing benefit for social sector tenants). Second, increases in the basic state pension and pension credit have been larger than under the policy inherited by the coalition government.[101]

Recent work by IFS researchers looked at the likely path of absolute income poverty among those aged 65 and over in the next decade.[102] This incorporated the planned changes to taxes and benefits as well as detailed modelling of factors such as the health, labour supply behaviour and private pension incomes of current and future cohorts of pensioners. The authors concluded that, after rising slightly between 2012–13 and 2014–15, absolute poverty is likely to be roughly stable among those aged 65 and over, in contrast to the increases projected for working-age families. This difference reflects strong projected growth in income from private pensions and earnings for this group, as well as the protection of pensioner benefits discussed above.

4.6 Conclusion

The latest release of HBAI data shows that 10.6 million individuals (16.8% of the population) in the UK were classified as being in absolute income poverty in 2012–13 on a BHC basis and 14.6 million (23.2%) on an AHC basis. Absolute poverty was broadly flat overall between 2007–08 and 2012–13 when measured BHC, but it has increased over this period when measured AHC.

The next releases of HBAI data, for 2013–14 and beyond, are likely to show rising poverty, at least among working-age adults and children.[103] As this happens, it will be important to know how big those changes are and who they are most affecting. It is a good time to take stock of some issues to do with the measurement of poverty or material hardship that this chapter has highlighted.

First, the treatment of housing costs can matter very much. The level of income poverty measured AHC has always been higher than income poverty measured BHC. In recent years, including in the latest year of data, for 2012–13, there have also been strikingly divergent trends between BHC and AHC poverty measures. AHC measures have shown increasing absolute poverty, while BHC measures have recorded little or no change. As explained in Section 4.1, that is because lower mortgage interest rates since 2007–08 have reduced the housing costs of higher-income individuals relative to low-income

[101] Changes to pensioner benefits look particularly generous relative to the inherited policy of earnings indexation of the state pension (over a period when that would have been less generous than price indexation). The differing effects shown between pensioner and working-age households are, however, driven largely by the protection of pensioners from most of the real-terms cuts to benefits that affect those of working age.

[102] Emmerson, Heald and Hood, 2014.

[103] Browne, Hood and Joyce, 2014.

individuals, on average. Only AHC measures account for variation in housing cost trends across income groups.

As mortgage interest rates rise again, the converse pattern is likely to occur: the increase will hit higher-income groups proportionately more, which will act to make trends in poverty measured AHC look *more* favourable than BHC trends. Again, the treatment of housing costs is likely to matter.

There have always been reasons to think that poverty measured AHC may be preferable to measures on a BHC basis. Changes in housing costs might be unrelated to any changes in housing quality, and housing costs can be a relatively inflexible expense in the short run, meaning that those on low incomes might have little choice but to cut back on other spending if their housing costs increase.[104] In addition, rises in rents can increase the BHC incomes of low-income renters without any improvement in their living standards, by triggering rises in housing benefit entitlements.

This chapter has highlighted evidence that low living standards may indeed be better detected by looking at the income available after housing costs have been paid. Movements in absolute income poverty among children seem to follow movements in child material deprivation more closely on an AHC basis than on a BHC basis. London, which has the highest housing costs, also has the highest AHC absolute poverty rate and the highest rates of pensioner and child material deprivation – yet it has a BHC absolute poverty rate lower than the UK average. The level of AHC income also predicts the likelihood of being in arrears on household bills better than BHC income does.

This issue is of immediate policy relevance, in that the government's legally-binding child poverty targets relate to BHC income poverty but not AHC income poverty.

A second point highlighted by the analysis in this chapter is that different measures of poverty or hardship reveal different things, and there is no reason why they must move together. As discussed, differences between trends in poverty measured AHC and BHC relate to differences in housing cost trends across income groups. Big differences in trends between absolute and relative poverty can arise when median income is changing significantly, as has been the case recently. And we have seen that arrears with household bills have fallen even as levels of absolute income poverty have risen, but that the spike in arrears in 2009–10 did coincide with a spike in redundancies and rises in unemployment. Taken together, such facts can provide us with a rich understanding of how and why poverty and hardship are changing. The differences between different measures can themselves be informative.

This is further evidence that, as argued previously by IFS researchers,[105] the government's proposal to define a new multidimensional index of child poverty looks ill advised. A single index that combined different measures into a single number could conceal important differences between movements in its component parts, and be much less informative than the individual components considered separately.

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[104] See Appendix A for further discussion of the benefits and drawbacks of AHC and BHC measures of income and poverty.

[105] Browne et al., 2013.

5. Young Adults and the Recession

Key findings

- Real incomes have fallen across the working-age spectrum since the recession, and particularly sharply for young adults. Comparing 22- to 30-year-olds in 2012–13 with 22- to 30-year-olds in 2007–08, median household income (RPI-deflated) fell by 13% BHC and 20% AHC. This compares with falls of 7% and 11% respectively for those aged 31–59.

- Over the same period, absolute income poverty (using a fixed real poverty line of 60% of 2010–11 median income) rose by 1.4 percentage points (ppt) BHC and by 6.5ppt AHC for adults aged 22–30, while it rose by 0.9ppt BHC and 3.4ppt AHC for adults aged 31–59.

- The fall in income for young adults since 2007–08 is entirely accounted for by falls in their earned income (and in the earnings of cohabiting partners, where applicable). These are due both to falls in employment and to sharp falls in real pay for those employed.

- Between 2007–08 and 2012–13, the employment rate fell by 4ppt for 22- to 30-year-olds while remaining unchanged for 31- to 59-year-olds. Median real earnings for employees aged 22–30 fell by 15% between 2007–08 and 2012–13. This is despite an increase in the proportion with high levels of formal education. It compares with a fall of 6% for adults aged 31–59.

- The earnings falls among young workers are partly due to lower hours of work (including more part-time work) – some of which looks involuntary, as indicators of 'under-employment' have risen. However, their hourly wages have also fallen particularly sharply. Median hourly wages fell by 11% in real terms for employees aged 22–30 between 2007–08 and 2012–13, and by just 3% for those aged 31–59.

- Just over a quarter of people aged 22–30 live with parents, and this proportion rose by 7% (2ppt) between 2005–06 to 2007–08 and 2010–11 to 2012–13. This has tended to moderate the fall in household income for those concerned. Median household (BHC) income among 22- to 30-year-olds living with parents fell by about 8% over this period; focusing only on their own income and that of any cohabiting partners, median income fell by 17%.

- There is evidence to suggest that the income levels of parents affect the living standards of young adults who live with them. Young adults who live with low-income parents are more likely than those who live with high-income parents to say that they cannot afford a holiday, cannot afford to save £10 per month or cannot keep up with regular payments. This is true even when comparing young adults whose personal incomes (and those of their partners) are similar. This implies that parents' incomes, which have been relatively stable, may have provided important insurance against falling personal incomes for some young adults since the start of the Great Recession.

In last year's report, we highlighted that recent trends in the incomes of young adults have looked worse than those for other adults, especially since the Great Recession – a point reiterated in Section 3.2 of this report, which looked at income inequality by age. We also noted that this appeared to be related to large declines in employment among young adults, at a time when employment rates for other age groups have proven remarkably robust.

In this chapter, we look in detail at young adults. Section 5.1 starts by setting out trends in their household incomes – the main measure of their living standards provided by the HBAI data – and putting these in the context of trends for other working-age individuals. Section 5.2 looks carefully within the households of young adults, showing how their household incomes have been impacted by other household members – such as parents – with whom many of them live. It also considers the extent to which living with parents actually seems to affect the living standards of young adults.

We then look in detail at what we show to be the key reason for the declining incomes of young adults: their labour market outcomes. Section 5.3 documents changes in the economic activity of young adults, in terms of employment, unemployment, inactivity and participation in education. Section 5.4 looks specifically at those in work and shows what has been happening to their real pay levels, separately identifying the roles of changes in hours of work and in hourly wages. It shows that these have also been performing considerably less well than those of other age groups. Section 5.5 briefly sets out what we know about the group of young adults who perhaps we should be most concerned about of all: those in neither paid work nor education. Section 5.6 concludes.

The age group that we take as being of primary interest for our analysis is those aged 22–30. The reason for not starting at younger ages is that rises in education participation would make the interpretation of some of the results difficult: although being in full-time education typically means lower income in the short term, we would normally want to think about this very differently from low income caused by unemployment or low pay. However, rises in participation in education are clearly of interest in their own right, and we discuss these in Section 5.3.

Most of the analysis in Sections 5.3, 5.4 and 5.5 uses data from the Labour Force Survey (LFS), not HBAI. The LFS is the main source of labour market statistics in the UK and offers larger sample sizes than the FRS, allowing us to draw more confident conclusions and to look at smaller subsets of young adults.

5.1 Household incomes

The evolution of household incomes throughout young adulthood

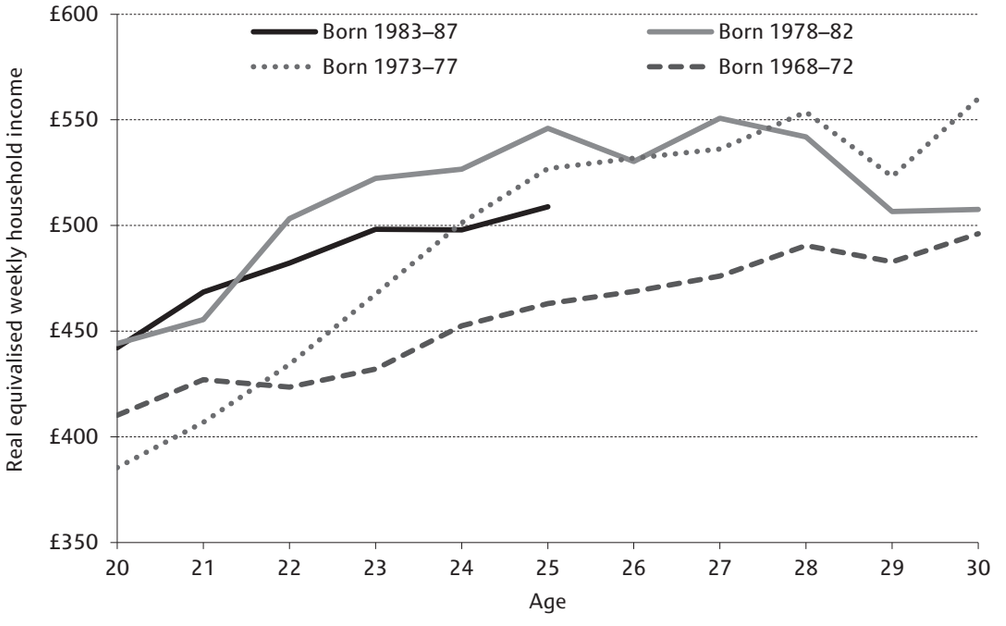
To begin to understand what has been happening to young adults' incomes recently, this subsection shows how household incomes have been evolving throughout young adulthood for current cohorts of young adults. It also compares this with the evolution of incomes over the same age range for previous cohorts of young adults.

The initial focus on household incomes is in line with the official HBAI income measure, and indeed most measures of living standards. But for young adults there are good reasons why we might want to exclude the incomes of certain household members, such as flatmates or parents. Although this makes relatively little difference to the overall figures that are presented in this section, it does make a significant difference for the substantial minority of young adults who live with parents. We look at that issue in detail in Section 5.2.

The HBAI data provide only repeated cross-sections, meaning that we cannot follow the same individuals over time. However, we can still follow the income levels of a group of people defined by their year of birth. For example, by comparing incomes for a representative sample of people aged 25 in 2011 with a (different) representative sample of people aged 26 in 2012, we are effectively following a 'synthetic cohort' as they age. Figure 5.1 exploits this fact and plots median BHC household income for different five-year birth cohorts throughout their 20s. The birth cohorts span those born in the late 1960s/early 1970s (1968–72) to those born in the mid 1980s (1983–87).

The figure shows that incomes typically rise with age as individuals move through young adulthood. This is a phenomenon usually attributed to wage increases flowing from financial returns to age or experience in the labour market. Indeed, we show in Section 5.4 that the pay of young workers typically increases as they age.

Figure 5.1. Median household (BHC) income between ages 20 and 30, by birth year



Note: All monetary amounts have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple. Incomes have been measured before housing costs have been deducted.
Source: Authors' calculations using Family Expenditure Survey and Family Resources Survey, various years.

Comparing the cohorts, two things stand out. First, for the cohort born between 1978 and 1982 (who were between 26 and 30 when the recession hit in 2008), household incomes started falling with age after about age 27.[106] As a result, their incomes after age 27 fell behind where the incomes of the previous cohort had been at that age. It is worth noting that the fact that household incomes actually fell after age 27 is largely attributable to increasing numbers of young adults setting up their own homes (for example, moving out of the parental home) at this point, and hence 'losing' the income of other household members. However, even looking only at their individual incomes and that of cohabiting partners, incomes remained broadly flat after age 27 – which is highly unusual at this stage of the life cycle, and again meant that that they fell behind where the incomes of the earlier cohort had been at that age.

Second, for the cohort born between 1983 and 1987 (who were between 21 and 25 when the recession hit), incomes did continue to rise up to the age of 25, but much less steeply than we would expect in normal times. Their income path at this stage looked relatively similar to that of the 1968–72 cohort, who experienced the early 1990s recession at this stage in their life cycle. As a result of these much less rapid income increases, their incomes at age 25 were lower than for both of the previous two cohorts (i.e. including the cohort born a decade earlier). Given the usual expectation that each cohort will tend to be better off than its predecessor, this is a large reversal in fortune.[107]

In summary, incomes at young adult ages are now lower than they were in the past. This is due to a combination of incomes rising much less steeply during adults' early 20s than would be the case in normal times (for those born in the mid-1980s), and incomes actually falling during adults' late 20s at a stage in life when they would normally be growing (for those born in the late 1970s and early 1980s). The next subsection charts the resulting changes over time in incomes at young adult ages, and compares them with the changes we see over the rest of the working-age spectrum.

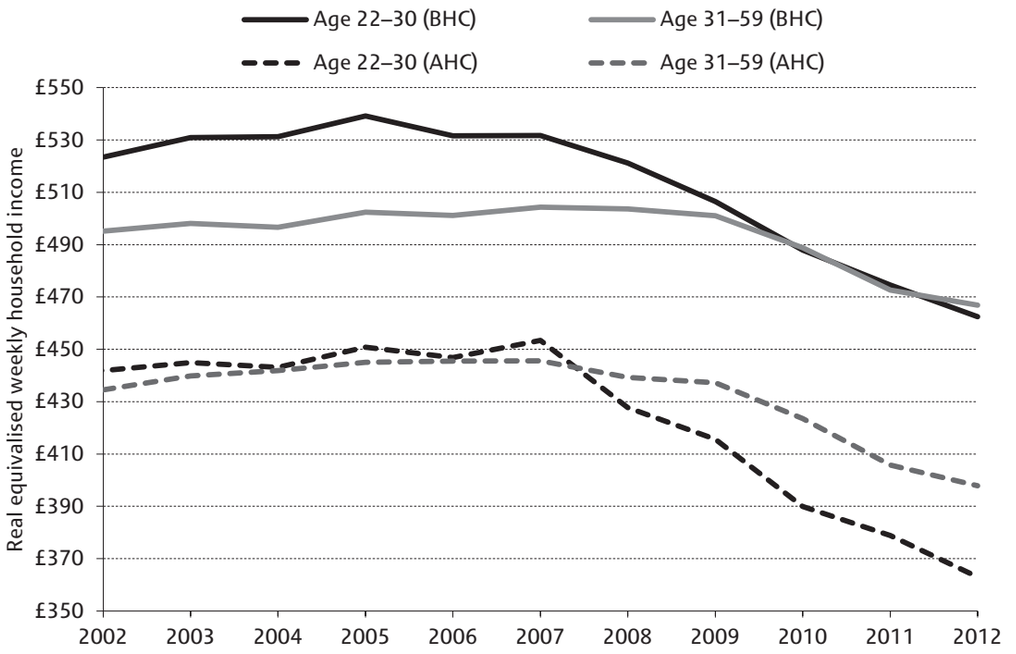
Changes over time in the household incomes of young adults

Figure 5.2 shows how median household income has changed over the last decade, over two age ranges. We consider adults aged 22–30 – the group of primary interest here – and, for comparison, those aged 31–59 (i.e. broadly the rest of the working-age population). Before-housing-costs (BHC) figures are shown using solid lines and after-housing-costs (AHC) figures are shown using dashed lines. Note that, unlike in the previous subsection, we are not tracking the incomes of the same group of people over time (or, equivalently, as they age): people of a given age in one year are different people from those of the same age a year earlier.

[106] It is worth noting that this result is *not* sensitive to equivalisation. The arrival of children during adults' late 20s could cause their equivalised incomes to fall even if their unequivalised incomes are rising. But that is not the case: unequivalised income also fell for the 1978–82 cohort between ages 25 and 30.

[107] All the points made in these three paragraphs are also true on an AHC basis (not shown).

Figure 5.2. Median household income by age group



Note: Years refer to financial years. All monetary amounts have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple.
Source: Authors' calculations using Family Resources Survey, 2002–03 to 2012–13.

Before the Great Recession, the median household income of 22- to 30-year-olds was higher than that of 31- to 59-year-olds on a BHC basis (for example, in 2006–07, the levels were £532 and £501 per week respectively). This might seem surprising, because earnings tend to rise with age. The explanation is twofold. First, a substantial number of young adults live with other adults who often have significant incomes of their own. In particular, about a quarter live with parents. The role of these other household members is analysed in detail in the following sections. Second, it is important to understand the role of equivalisation when comparing levels of income across age groups. Younger adults are less likely to have dependent children and to face the additional costs associated with them – costs which equivalisation attempts to account for.

In contrast, on an AHC basis, the two age groups had very similar median incomes before the recession. There are two main reasons why young adults tend to have higher housing costs. First, young renters are disproportionately likely to rent from a private landlord, and therefore to pay higher rents than those in social housing. Second, young homeowners are almost all paying mortgage interest – and, because they have more outstanding mortgage debt, they tend to be paying relatively large amounts of interest (see Section 3.2) – whereas older homeowners tend to pay less interest or, if they have finished repaying their mortgage, none at all.

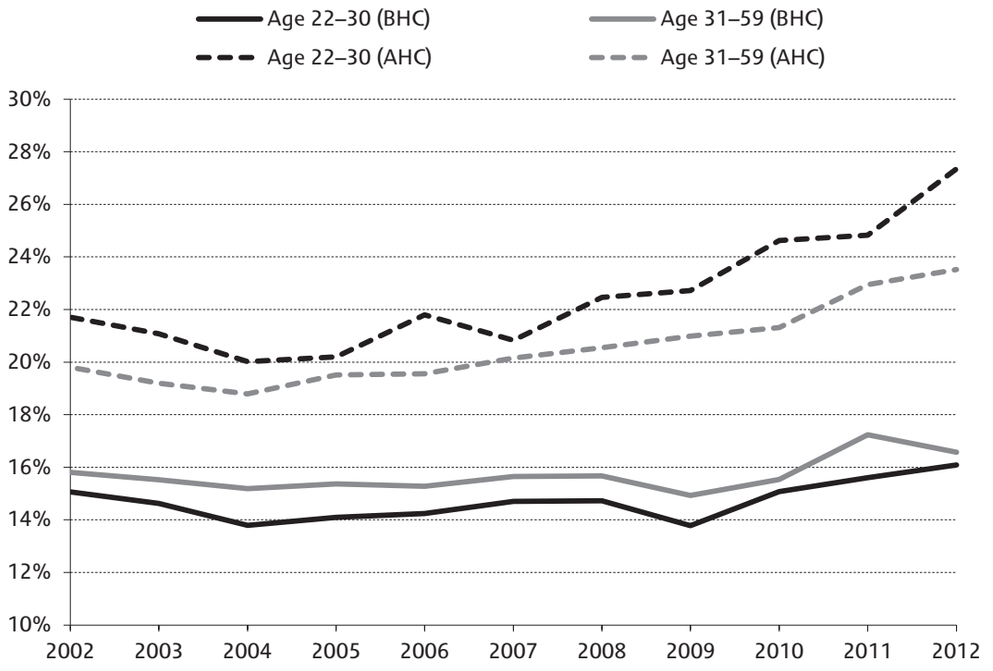
Income trends were quite similar for young adults and for older working-age adults before the recession. Both groups experienced very little growth in median income over the five-year period between 2002–03 and 2007–08 (less than 2% BHC and less

than 3% AHC). This slow growth in working-age incomes was unusual outside of recessions but was clearly not something affecting young adults only. Note, however, that pensioner incomes were growing much more strongly over this period, as for much of recent history: median income among adults aged 60 and above grew by 9% BHC and by 15% AHC (see Section 3.2 for more detailed discussion of changes in incomes right across the age spectrum).

But since just before the start of the Great Recession in 2007–08, young adults have clearly fared the worst. Among the 22–30 age group, median income fell by 13% BHC and 20% AHC between 2007–08 and 2012–13. This compares with falls of 7% and 11% respectively for the 31–59 age group. The result is that median income for adults aged 22–30 is now no higher than that for adults aged 31–59 on a BHC basis, and it is lower (by about £35 per week) on an AHC basis. Since our comparable data series began in 1961, the former had not been true at any point before the Great Recession and the latter had been the case only for a few years around the recession of the early 1990s.

Figure 5.3 presents a similar analysis of trends in income poverty by age group, using an absolute poverty line fixed at 60% of 2010–11 median income in real terms.[108]

Figure 5.3. Absolute income poverty by age group



Note: Years refer to financial years. The poverty line is equal to 60% of 2010–11 median income in real terms.
Source: Authors' calculations using Family Resources Survey, 2002–03 to 2012–13.

[108] The poverty lines are £272 per week BHC and £236 per week AHC in 2012–13 prices for a couple with no dependent children. For other household types, the poverty lines are the same but they apply after household income has been equivalised.

Trends for low-income young adults have also been worse than those for their older working-age counterparts since the crisis. Between 2007–08 and 2012–13, absolute poverty among adults aged 22–30 rose by 1.4 percentage points (ppt) BHC and by 6.5ppt AHC, while rising by 0.9ppt BHC and 3.4ppt AHC for adults aged 31–59. Note that, again, pensioners were meanwhile doing far better: absolute poverty among adults aged 60 and above fell on a BHC basis and stayed broadly flat on an AHC basis between 2007–08 and 2012–13.

Explaining the change in household incomes for young adults

We now turn to why household incomes for young adults are so much lower than they were for people of the same age before the recession, by separating changes in the sources of their household income.

Table 5.1 decomposes the mean change in household BHC incomes among 22- to 30-year-olds between 2007–08 and 2012–13 by income source. We explicitly separate the individual incomes of the young adults and any cohabiting partners (known as 'benefit unit' incomes) from the incomes of other household members. Benefit unit incomes are decomposed into net earnings, net self-employment income, benefits and tax credits, other income sources (for example, savings and investments) net of taxes on them, and deductions such as council tax. The incomes of other household members are important because about 40% of the group live with adults besides partners (most

Table 5.1. Adults aged 22–30: contributions of income sources to mean household (BHC) income change, 2007–08 to 2012–13

	Share of household income (2012–13)	Change (2007–08 to 2012–13)	Contribution to household income growth (2007–08 to 2012–13)
Income of adult and (if applicable) partner			
Net earnings	55%	–21.9%	–13.5ppt
Net self-employment income	5%	–9.3%	–0.5ppt
Benefits and tax credits	9%	+23.1%	+1.5ppt
Other	3%	–23.7%	–0.8ppt
Deductions (e.g. council tax)	–3%	–13.0%	+0.5ppt
Net income of other household members			
Parent(s)	19%	+13.9%	+2.0ppt
Others	12%	–9.9%	–1.2ppt
Total income	100%	–12.0%	–12.0ppt

Note: Households with negative incomes or whose incomes are so high that the SPI adjustment was applied (see Appendix A) are excluded. All incomes have been equivalised and are measured before housing costs have been deducted. 'Parents' here include biological parents, step-parents, foster parents and parents-in-law. The income of parent(s) is the income of any benefit unit within the household that contains a parent of the adult or a parent of the adult's cohabiting partner.
Source: Authors' calculations using Family Resources Survey, 2007–08 and 2012–13.

typically their parents, but also housemates/flatmates) – an issue explored in detail in Section 5.2.

The table shows that the post-tax employment income of young adults and cohabiting partners accounts for about 60% of their net household income, on average (and 88% of benefit unit income). The table also shows that a sharp real fall in those earnings fully accounts for the fall in their average household income since the crisis. Average earned income among the group fell by 22% in real terms between 2007–08 and 2012–13, and this on its own acted to reduce their real household incomes by 13.5% (with falls in self-employment income acting to reduce household income by a further 0.5%). This is driven by two factors: a fall in employment among the group and large real falls in the pay of those employed. These factors are analysed and discussed in detail in Sections 5.3 and 5.4.

The fact that the actual fall in average household income was slightly less than that 13.5%, at 12%, largely reflects two offsetting factors: benefits and tax credits, and the incomes of parents with whom the young adults live.

Benefit and tax credit income for young adults and their partners increased by almost one-quarter between 2007–08 and 2012–13, acting to increase their average household income by about 1.5%. This is a much bigger rise than for the population as a whole (see Table 2.3 in Chapter 2 – although note that it has a smaller sample of individuals and there is therefore more uncertainty around the central estimate) but from a relatively low level, so young adults' incomes remain less dependent on benefits than those of older age groups. All else equal, we would expect benefit and tax credit income to have increased by more among young adults. Their employment rates and earnings levels have fallen by more (see Section 5.3 and 5.4), and this mechanically increases entitlements to means-tested benefits and tax credits.

The income of parents is the other major source of household income that rose for adults aged 22–30 between 2007–08 and 2012–13. This accounts for about one-fifth of total household income for the group (more than a quarter of them live with parents, as shown in Table 5.2 in the next section). It rose by 14% on average, acting to increase their average household income by 2%. This is partly due to rises in the BHC incomes of those parents,[109] but is also due to an increase in the proportion of young adults living with parents, as we show in Section 5.2. Note also that, even if the share of household income coming from parents were unchanged, this would still act to reduce the proportionate hit to household income from falls in young adults' earnings (simply because those earnings comprise a smaller share of overall household income than would otherwise be the case).

In summary, household incomes for young adults have fallen sharply since 2007–08 because their employment incomes have fallen sharply. In Sections 5.3 and 5.4, we analyse labour market trends among young adults in detail and show that falls in employment rates and real falls in the pay of those employed have both been

[109] This is perhaps unsurprising, given that median BHC incomes for adults aged 60 and above actually rose slightly.

contributing factors. Over the same period, average household incomes for young adults have been cushioned a little by an increase in the incomes of parents who they reside with (partly because a larger number are now living with parents than before the recession). This leads us to the next section, where we look in detail at the role of other household members in affecting the living standards of young adults.

5.2 Household composition and living standards

Household structure, income levels and income changes

As Table 5.2 shows, only about three-fifths of adults aged 22–30 live on their own or just with a partner.[110] More than a quarter live with parents, and the remainder live with other adult housemates/flatmates (such as friends).

When using standard household-level indicators, as in the HBAI series and in the previous section, the incomes of these other household members directly affect the measured living standards of young adults. As these adults age, though, far fewer of them are likely to continue living with parents or friends. Their own income might therefore be more indicative of their prospects than their household income. And even in the shorter term, the material benefits (or otherwise) for young adults of sharing households with others are unclear.

Table 5.2. Household composition and (BHC) incomes for adults aged 22–30

	Living on own or with partner only	Living with parents	Living with others	All
Percentage of group in 2005–06 to 2007–08	60%	26%	14%	100%
Percentage of group in 2010–11 to 2012–13	59%	28%	13%	100%
Income levels, 2010–11 to 2012–13				
Median household BHC income (p.w.)	£459	£510	£488	£478
Median benefit unit BHC income (p.w.)	£459	£281	£337	£390
Income changes between 2005–06 to 2007–08 and 2010–11 to 2012–13				
Median household BHC income	–11.7%	–7.8%	–18.7%	–11.6%
Median benefit unit BHC income	–11.7%	–17.3%	–22.4%	–12.5%

Note: 'Parents' here include biological parents, step-parents, foster parents and parents-in-law.
Source: Authors' calculations using Family Resources Survey, various years.

[110] All classifications of individuals by household composition in this section are based only on the other *adult* members of their household. Of those classified as living on their own or with a partner, 44% have a dependent child (see Table C.1 in Appendix C).

In this section, we take a closer look at incomes and living standards within young adults' households. To do this, we split them into three groups: those who live with no adults other than (if applicable) a cohabiting partner; those who live with parents; and those who live with non-parents (for example, friends). To ensure sufficient sample sizes within each group, we analyse pooled three-year sets of HBAI data throughout this section, rather than single years. Table C.1 in Appendix C outlines some characteristics of each of these groups, which we refer to where relevant.

Table 5.2 documents the median household income and median 'benefit unit' income of each group (measuring incomes BHC). The term 'benefit unit' income refers to the combined income of an individual and (where applicable) their cohabiting partner.[111] For those who live on their own or with no adults other than their partner, the two measures of median income are by definition identical (at £459 per week).

The table highlights the potential importance of understanding the contribution of other household members to the household income of young adults. Those who live with parents have the highest household incomes, and yet the lowest benefit unit incomes. Their living standards according to the official measure, then, are very sensitive to the incomes of their parents; and there might be far more cause for concern about their long-term prospects than the headline household-level income measures would suggest. The same conclusions apply on an after-housing-costs basis (see Table C.2 in Appendix C).

Young adults who live with non-parents besides partners (for example, friends) also have substantially higher median household incomes as a result, although the difference is smaller: those other household members raise median household income by about 45% (comparing household and benefit unit incomes), whereas parents who live with young adults raise their median household income by about 80%. Overall, median household income for people aged 22–30 is more than one-fifth higher than median benefit unit income.

It is also important to account for other household members when interpreting *trends* in young adults' incomes since the recession. The bottom of Table 5.2 shows the changes in median household and benefit unit income for the same three groups between 2005–06 to 2007–08 ('pre-recession') and 2010–11 to 2012–13 ('post-recession'). For those who live with no adults besides their partner, the changes in the two measures are by definition identical, and median income fell by just under 12%.

Living with parents has acted to substantially moderate the fall in household income for those concerned. Median household income among the group fell by about 8% over the period, whereas their median benefit unit income fell by about 17%. The difference between the reductions in these two measures of income for the group is statistically significant. The implication is that, for young adults living with parents, their parents' incomes have not fallen by as much as their own, so the percentage fall in household

[111] Benefit units also include any dependent children of the adults within them, and we equivalise benefit unit incomes based on the composition of benefit units in an analogous way to how household incomes are equivalised (see Appendix A).

income as a whole is smaller. Those who live with adults besides their parents or partner have also seen a relatively large fall in median benefit unit income, of about 22%; but the other adults in those households appear to have played a smaller role in 'diluting' the ultimate change in household income. Again, qualitatively the same conclusions apply on an after-housing-costs basis (see Table C.2 in Appendix C).

It is noticeable that benefit unit incomes have fallen by more among young adults living with parents than among those living with no adults besides their partner (and indeed the same is true for those living with adult non-parents). A possible contributing factor is that individuals whose incomes have been hit particularly hard have *responded* by choosing to live with parents, when they would not otherwise have done so. Research from the US indicates that, when economic conditions deteriorate, some young adults do use the possibility of living with parents as an insurance mechanism against shocks to their own incomes.[112] Some suggestive evidence that this may have been happening in the UK comes from the fact that the proportion of 22- to 30-year-olds living with parents has increased by 7% (2 percentage points) from 26% pre-recession to 28% post-recession (as shown at the top of Table 5.2). This matches closely with the same estimates from the LFS, which suggests a rise from 25% to 27%. Because the sample size is much larger in the LFS, the estimates are statistically very precise and this change is statistically significant.

The impact of other household members on young adults' living standards

The analysis in this section so far suggests that it is important to know how the living standards of adults are really affected by living with others. Does living with parents or friends really affect living standards? If so, is it living with them per se that is important or does the income of those other household members matter?

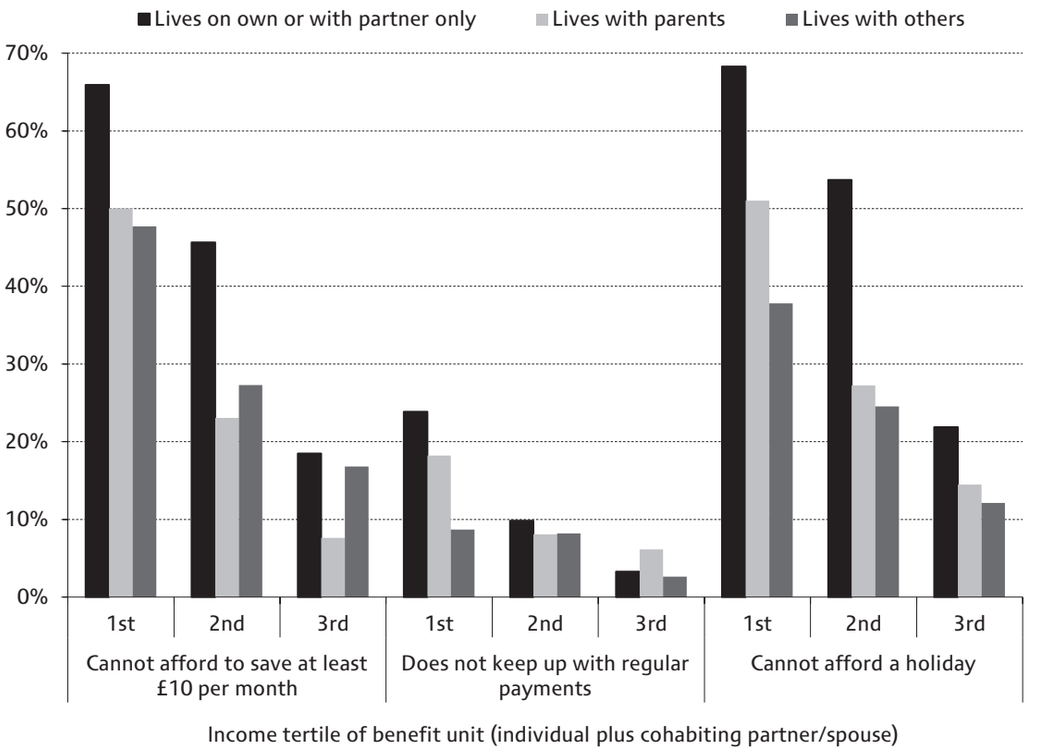
Figure 5.4 shows how three potential indicators of financial hardship vary for young adults according to their household structure, using the same three-way classification as previously. The three measures come from questions in the FRS asking whether the adult feels unable to save £10 per month, to keep up with regular payments (for example, bills) and to afford a holiday.[113] In each case, then, a positive answer indicates more hardship.

We compare young adults with similar 'benefit unit' incomes (individual incomes plus the income of any cohabiting partner), by also splitting them into three equally-sized groups – 'tertiles' – based on their (equivalised) benefit unit income. This is because benefit unit income is correlated with household structure (see Table 5.2), but we want to get a sense of whether household structure (not benefit unit income) affects living standards. Nevertheless, as ever with this type of analysis, the results can only be suggestive. Differences in measured hardship across household structures – even when

[112] Kaplan, 2012.

[113] This excludes holidays that involve staying in the homes of relatives.

Figure 5.4. Indicators of financial hardship among adults aged 22–30, by benefit unit (BHC) income and household structure (2010–11 to 2012–13, UK)



Note: Incomes have been measured before housing costs have been deducted. They are equivalised using the modified OECD equivalence scale at the benefit unit level (not the household level, as elsewhere in this report). Income tertiles are formed by dividing individuals into three equally-sized groups based on the level of income in their benefit unit, with the first tertile being the lowest-income group and the third tertile being the highest-income group.
Source: Authors' calculations using Family Resources Survey, 2010–11 to 2012–13.

comparing people with the same benefit unit income – might be due to other differences between young adults who live in different types of households.

The figure highlights quite a consistent pattern. Young adults who live on their own or with a partner only (plus any dependent children) are typically the most likely to indicate financial hardship, when compared with other young adults who have similar benefit unit incomes. This is suggestive that either young adults who live with others are beneficiaries of some income sharing within their households, or they experience significant other material benefits such as economies of scale and hence reductions in per-head costs (or both).[114]

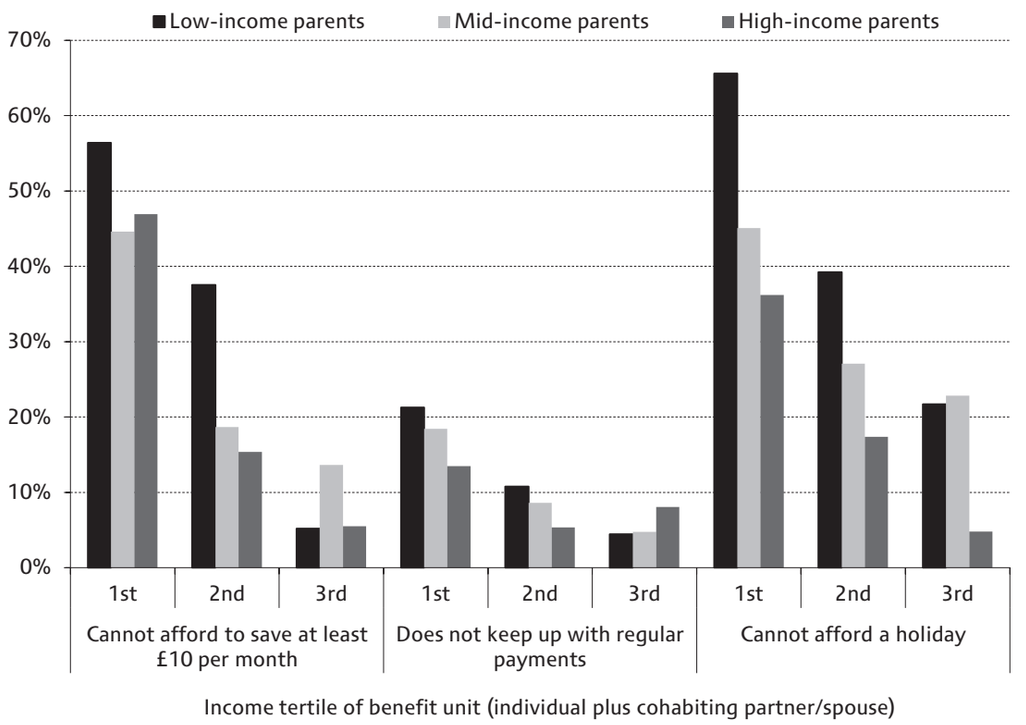
[114] An alternative hypothesis behind this result might have been that the additional costs of dependent children are not properly accounted for by the equivalence scales used to adjust incomes. Almost half of those aged 22–30 who live with no adults other than their partner have a dependent child, compared with less than 10% of other adults of their age (see Table C.1 in Appendix C). However, this cannot be the only explanation: the qualitative pattern shown in Figure 5.4 remains even if young adults with dependent children are excluded from the analysis (although if anything their exclusion reduces the gap a little).

In the case of young adults who live with parents, it seems reasonable to expect that income sharing is a significant part of the story. We have also seen (from Table 5.2) that falls in household income for young adults who live with parents have been much smaller than the falls in their benefit unit incomes. The extent of income sharing within the households of that particular group is therefore very important when interpreting changes in their living standards since the recession.

Figure 5.5 attempts to shed some light on this issue. It looks only at young adults who live with parents (i.e. the second group shown in Figure 5.4). It splits young adults into three equally-sized groups ranked by benefit unit income, as before. It also splits the income of the parents in the household into three equally-sized groups, in the same way. It then shows whether, given the income of a young adult's benefit unit, our measures of financial hardship are correlated with the income of the parents with whom they live. If there is income sharing within these households, we would expect there to be such a correlation, all else equal.

There is evidence of such a correlation, and hence some sharing of income between parents and adult children within households. Young adults who live with relatively

Figure 5.5. Indicators of financial hardship among adults aged 22–30 who live with parents, by benefit unit income and income of parents (2010–11 to 2012–13, UK)



Note: Incomes have been measured before housing costs have been deducted. They are equivalised using the modified OECD equivalence scale at the benefit unit level (not the household level, as elsewhere in this report). Income tertiles are formed by dividing individuals into three equally-sized groups based on the level of income in their benefit unit, with the first tertile being the lowest-income group and the third tertile being the highest-income group.
Source: Authors' calculations using Family Resources Survey, 2010–11 to 2012–13.

low-income parents are generally more likely to say that they cannot afford to save £10 per month, keep up with regular payments or go on holiday, when compared with peers with similar personal incomes but who live with higher-income parents.

In summary, the Family Resources Survey data provide some tentative evidence that the substantial proportion of young adults who live with other adults do benefit from this, in terms of their material living standards. For those who live with parents, we might expect that this (at least partly) reflects income sharing within households. We do indeed find a negative correlation between parental income and indicators of hardship for those young adults who live with parents – even when comparing young adults whose own incomes are similar. This is potentially very important when interpreting changes in those adults' living standards since the recession, because their parents' incomes have tended to be much more resilient than their own. At least in the short term, living with parents may have provided some insurance for the living standards of these young adults in the face of the difficult labour market that they have faced – a labour market which is the subject of the following sections.

5.3 Economic activity of young adults

A fall in income from employment has been the cause of falling incomes for young people recently. This has been driven by a reduced fraction of this age group actually being in work, which is the issue we discuss here, and lower earnings among those in work, which is the focus of the next section.

The primary data source used in these sections is the Labour Force Survey (LFS), not HBAI. LFS is a leading source of labour market statistics in the UK, and provides larger sample sizes, which allow us to draw more confident conclusions and to look at smaller subgroups of young adults.

We classify individuals into one of four mutually exclusive categories: 'in employment', 'in full-time education', 'unemployed' and 'not economically active or in education'.[115] Anyone in full-time education is classified in the second group and is excluded from the employed or unemployed categories. Some young adults are in full-time education and have a (typically part-time) job, but it is their main economic activity that is of primary interest.

The economic activity of young adults is important for their living standards for a number of reasons. Most income for young adults is earned in the labour market (see Table 5.1 earlier). Those in work have much higher incomes than those not in work. Median BHC household income for 22- to 30-year-olds in paid work was £545 per week in 2010–11 to 2012–13, compared with £299 per week for those not in paid work or

[115] We define 'in employment' as including both employees and the self-employed; 'unemployment' is defined according to the International Labour Organisation definition. See http://www.ons.gov.uk/ons/dcp171766_231903.pdf for more details. Note that 'economically active' is defined as the sum of people who are employed and people who are unemployed (using the International Labour Organisation definition). It therefore excludes those who are 'inactive', i.e. not seeking paid work.

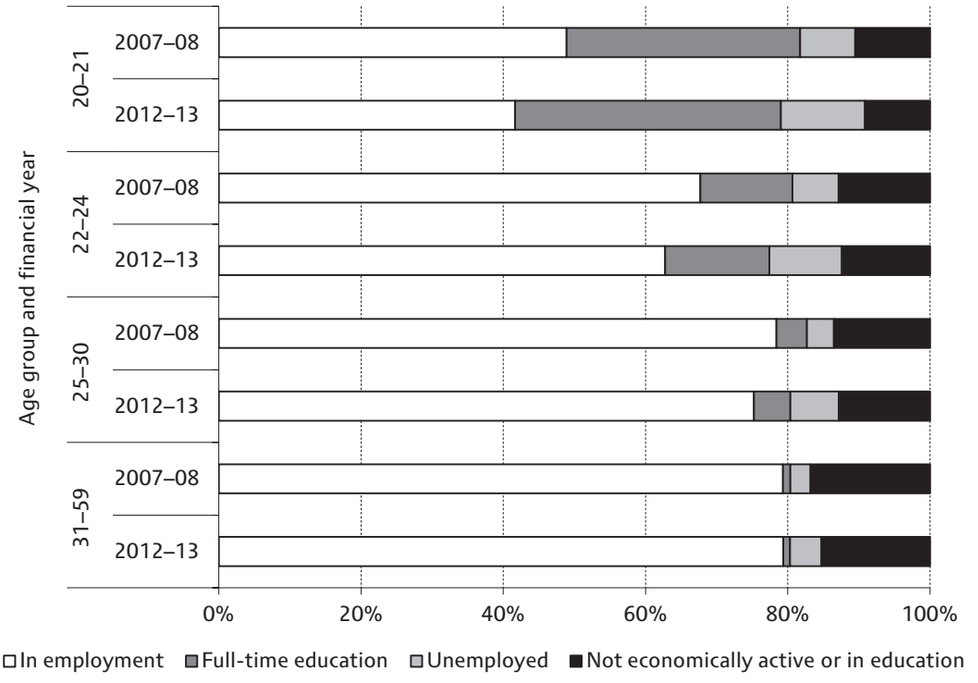
full-time education (and £408 per week for those in full-time education, some of whom work part-time).[116]

Moreover, we should clearly be less concerned about rising education participation than rising unemployment among young people. Although they have lower incomes, students tend to have temporarily low income and the additional education can lead to higher earnings in the future. In most cases, unemployment is also temporary, but unlike education we would not expect it to increase future earnings potential, and indeed a literature on the 'scarring' effects of early unemployment suggests that the opposite can be the case.[117]

Figure 5.6 compares the economic activity of young adults in 2007–08 (prior to the recession) and 2012–13. Even prior to the recession, young adults had lower employment rates than older working-age adults.[118]

Since the recession, there have been significant changes in the economic activity of young people. For 20- and 21-year-olds, the proportion in employment has fallen from about 49% to 42% over the five years. About half of that fall can be explained by an

Figure 5.6. Main economic status by age group, 2007–08 and 2012–13



Note: 'In employment' and 'Unemployed' exclude those in full time education.
Source: Authors' calculations using the Labour Force Survey, 2007–08 and 2012–13.

[116] The relative BHC poverty rates for these groups are 8.2%, 36.8% and 23.8% respectively.

[117] Arulampalam, 2001; Burgess et al., 2003; Gregg and Tominey, 2005.

[118] However, younger adults are less likely to be outside of the labour force and education, primarily because they are less likely to be looking after children, unwell or retired.

increase in the proportion in full-time education, which has risen from 33% to 37% over the same period. However, the proportion of these adults who are unemployed also rose, by 4 percentage points to 12%.[119]

Older adults in their 20s have seen similar rises in the prevalence of unemployment, but (unsurprisingly) smaller rises in education participation and hence smaller reductions in employment. For 22- to 24-year-olds, the employment rate fell from 68% to 63%, with a 2ppt increase in full-time education and a 4ppt rise in the proportion unemployed; for 25- to 30-year-olds, there was a 3ppt fall in employment and this can be almost entirely explained by a corresponding rise in unemployment.

Taking all 22- to 30-year-olds together, their employment rate has fallen by 4ppt from just under 75% to just over 71% between 2007–08 and 2012–13, with an increase in the proportion unemployed from under 5% to 8%. Over the same period, the 31–59 age group saw no change in employment (or, unsurprisingly, education), and a 1.5ppt increase in the proportion unemployed was offset by an equivalent fall in the proportion inactive. It is not unusual for a recession to hit the employment rates (and increase the unemployment rates) of young adults more than those of older people.[120] The key difference between this recession and others in this respect is the remarkable stability of employment for all age groups other than young adults.

Proportionate increases in unemployment among young adults since the recession have been quite similar across education groups. However, this corresponds to a larger absolute increase for those with the lowest levels of education (GCSE-equivalent or below, for whom the prevalence of unemployment increased by more than 5ppt, from 8.4% to 13.9%, among those aged 20 to 30), for whom the incidence of unemployment was highest to start with.

To a certain extent, the decreases in employment rates of those aged 20–24 since the recession are a continuation of a longer-term trend. Figure 5.7 looks at trends since 1992–93. It shows falling employment rates for 20- to 21-year-olds, particularly during the 1990s; and, to a lesser extent, falling employment rates for 22- to 24-year-olds during the 2000s. However, these were times of (generally) falling unemployment: the falling employment rates were primarily explained by increasing participation in education (see Figures C.1 and C.2 in Appendix C). Recently, as we have seen, falls in employment have been accompanied both by rises in unemployment and by increases in education participation. The broader implications of these employment falls are therefore likely to be mixed, as discussed further below.

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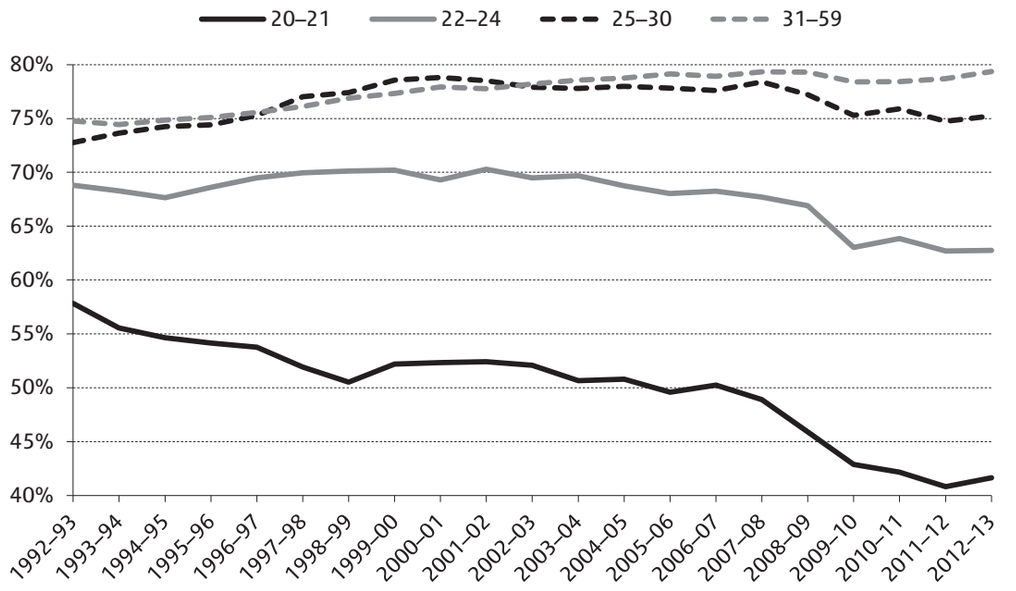
[119] Note that this differs from the headline 'unemployment rate' in two ways. As described above, it excludes those in full-time education. More substantively, the unemployment rate is the proportion of the labour force (unemployed and employed individuals combined) that is unemployed, not the proportion of the population.

[120] See Blundell, Crawford and Jin (2014) for the UK and Elsby, Hobijn and Sahin (2010) and Hoynes, Miller and Schaller (2012) for the US.

Figure 5.7. Employment rates by age



Note: Employment rates exclude those in full-time education.
Source: Authors' calculations using the Labour Force Survey, various years.

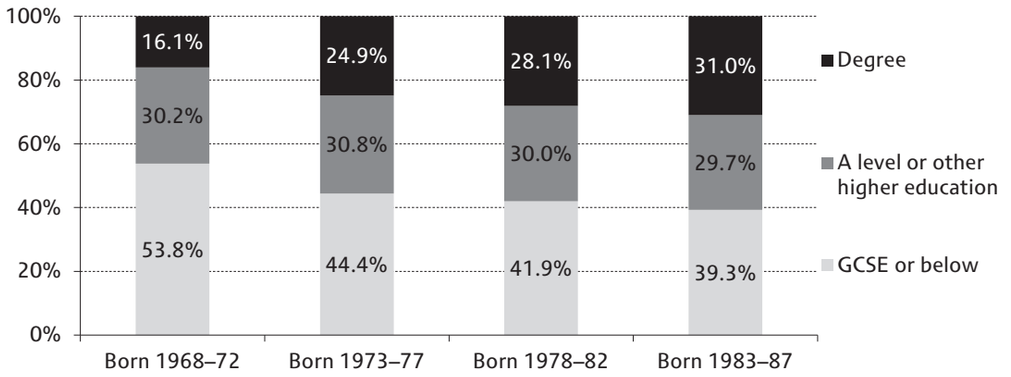
Another important change, which again largely continues a theme from before the recession, has been declines in the proportion of people who are neither looking for work (i.e. who are not economically 'active') nor in education.[121] For adults aged 25 and above, this continues a trend that began in the late 1990s (see Figure C.3 in Appendix C). Since 2007–08, there have been declines across all of the adult age groups shown in Figure 5.6. There are reasons to take some encouragement from this when thinking about the future labour market prospects of young adults, as discussed further in Section 5.5.

An important consequence of increases in education participation among young people has been increases in the proportion who leave with high levels of qualifications. These are shown in Figure 5.8, which compares the highest educational qualification gained by age 25 for four birth cohorts. Of those born in the mid 1980s (who were in their early 20s in the late 2000s), 31.0% were educated to degree level – up from 24.9% for the cohort born 10 years earlier. There has been a corresponding decrease in the proportion who have no more than GCSE-level qualifications.

Rising levels of participation in education, then, are important not just for understanding falls in employment. By increasing the number of highly-qualified young adults, this trend is also important to bear in mind when looking at earnings trends among young workers. Higher qualifications are generally expected to lead to higher

[121] This trend has been studied elsewhere – for example, by Blundell, Crawford and Jin (2014).

Figure 5.8. Highest educational qualification at age 25, by birth year



Source: Authors' calculations using the Labour Force Survey, various years.

earnings;[122] so, all else equal, this should increase the earnings of workers in younger cohorts relative to the earnings of previous cohorts of young workers. But, of course, all is not equal, and the severe recession of the late 2000s has had a huge impact on real earnings levels. In the next section, we study earnings trends among young adults in detail.

5.4 The earnings of young adults in paid work

The previous section looked at changes in economic activity among young adults and documented recent falls in employment among the group. We now turn to the second reason why their employment income has declined: falls in the real pay of employed young adults. For the same reasons as in Section 5.3, we use data from the LFS. This does not measure the amounts of income or profit that individuals get from self-employment. This section therefore focuses on employees only.

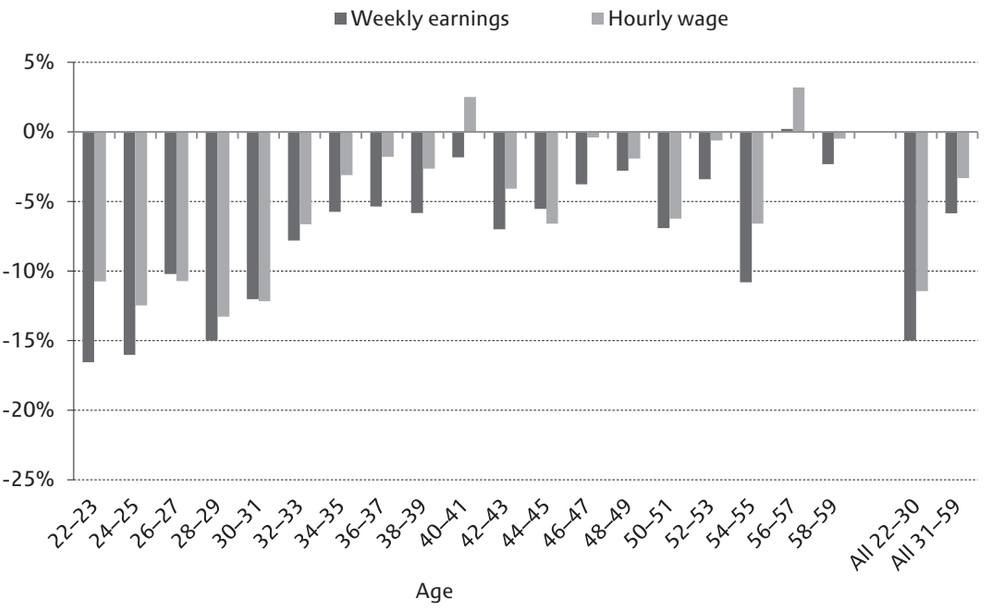
Weekly pay, hourly pay and hours worked

Figure 5.9 displays the real changes in median weekly earnings[123] from 2007–08 to 2012–13, by age. Employees aged 22–30 have median weekly earnings that are 15% lower in real terms than those of workers of the same age before the crisis. By contrast, by 2012–13, employees aged 31–59 had median weekly earnings almost 6% lower in real terms compared with 31- to 59-year-olds in 2007–08. So the earnings of in-work young adults have fallen by more than those of other age groups, just as their employment rates have. Moreover, we can see that there is not a smooth relationship between age and the falls in income. Grouping ages in two-year age bands, we see that

[122] See Blundell et al. (2000) and Blundell, Dearden and Sianesi (2005).

[123] Maintaining consistency with the analysis of household incomes, in this and all the other analysis of earnings that follows, wages and earnings are expressed in 2012–13 prices, deflated by the same retail price index excluding council tax. All changes or growth rates are expressed in real terms. Deflating by a price index that records lower inflation, such as RPIJ, would make the falls in earnings look smaller, but the differential trends between younger and older adults would remain.

Figure 5.9. Real change in median gross weekly earnings and hourly wages (employees only) by age, 2007–08 to 2012–13



Note: Gross weekly earnings and hourly wages are expressed in real terms, deflated by the retail price index excluding council tax.
Source: Authors' calculations using the Labour Force Survey, 2007–08 and 2012–13.

workers from all age groups from 22–31 have seen falls of over 10% whereas, with just one exception (age 54–55), no age group 34 or older saw a fall of over 7% in weekly earnings.

Further inspection shows that, within these overall figures, there is not much evidence of variation in (proportionate) earnings falls by education group. Median weekly earnings for those aged 22–30 with a degree fell by 13.8% from 2007–08 to 2012–13, compared to 13.4% for individuals with at most non-degree higher education or A levels and 15.0% for those with at most GCSE-level qualifications.

One potential reason why weekly earnings have fallen is that workers may be working fewer hours than prior to the recession.[124] Figure 5.9 therefore also displays the change in median hourly wages for each age group. For most age groups, the fall in median hourly wages is lower than the fall in median weekly earnings, which is indicative of falling average hours worked per week. However, the pattern of greater falls in earnings for younger age groups remains when looking at median hourly wages, with real falls of 11% for those aged 22–30 and just 3% for employees aged 31–59.

Table 5.3 confirms the decline in working hours and provides more detail. Average weekly hours worked (among those working at all) fell between 2007–08 and 2012–13, and they fell more for young adults: by 1.5 hours per week for those aged 22–30 and by

[124] See Table 5.3 for evidence of this change.

Table 5.3. Characteristics of individuals in paid work and not in full-time education

Characteristic	Aged 22–30		Aged 31–59	
	2007–08	2012–13	2007–08	2012–13
Part-time (< 30 hours per week)	13.1%	17.6%	21.3%	22.3%
Mean hours worked per week	37.9	36.4	36.4	35.9
Self-employed	7.2%	8.0%	14.3%	14.9%
Want a new job	7.7%	9.8%	4.3%	5.1%
Want an additional job	0.8%	1.1%	0.7%	0.9%
Want longer hours in current job	7.5%	11.3%	6.2%	9.0%

Source: Authors' calculations using the Labour Force Survey, 2007–08 and 2012–13.

0.5 hours per week for those aged 31–59. This is at least partly driven by a substantial increase in the proportion of young adults working part-time, from 13.1% to 17.6%.

There is also some evidence that the decline in working hours is due to a reduction in employers' demand for young adults' labour since the recession (rather than changes in their preferences or incentives, for example). The proportion who say they want longer hours in their current job rose from 7.5% in 2007–08 to 11.3% in 2012–13. Other possible proxies for so-called 'under-employment' (the proportions of workers who are self-employed,[125] who want a new job or who want an additional job) have also increased, although the table shows that these indicators have also increased for older workers, for whom falls in working hours have been more moderate.

The evolution of workers' pay within birth cohorts

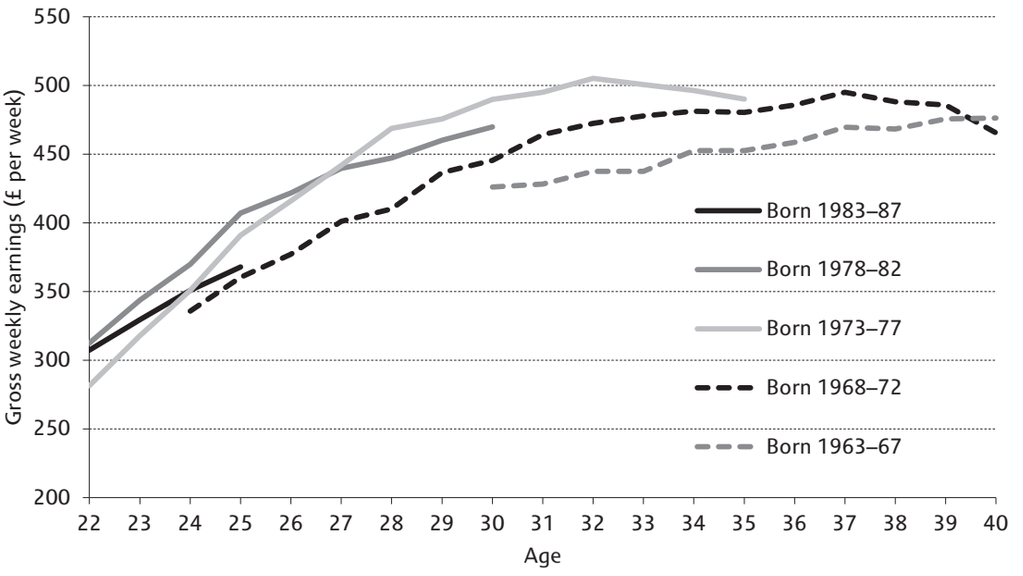
This section has so far focused on what the earnings of a given age group were prior to the Great Recession and in 2012–13. It has shown that falls in real earnings have been particularly large when comparing young adults in 2012–13 with people of the same age before the recession. One way of seeing how this has come about is to follow the evolution of young workers' pay within particular birth cohorts, to look at how the recession seems to have affected the path of their earnings. To do this, we use the same 'synthetic cohort' methods used to look at household incomes at the start of Section 5.1.

Figure 5.10 shows median weekly earnings for people born in successive five-year birth cohorts, from 1963–67 to 1983–87. There have typically been steep rises in earnings as individuals move through their 20s. In other words, there are clear returns to age and/or experience for young workers.[126] Given that young adults are typically on a steep part of their lifetime earnings trajectory, it is perfectly possible that their earnings continue to grow as they age (but less quickly than would be 'usual') at times when general earnings levels are falling.

[125] See Bell and Blanchflower (2011b) for more details on under-employment of young people, and D'Arcy and Gardiner (2014) for more details on the increase in self-employment since the recession.

[126] See Altug and Miller (1998), Dustmann and Meghir (2005) and references therein.

Figure 5.10. Median gross weekly earnings between ages 22 and 40 (employees only), by birth year

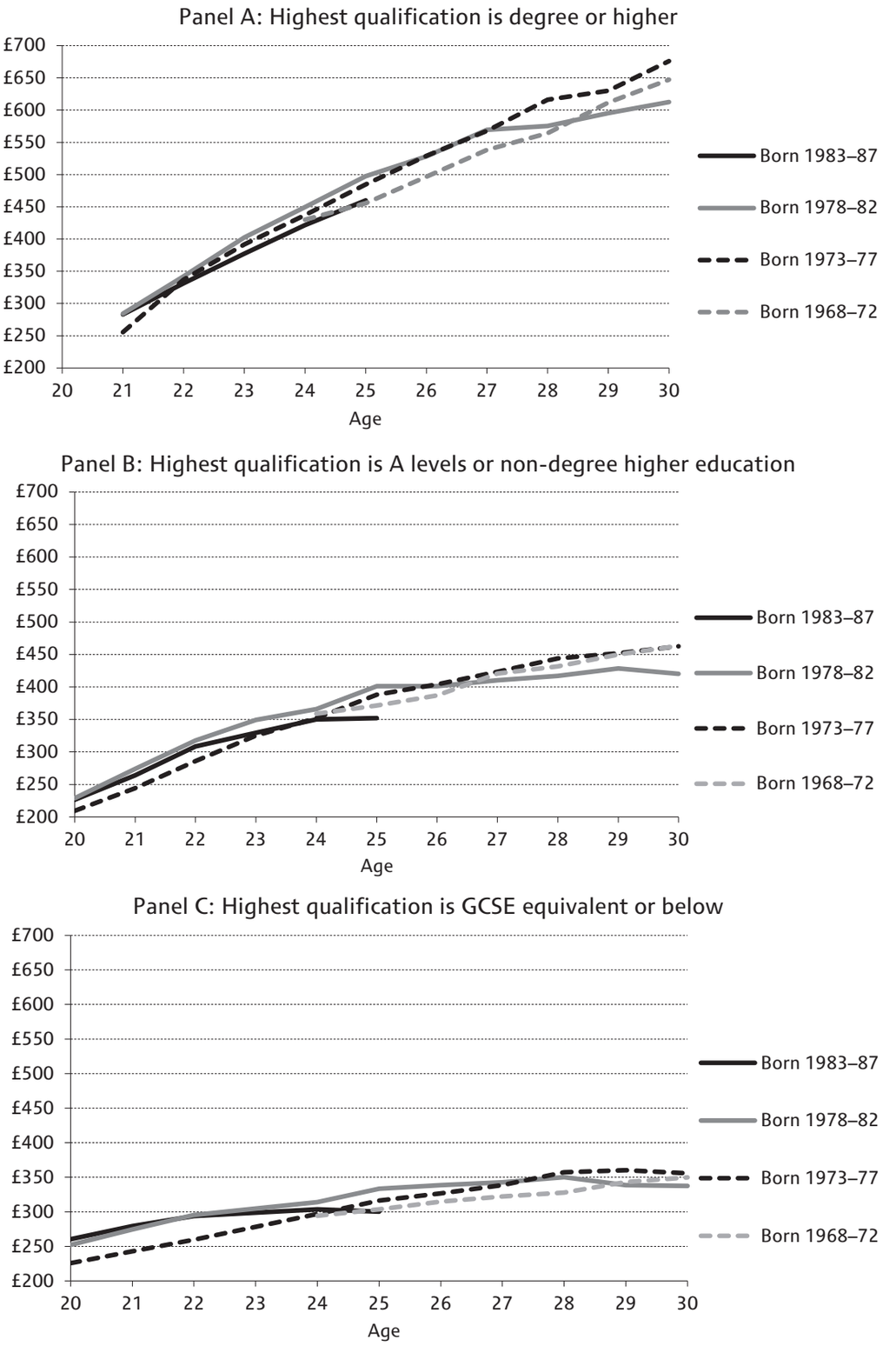


Note: Earnings expressed in 2012–13 prices; previous years deflated by the retail price index excluding council tax.
Source: Authors' calculations using the Labour Force Survey, various years.

The age profile of earnings is considerably steeper at young adult ages than the age profile of household incomes (see Figure 5.1 earlier). Taking the 1973–77 cohort as an example, median earnings among those in work rose by 25% from age 25 to 30, while median (equivalised) net household income rose by 6%. A number of factors are likely to be responsible for this. As gross earnings rise, the proportion of them that are taxed increases too, and eligibility for means-tested benefits and tax credits declines. As young adults age, they are more likely to start families, which reduces their equivalised incomes, and to move out of the parental home, which will also often act to reduce their household income (see Section 5.2).

How do these age profiles of earnings for different birth cohorts help us understand the effect of the Great Recession on young people? First, they show that the youngest *cohorts* shown in Figure 5.10 have still seen increases in median earnings as they got older. Indeed, for the 1983–87 birth cohort (aged between 21 and 25 when the recession hit), median earnings of those in work increased by about 20% between ages 22 and 25. Second, though, this is still considerably lower growth in earnings than experienced by previous cohorts over the same age range. That is why, at age 25, median earnings for the mid-1980s cohort were 10% lower than for those born five years earlier, 6% lower than for those born 10 years earlier and only 2% higher than for those born 15 years earlier. It is also worth recalling that this is despite a very substantial increase in education levels (as shown in Figure 5.8): 31% of the mid-1980s cohort had a degree at age 25, compared with only 16% of the cohort born 15 years earlier.

Figure 5.11. Median gross weekly earnings between ages 20 and 30 (employees only), by birth year and highest educational qualification



Note: Earnings expressed in 2012–13 prices; previous years deflated by the retail price index excluding council tax. Individuals with degrees are only followed from age 21 onwards.
Source: Authors' calculations using the Labour Force Survey, various years.

For slightly older cohorts, born between the late 1960s to the mid 1970s, there is evidence that their real pay has been flattening out and even falling, in their early and late 30s respectively. At these ages, the trajectory of earnings is typically less steep than in adults' 20s. Hence, it takes less of a slowdown in the labour market for earnings to stop rising with age altogether. Indeed, even though their real earnings have fallen during their early 30s, median earnings at age 35 of those born in the mid 1970s are still higher than age-35 earnings for the previous cohort. That is because earnings growth during the early 30s was only relatively modest for the previous cohort (in contrast to the rapid earnings growth they saw during their 20s).

Figure 5.11 presents similar analysis after splitting each cohort into three groups based on their education level. Some caution is needed when doing this, as younger cohorts have higher proportions of highly-educated individuals. This means that one is not necessarily comparing 'like with like' when looking across cohorts at groups with the same education level. Despite this caveat, the figure is useful in highlighting three points. First, earnings are higher for more highly-educated individuals. Second, this earnings gap between the high- and low-educated grows throughout adults' 20s; in other words, earnings tend to rise more steeply with age and/or experience for the more highly educated. Third, one consequence is that the recession brought real earnings growth to a complete standstill for the low-educated born in the mid-1980s, as they approached age 25; in contrast, their graduate contemporaries continued to see clear increases in their real earnings at this point (but less sharp increases than graduates would normally expect early in their careers).

Nevertheless, it is clear from Figure 5.11 that real pay for young adults within each education group has grown less throughout their early 20s than we would expect in more normal times. As a result, age-25 real median earnings within the mid-1980s birth cohort were lower than they had been for the cohort born 10 years earlier, for each education group. In this sense, the conclusion that applied to young adults as a whole (as discussed around Figure 5.10) seems to apply broadly across the education spectrum.

One potential reason why young adults could be earning less – and perhaps seeing less earnings growth – than similar people in previous cohorts is that they are in different kinds of jobs. For example, recent graduates may be earning less than graduates in previous cohorts because they are less likely to enter higher-paying types of 'graduate jobs' which require a degree. Some evidence of this can be found in the Destination of Leavers from Higher Education (DLHE) survey, which interviews young adults six months after graduation. For those who left higher education in 2010[127] and were employed six months later, 62.8% were employed in a 'professional' occupation.[128] This compares with 66.8% of those who graduated in 2006.

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[127] Data for more recent graduates are available, but they are not comparable to previous years due to changes in the questions.

[128] 'Professional' occupation is defined as anyone who has a job classed as a 'manager or senior official', 'professional occupation' or 'associate professional and technical occupation' in the Standard Occupational Classification framework. See https://www.hesa.ac.uk/content/view/2077/239/ for more information on the DLHE statistics.

In summary, the real pay of in-work young adults is significantly lower than it was before the recession. This is partly due to reduced hours of work (including more part-time work) – some of which looks involuntary, as indicators of 'under-employment' have risen – but there have also been sharp falls in real hourly wages. Both hourly and weekly pay have declined more at young ages – the 20s and early 30s – than at older ages.

In general, because young adults are at a stage in the life cycle where earnings typically rise steeply with age, cohorts born in the mid 1980s have still seen rising pay throughout their early 20s – but the rises have been less steep than we would have expected outside of recession, and that is why they have fallen behind where prior cohorts were at the same age. The low-educated members of the mid-1980s cohort are an exception. The earnings of the low-educated typically rise less steeply with age, and this means that the recession has been sufficient to bring their earnings growth to a complete standstill as they approached age 25.

5.5 Young adults not in employment or full-time education

The proportion of 22- to 30-year-olds who are not in work or full-time education has increased since the recession, from 18.0% in 2007–08 to 20.6% in 2012–13. As discussed in Section 5.3, this group have much lower household incomes on average, and are much more likely to be in income poverty, than their peers. In addition, we might be concerned about the future impact of their current economic status on their future ability to work and earn good wages, in a way that we would not necessarily be concerned about those in either paid work or full-time education. We therefore finish by setting out what we know about this group. Note that they are comprised of both the unemployed (i.e. seeking work but not in work) and people not economically active (who additionally are not in full-time education).[129]

Table 5.4 shows the percentage not in paid work or education for different subgroups of those aged 22–30, in 2007–08 and 2012–13. In 2012–13, almost 27% of women aged 22–30 were in this category, compared with under 15% of men. As we would expect, less-highly-educated groups are far more likely to fall into this category: those with no more than GCSE-level qualifications are four times more likely to be in it than graduates. Finally, a larger fraction of young adults outside of London and the South of England are out of work or education (22.0% compared with 18.6%). All of the subgroups shown saw a rise in the proportions not in paid work or education between 2007–08 and 2012–13, although the rise was proportionately bigger outside of London and the South of England and for men.

[129] This is not the same group as 'NEETs' – people not in employment, education or training – described in statistics released by the Department for Education. First, the group we consider will include some people in part-time education or in training. Second, NEET statistics generally focus on younger age groups, in particular 16- to 18-year-olds and 19- to 24-year-olds. See https://www.gov.uk/government/collections/statistics-neet.

Table 5.4. Percentage of 22- to 30-year-olds not in work or full-time education

Group	2007–08	2012–13
All	18.0%	20.6%
Women	24.6%	26.9%
Men	11.4%	14.6%
Highest qualification: degree or higher	7.3%	9.6%
Highest qualification: A level or non-degree HE	10.8%	13.9%
Highest qualification: GCSE or below	30.7%	37.0%
Lives in London, South East or South West	17.0%	18.6%
Lives elsewhere in UK	18.7%	22.0%

Source: Authors' calculations using the Labour Force Survey, 2007–08 and 2012–13.

Table 5.5 gives more details of the activities and employment histories of 22- to 30-year-olds, both in 2007–08 and in 2012–13. The first row reiterates that there was an increase in the proportion who were in neither paid work nor education. The next two rows show that this fed through to an increase in measures of 'long-term' non-employment among young adults, with more having not worked in the last year, and more having never worked, than before the recession.

However, the reductions in employment have translated into more young adults seeking work (i.e. unemployed) rather than any increases in inactivity (i.e. those not seeking work). Although the proportion of 22- to 30-year-olds who are unemployed rose markedly from 4.7% to 8.0% between 2007–08 and 2012–13, the proportion inactive actually fell from 13.3% to 12.7%. As discussed in Section 5.3, the drop in inactivity continues a longer-term trend. When thinking about the future economic prospects of young adults, it is an encouraging sign: some may have worried that lower employment levels – and particularly long-term non-employment – for young adults could lead to large numbers becoming 'discouraged' or 'detached' from the labour market and dropping out of the labour force entirely.[130]

Table 5.5. Measures of non-employment among 22- to 30-year-olds

	2007–08	2012–13
Percentage of 22- to 30-year-olds who are:		
Not in work or full-time education (FTE)	18.0%	20.6%
Never worked (and not in FTE)	5.2%	5.7%
Not worked in last year (and not in FTE)	13.9%	16.2%
Unemployed (ILO definition; and not in FTE)	4.7%	8.0%
Not economically active or in full-time education	13.3%	12.7%
Looking after family (and not in FTE)	8.0%	8.0%
Single and looking after family (and not in FTE)	2.6%	2.7%

Source: Authors' calculations using the Labour Force Survey, 2007–08 and 2012–13.

[130] See, for example, Blanchard and Summers (1987).

5.6 Conclusion

Recent years have seen substantial reductions in employment among young adults and, compared with people of the same age before the recession, falls in the real earnings of those who are employed. In both cases, there is a contrast between young adults and other working-age adults, for whom employment rates have been much more stable and for whom real earnings have fallen less sharply (though still substantially). The fact that this is true of both employment and real earnings suggests that there has been a reduction in employers' demand for young adults' labour that is larger than the reduction in labour demand for other adults.

It is not unusual for a recession to hit the employment rates of young adults harder than those of older people.[131] The key differences between this recession and others in our recent past are the remarkable stability of employment for all age groups other than young adults and the very sharp falls in the real pay of workers, by which young adults have been the most acutely affected by some distance.

We see clear evidence of these labour market trends feeding through to headline measures of living standards. Household incomes have fallen sharply at young adult ages – and more sharply than at other ages – and this can be entirely accounted for by reduced income from employment.

For more than one-quarter of young adults (aged 22–30), household incomes are affected by the incomes of parents with whom they live. At least in the short term, living with parents looks to have provided some important insurance for young adults' living standards in the face of the difficult labour market that they have encountered. Income trends for the parents who live with their adult children have been far more favourable than those for the young adults themselves, substantially moderating the fall in household income for those young adults. We have also found some evidence that the income levels of parents may indeed affect the living standards of young adults who live with them. Nevertheless, living with parents is unlikely to be a long-term solution for many. When thinking about their ultimate economic prospects, the rather alarming trends in the personal (rather than household) incomes of young adults are probably more relevant.

On the subject of longer-term prospects for the current crop of young adults, there are at least two important issues. First is the extent to which the labour market will absorb the increase in more-highly-educated young adults entering the labour force, matching them with jobs that make most use of their higher education levels and paying them accordingly. Alongside increases in unemployment, there have also been increases in participation in education among young people. This could potentially have much more positive implications for their future economic outcomes, but the future financial returns to education are a key uncertainty. Some evidence from the United States perhaps provides some reason for caution. It argues that the 2000s saw a decline in the

[131] Blundell, Crawford and Jin, 2014.

demand for skilled and cognitive tasks and that there has been an associated flattening of the wage profile for young American cohorts as they age.[132]

A second important question is the extent to which these difficult early labour market experiences affect the ability of young adults to work and earn good wages in future. There is evidence that unemployment during young adulthood may have negative long-term effects on earnings[133] and unemployment probabilities.[134] Related research has looked at cohorts of young adults who were 'unlucky' in graduating during macroeconomic downturns and has found persistent negative impacts on future earnings.[135]

There are many reasons why these longer-term 'scarring' effects may exist. One is growing detachment from the labour market during spells of unemployment. On that, there are some positive signs: there are fewer economically inactive young adults (who are neither in the labour force nor in full-time education) than in the years prior to the recession. Another possible cause of scarring is depreciation of knowledge and skill during unemployment spells, or indeed a lack of the normal accumulation of knowledge and skill because of starting out in a lower-skilled job: we know that recent graduates in the UK have been less likely to enter professional occupations than their predecessors. These issues will be crucial in determining the long-run impacts of the recent recession on the cohorts unlucky enough to enter the labour market at around that time. They are well worthy of further research.

[132] Beaudry, Green and Sand, 2013 and 2014.

[133] Arulampalam, 2001; Gregg and Tominey, 2005.

[134] Burgess et al., 2003.

[135] Kahn, 2010; Oreopoulos, von Wachter and Heisz, 2012.

Appendix A. The Households Below Average Income (HBAI) methodology[136]

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 or happiness, 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 4 provides a discussion of recent changes in material deprivation according to these indicators.

Even as a measure of material well-being, 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.[137]

The treatment of housing costs

The government's HBAI publication looks at 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

[136] Many of these issues are also discussed in Berthoud and Zantomio (2008).

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

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. Note also that costs such as maintenance, repairs and contents insurance are excluded.

When looking at changes in average living standards across the population as a whole, there is usually a strong case for focusing on changes in BHC incomes. This is because most individuals exercise a considerable degree of choice over housing cost and quality, at least beyond the short run, 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 AHC incomes in certain circumstances.

First, AHC incomes 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 AHC income has an advantage over BHC income as a measure of living standards for low-income households. This is because housing benefit reimburses individuals specifically for their housing costs. 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 relative supply of rented accommodation – 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, AHC incomes may be more appropriate than BHC incomes 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.[138] This is 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 the case over recent years, as rapid falls in mortgage interest rates reduced the housing costs of those with a mortgage significantly. Falls in mortgage interest rates have of course not benefited 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 AHC incomes 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 to have a mortgage than the population as a whole.

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 some households, this assumption may provide a reasonable approximation – for example, some couples may benefit equally from all income coming into the household. 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 units of a household but not *between* them, by measuring incomes at the benefit unit level rather than at the household level. 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

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,

[138] 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.

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

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 scale, and a DWP AHC variant, shown in Table A.1, to adjust incomes on the basis of household size and composition, expressing all incomes as the amount that a childless couple would require to enjoy the same standard of living. 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'.

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 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.[139]

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, marital status, region and a number of

[139] See also section 5.3 of Brewer et al. (2008).

other variables) reflects the true UK population.[140] 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 procedure is applied to incomes at the very top of the income distribution to correct for the particular problems in obtaining high response rates from very rich individuals and the volatility in their reported incomes. This adjustment procedure uses projected data from HMRC's Survey of Personal Incomes (SPI) – a supposedly more reliable source of data for the richest individuals based on income tax returns. The very richest individuals, for whom the SPI adjustment is applied, are assigned an income level derived from the SPI survey. 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.

The income measure summarised

In the analysis in this report, we therefore follow the government's HBAI methodology, using *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 2012–13 prices, as our measure of living standards. For brevity, we often use this term interchangeably with 'income'.

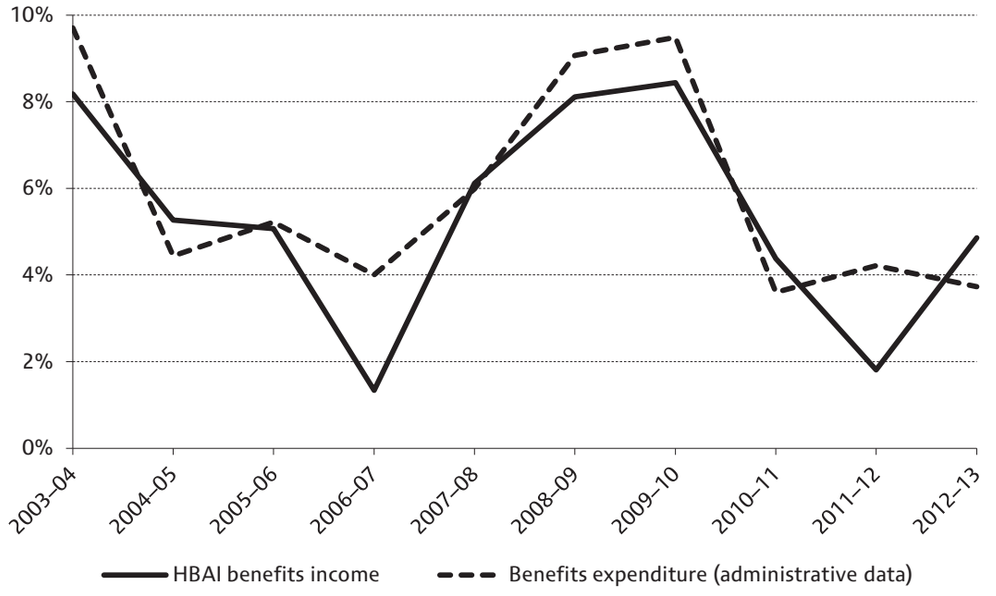
[140] See Department for Work and Pensions (2014).

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

Figure B.1 shows total benefit spending (including tax credits) 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.)

The cash-terms year-on-year increase in benefit and tax credit receipts recorded in the HBAI data in 2012–13 was 4.9%. This is higher than the 3.7% increase in the amount that the government's administrative data record as being paid out in benefits and tax credits. In contrast, in 2011–12, HBAI had recorded a smaller cash-terms rise in total benefit and tax credit receipt than the administrative data suggested. Taking the two years between 2010–11 and 2012–13 together, there is therefore less of a discrepancy between the two sources. A possible explanation, then, is that the over-recording of benefits growth in HBAI in 2012–13 is partly unwinding an under-recording of growth in the previous year.

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.
Source: HBAI benefits income from authors' calculations using Family Resources Survey, various years. Administrative expenditure from DWP benefit expenditure table 1 (available at https://www.gov.uk/government/publications/benefit-expenditure-and-caseload-tables-2014) and HMRC annual accounts, various years (latest available at https://www.gov.uk/government/publications/annual-report-and-accounts-2012-13--3).

The graph shows that this latest discrepancy is by no means unprecedented. Differences from year to year are to be expected due to random sampling variation in the underlying survey data, as well as possible fluctuations in the survey's ability to correctly record benefit and tax credit income from those who are sampled. In recent history, the HBAI data have been getting progressively worse at recording benefit and tax credit receipt. Taking the period since 2002–03 as a whole, administrative data show a cash increase in benefit and tax credit spending of 78%, whilst HBAI records an increase of only 68%.

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 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 2012–13, it recorded just 57% of pension credit spending and 70% 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. 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 2012–13

	Administrative data (£ billion)	HBAI data (£ billion)	Percentage of total expenditure recorded in HBAI data
Basic state pension	79.7	71.2	89%
Pension credit	7.5	4.3	57%
Tax credits	28.8	20.3	70%
Child benefit	12.2	11.1	91%
Housing benefit	23.9	18.5	77%
Disability living allowance	13.4	11.0	82%
All benefits and tax credits	207.6	166.5	80%

Note: Figures for tax credits and child benefit are for the UK. Other figures are for Great Britain.
Source: HBAI benefits income from authors' calculations using Family Resources Survey, 2012–13. Administrative expenditure from DWP benefit expenditure table 1 (available at https://www.gov.uk/government/publications/benefit-expenditure-and-caseload-tables-2014) and HMRC annual accounts, 2012–13 (https://www.gov.uk/government/publications/annual-report-and-accounts-2012-13--3).

Appendix C. Supplementary tables and figures to Chapter 5

This appendix presents some analysis supplementary to that in Sections 5.2 and 5.3, which looked at young adults and the recession.

Section 5.2 split 22- to 30-year-olds into three groups: those who live with no adults other than (if applicable) a cohabiting partner; those who live with parents; and those who live with non-parents (for example, friends). Table C.1 describes the characteristics of the three groups in 2010–11 to 2012–13.

The analysis in Chapter 5 then looked at before-housing-costs (BHC) income levels, and changes in incomes, for young adults living in the three different types of household. It considered both median household income and median 'benefit unit' income for each group. The term 'benefit unit' income refers to the combined income of an individual and (where applicable) their cohabiting partner.[141] For those who live on their own or with no adults other than their partner, the two measures of median income are by definition identical; for others, the measures can differ. Here we show the same analysis on an after-housing-costs (AHC) basis.

Table C.1. Characteristics of adults aged 22–30, by household composition (2010–11 to 2012–13, UK)

	Living on own or with partner only	Living with parents	Living with others	All
Demographics				
Female	58%	41%	42%	51%
Has dependent children	44%	5%	8%	28%
Full-time student	4%	9%	27%	9%
In paid work	76%	71%	68%	74%
Not in paid work or full-time education	21%	22%	13%	21%
Unemployed	6%	13%	9%	8%
Graduate	30%	28%	33%	30%
Lives in London or South East	27%	31%	41%	30%
Homeowner	36%	1%	7%	22%
In owner-occupied accommodation	36%	74%	17%	44%

Note: 'Parents' here include biological parents, step-parents, foster parents and parents-in-law.
Source: Authors' calculations using Family Resources Survey, 2010–11 to 2012–13.

[141] Benefit units also include any dependent children of the adults within them, and we equivalise benefit unit incomes based on the composition of benefit units in an analogous way to how household incomes are equivalised (see Appendix A).

Table C.2. After-housing-costs income levels and income changes for adults aged 22–30, by household composition (UK)

	Living on own or with partner only	Living with parents	Living with others	All
Income levels, 2010–11 to 2012–13				
Median household AHC income (p.w.)	£360	£440	£339	£380
Median benefit unit AHC income (p.w.): assumption 1	£360	£278	£281	£330
Median benefit unit AHC income (p.w.): assumption 2	£360	£313	£281	£338
Income changes between 2005–06 to 2007–08 and 2010–11 to 2012–13				
Median household AHC income	–16.1%	–10.7%	–26.2%	–16.1%
Median benefit unit AHC income (assumption 1)	–16.1%	–23.4%	–25.7%	–18.4%
Median benefit unit AHC income (assumption 2)	–16.1%	–18.5%	–25.7%	–17.2%

Note: 'Parents' here include biological parents, step-parents, foster parents and parents-in-law. 'Assumption 1' is that each benefit unit's share of the household's housing costs is equal to its share of the total number of adults in the household. 'Assumption 2' is the same except that adults living with parents are assumed to face no housing costs.
Source: Authors' calculations using Family Resources Survey, various years.

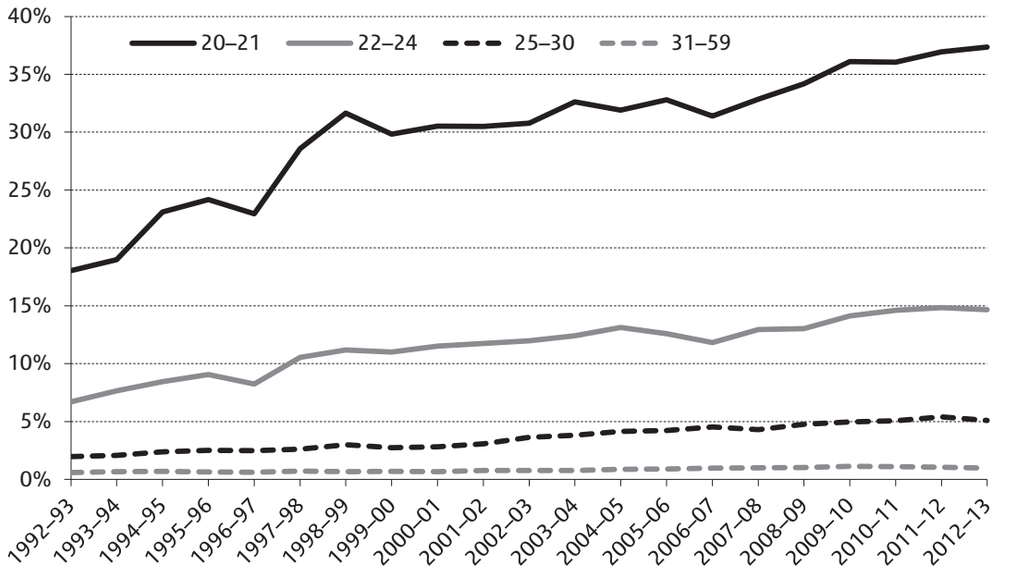
Unlike BHC incomes, housing costs are recorded only at the household level in the HBAI data. When looking at AHC incomes within households, we therefore have to make an assumption about which individuals really face those costs. We consider two illustrative alternatives. 'Assumption 1' is that a household's housing costs are split equally between all adults. 'Assumption 2' is the same except that, in cases where an adult lives with parents, that adult (and any cohabiting partner) is assumed to face no housing costs. Table C.2 shows results under both assumptions.

The key conclusions highlighted in Section 5.2 also apply on an AHC basis. Under either assumption about the within-household allocation of housing costs, those who live with parents have the highest median household income of the three groups, and yet a lower median benefit unit income than their age group as a whole. And living with parents has acted to substantially moderate the fall in household income for those concerned. Median household income among the group fell by about 11% over the period, whereas their median benefit unit income fell by about 23% and 19% under the two assumptions about housing costs.

Section 5.3 documented recent changes in the economic activity of young adults and showed how these relate to longer-term trends in employment rates by age. Figures C.1–C.3 show longer trends in education participation, unemployment and inactivity, by age. As in Section 5.3, note that we define these categories in a mutually exclusive way,

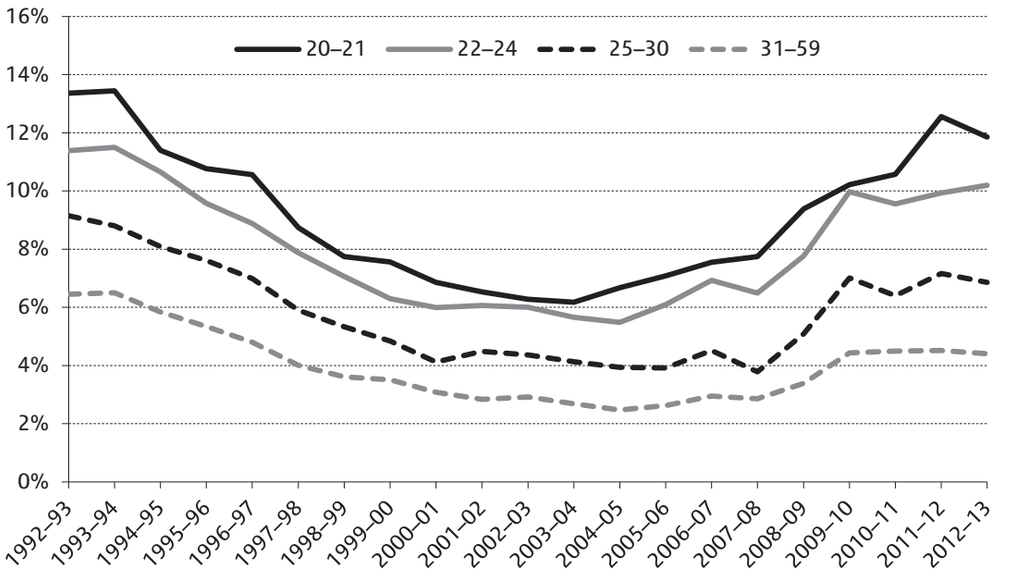
so that the unemployed and inactive groups do not include people in full-time education.

Figure C.1. Percentage of population in full-time education, by age



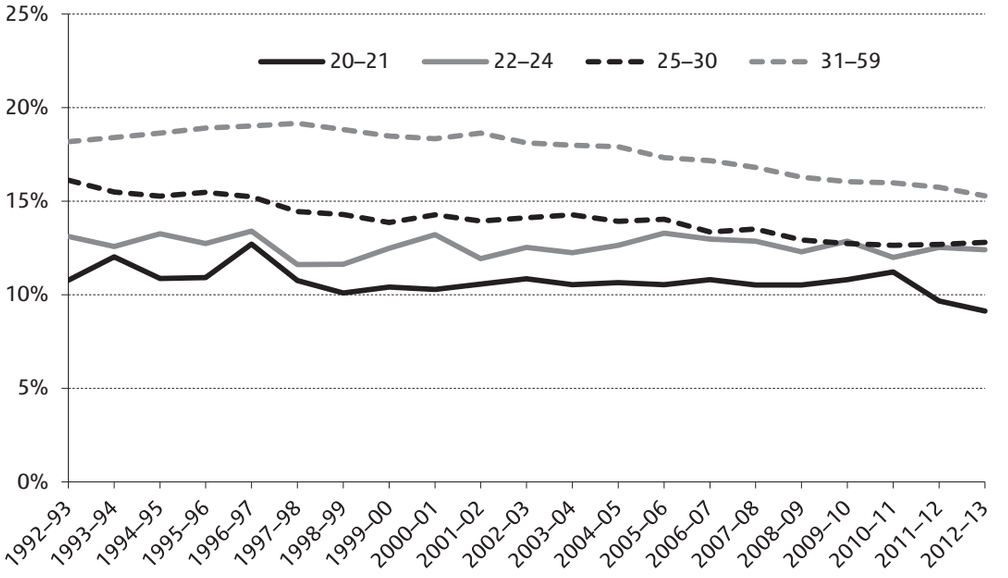
Source: Authors' calculations using the Labour Force Survey, various years.

Figure C.2. Percentage of population unemployed, by age



Note: 'Unemployed' excludes those in full-time education.
Source: Authors' calculations using the Labour Force Survey, various years.

Figure C.3. Percentage of population not economically active or in full-time education, by age



Source: Authors' calculations using the Labour Force Survey, various years.

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