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**Research Report**

## Living standards, poverty and inequality in the UK: 2019

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# Living standards, poverty and inequality in the UK: 2019

Pascale Bourquin  
Jonathan Cribb  
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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 ES/M010147/1) is also very gratefully acknowledged.

Data from the Family Resources Survey were made available by the Department for Work and Pensions, which bears no responsibility for the interpretation of the data in this report. The Households Below Average Income data prior to 1994–95 were constructed from the Family Expenditure Survey. These data are available from the UK Data Service.

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# 1. Introduction

This report examines how living standards – most commonly measured by households' incomes – have changed for different groups in the UK, and the consequences that these changes have for income inequality and for measures of deprivation and poverty. In this latest report, we focus in particular on those people who are poorest in society, with two of our three main chapters focusing on poverty.

The analysis in this report is chiefly based on data from two UK household surveys. The first is the Family Resources Survey (FRS), a survey of around 20,000 households a year, which contains detailed information on different sources of household incomes. We use household income variables derived from the FRS by the UK government's Department for Work and Pensions (DWP). These measures of incomes underlie the DWP's annual statistics on the distribution of income, known as 'Households Below Average Income' (HBAI). The FRS/HBAI data are available for the years from 1994–95 to 2017–18. They are supplemented by HBAI data derived from the Family Expenditure Survey (FES) for the years up to and including 1993–94. We also use data from the FES, and its later equivalents the Expenditure and Food Survey (EFS) and the Living Costs and Food Survey (LCF), to look at measures of households' expenditure to help us to measure and understand the material living standards of poorer households.

The main outcomes of interest in this report are measures of household income. We use the measure of income that is used in the HBAI statistics. Further details regarding the methodology of HBAI can be found in Appendix A, but a few key points are worth summarising here:

- Income is measured at the household level, i.e. as the total income of all individuals living in the same household. A household for these purposes is not the same as a family, which is defined simply as a single adult or couple and any dependent children they have. For instance, young adults living together (other than as a couple) would be classified as in the same household but not in the same family.
- Income is rescaled ('equivalised') to take into account the fact that households of different sizes and compositions have different needs.
- Income is measured after deducting income tax, employee and self-employed National Insurance contributions, and council tax, and it includes income from state benefits and tax credits.
- Income is measured both before housing costs have been deducted (BHC) and after they have been deducted (AHC).
- All cash figures are presented in 2017–18 prices and all income growth rates are given after accounting for inflation. We adjust for inflation using measures of inflation based on the Consumer Prices Index, which are the same measures as are used by DWP in the government's official HBAI statistics.

Because the data on household incomes are produced and released with some lag, we complement the results using another data set, the Labour Force Survey (LFS), for which

the latest available data cover 2018–19. Although these data do not measure household income, they provide high-quality information on the UK labour market, trends in which are key in determining living standards. This data set allows us to present results that are more up to date than those using household income data alone.

Since all the analysis is based on a sample from the population, all estimated statistics are subject to sampling error. It is therefore important to gauge whether changes are large enough that we can be confident they reflect real changes in the population as a whole, rather than random variation in the sample from one year to another. We frequently test whether estimated changes are ‘statistically significant’. In our analysis, being ‘statistically significant’ implies that an estimate is statistically significantly different from zero at the standard 5% significance level.

The rest of this report proceeds as follows. Chapter 2 contains our analysis of changes in average incomes in the UK, and how incomes have changed for richer and poorer people, and the knock-on consequences for income inequality. We also examine how household incomes have changed for people of different ages in recent years. Chapter 3 analyses changes in poverty, and the living standards of poorer households in general. We examine how ‘material deprivation’ (the inability to afford important material goods and services) has changed for families with children and for pensioners. Finally in this chapter, we examine the increase in relative pensioner poverty that has occurred in recent years. Chapter 4 analyses measures of – and trends in – severe poverty, which affects people with incomes significantly below the headline poverty lines. This is challenging because household surveys struggle to measure those with the very lowest (and the very highest) incomes in society, so we make use of a range of data sources to do so.

Finally, accompanying the release of this report, the same authors have written a stand-alone working paper (Bourquin et al., 2019), which examines the gradual, but important, rise in in-work poverty (the poverty rate for working-age families living in a working household) in the UK over the last 25 years. In it, we look at the role that changes in the labour market, tax and benefit system, and housing costs have played in this development. It forms part of the research undertaken as part of this report.

## 2. Living standards and income inequality

### Key findings

- **Median (middle) household income stalled completely in 2017–18 (the latest data).** This was only the fourth year in the last 30 years in which household incomes have not grown. It leaves median income only 5.6% higher than 10 years earlier in 2007–08, before the Great Recession. Prior to this year, however, the recovery had seen reasonable income growth – median incomes grew at a rate of 1.6% a year from their low point in 2011–12 until 2016–17, which is higher than the pre-recession rate of 1.2% per year seen from 2002–03 to 2007–08.
- **The key driver for stalling income overall has been employee earnings growth being lower than inflation in 2017–18.** Real median employee earnings fell by 0.3% in 2017–18. Although nominal (cash-terms) earnings growth was similar to the previous year, inflation rose from 0.9% to 2.7% as a result of the lower sterling exchange rate following the EU referendum.
- **Reductions in the reported amounts of working-age benefits pushed down incomes of poorer households in 2017–18.** This depressed the net incomes of poorer families, while incomes for middle- and high-income families stagnated or slightly grew. The bottom fifth of the income distribution on average saw its income decline by 1.6% in 2017–18; conversely, the top fifth saw it grow by 0.8% and the middle fifth on average saw no movement in income over this period.
- **However, overall income inequality as measured by the Gini coefficient barely changed in 2017–18.** The UK Gini coefficient was 0.34 in 2017–18, the same as it was in the late 1980s. Nonetheless, income inequality is still substantially higher than it was in the 1970s.
- **Since the recovery from the Great Recession began in 2011–12, the incomes of different age groups have performed similarly.** The age group that has seen the strongest growth in incomes since 2011–12 is 22- to 30-year-olds, who did worst during the 2007–08 to 2011–12 period. Pensioners, who did much better than working-age families in the recession, have seen much more similar income growth to working-age households since 2012–13; if anything, their incomes have fallen back in comparison. However, as a whole since 2007–08, pensioner incomes have on average grown substantially more than non-pensioner incomes.

This chapter analyses trends in average incomes and income inequality between UK individuals. We also explore the determinants of trends in income growth and how they have evolved over time, on average and for different groups. We use the Households Below Average Income (HBAI) data, the latest version of which covers the financial year 2017–18, to document these trends in recent years. For the analysis of the labour market, we supplement our HBAI analysis with the Labour Force Survey (LFS).

To understand the pattern of income growth in recent years, we analyse how different sources of income, including earnings from employment and state benefits and tax credits, have contributed to changes in total income. We focus on changes in living standards and inequality that have (or have not) occurred over the last year (since 2016–17) as well as changes since the Great Recession (i.e. since 2007–08) and the recovery period (since 2011–12).

We conduct our analysis at the individual level, meaning that we look at inequality and differences in living standards between individuals, not between households. However, the measure of income that we focus on for each individual is household income. That is, we add up the income of all individuals within a household. There are several more points worth noting about the measures of household income we focus on throughout this chapter; a longer description of the measurement of household income can be found in Appendix A.

Unless otherwise stated, all figures in this chapter relate to ‘net’ income, which measures total household income after income tax, National Insurance contributions and council tax have been paid and after state benefits and tax credits have been received. Household incomes can be measured either before or after housing costs have been deducted (referred to respectively as ‘BHC’ and ‘AHC’). Unless otherwise stated, we report incomes in this chapter on a BHC basis.

When using income as an indicator of household living standards, it is important to account for differences in household size and composition. We therefore report measures of ‘equivalised’ incomes (which are adjusted for household size and structure) and express all incomes as the equivalent amount for a childless couple. Throughout this report, many statistics will be presented for the whole of the UK; however, for those series looking at longer-term trends, we present statistics for Great Britain (GB) only, as Northern Ireland has only been included in the HBAI data since 2002–03.

When comparing how living standards and inequality change over time, it is important to account for inflation – because rising prices reduce the purchasing power of any given level of cash income. Following the Department for Work and Pensions (DWP), we therefore express all incomes in 2017–18 prices after adjusting for inflation using a measure based on the Consumer Prices Index (CPI) that includes mortgage interest payments. All income growth rates are reported after accounting for this measure of inflation.<sup>1</sup>

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<sup>1</sup> Further information on the adjustments that DWP makes for inflation can be found in Department for Work and Pensions (2019). A series of the deflators that we use in this analysis can be found in IFS’s Living Standards, Inequality and Poverty Spreadsheet, <https://www.ifs.org.uk/uploads/publications/data/Inequality%2C%20poverty%20and%20living%20standards%20data.xlsx>.

It should also be pointed out that when analysing trends in inequality in this chapter, we only look at inequality in household incomes between those on higher and lower household incomes (rather than, say, inequality in wages or wealth, or inequalities between particular groups, such as genders or ethnicities). Furthermore, we focus on measures of ‘relative’ inequality. That is, rather than looking at absolute differences, we look at how much larger in percentage terms the incomes of high-income individuals are than those of low-income individuals. In other words, if we increased everyone’s incomes by 10%, inequality would be unchanged. However, if instead we gave everyone £10 in cash, inequality would fall, as an additional £10 in income would result in a larger proportional increase in income for poorer individuals.

For the most part of our inequality trends analysis, we examine how incomes have changed at each point of the income distribution. This allows us to describe how inequality has changed in a detailed and yet transparent manner. However, when analysing longer-term trends, we use two summary measures of inequality: the Gini coefficient, which captures inequality across the whole distribution, and the top 1%’s share, which focuses on income inequality between the very top and the rest. A limitation of our analysis, which results from the choice of data set, is that we are not able to explore income inequality within the much discussed top 1%, as the HBAI data do not include detailed information for this group.

This chapter proceeds as follows. Section 2.1 summarises average incomes in the UK, how incomes vary across the income distribution and how they have evolved over the recent past. Section 2.2 explores the determinants of household incomes on average and across the distribution and their trends over recent years. Section 2.3 investigates the differences in household incomes by age as well as the recovery in living standards for individuals in pensioner and non-pensioner households. Section 2.4 discusses prospects for living standards and inequality and Section 2.5 concludes.

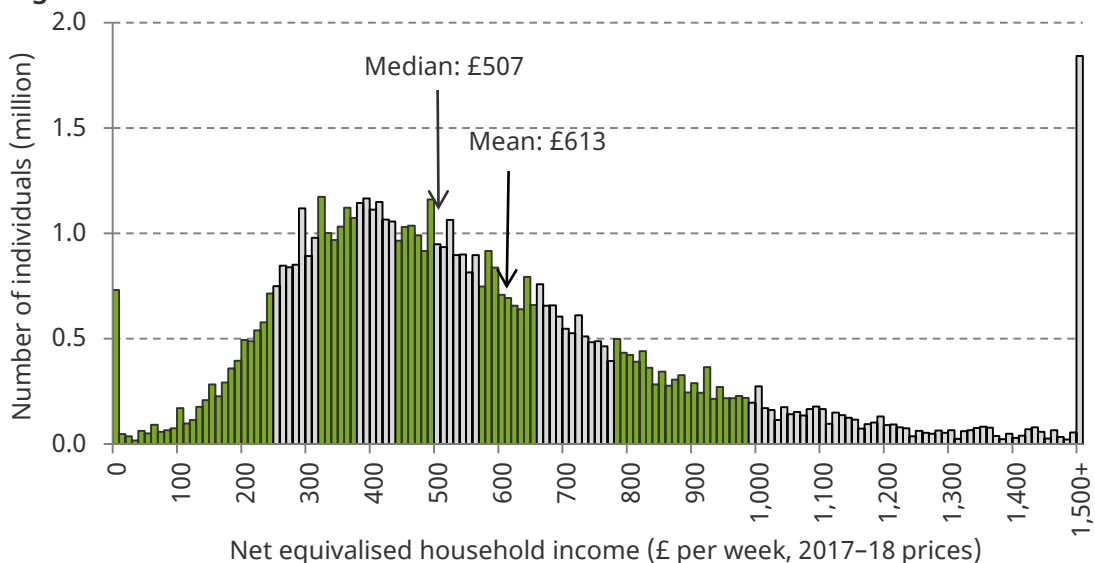
## 2.1 Changes in household incomes in the UK

Figure 2.1 shows the UK income distribution in 2017–18. It presents the number of people in the UK living in households with different levels of weekly net equivalised household income, grouped into £10 bands.<sup>2</sup> The bar for the £240–250 band (the last band belonging to the first income decile), for example, contains around 715,000 people. The rightmost bar in the figure (which groups multiple bands together) contains around 1.8 million people living in households with a weekly net income of at least £1,500.

The bars are coloured alternately green and grey to indicate income deciles. Incomes are notably concentrated at the middle of the distribution, shown by the fact that deciles are narrower around the median income, which was £507 in 2017–18. Mean income was £613 per week in 2017–18 but, because this is skewed by the presence of very high incomes, around two-thirds of the population (64%) have an income less than the mean.

<sup>2</sup> Households with negative net income – for example, due to self-employment losses – have their net income set to £0 in the HBAI.

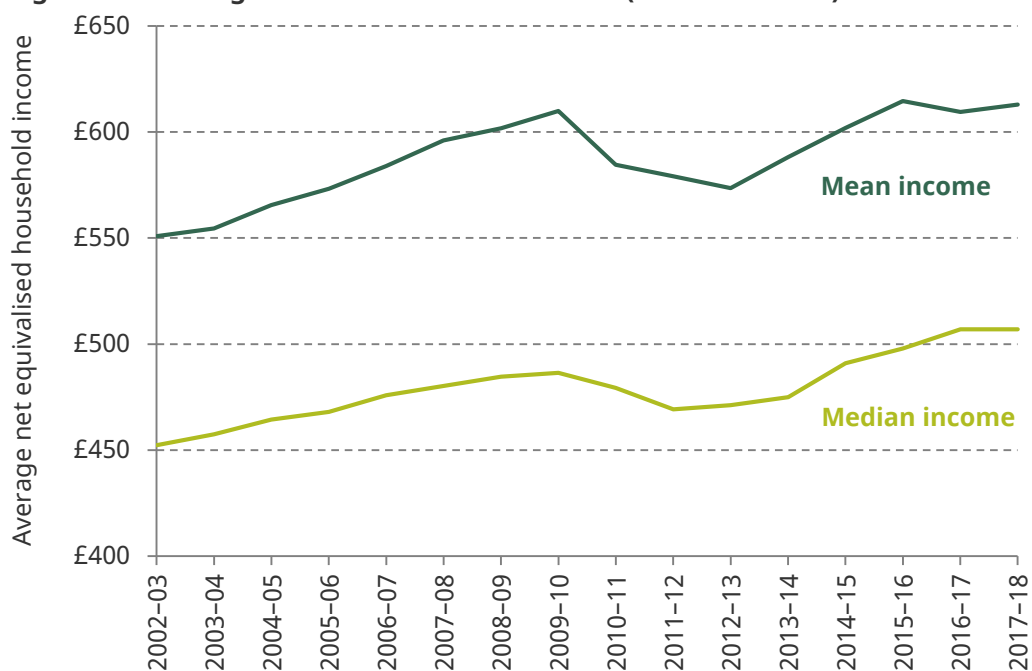
**Figure 2.1. The UK income distribution in 2017-18**



Note: Incomes have been measured before housing costs have been deducted. All incomes have been equivalised using the modified OECD equivalence scale and are expressed in terms of equivalent amounts for a childless couple. The rightmost bar represents incomes of at least £1,500 per week. Bars are coloured alternately green and grey to indicate income deciles.

Source: Authors' calculations using the Family Resources Survey, 2017-18.

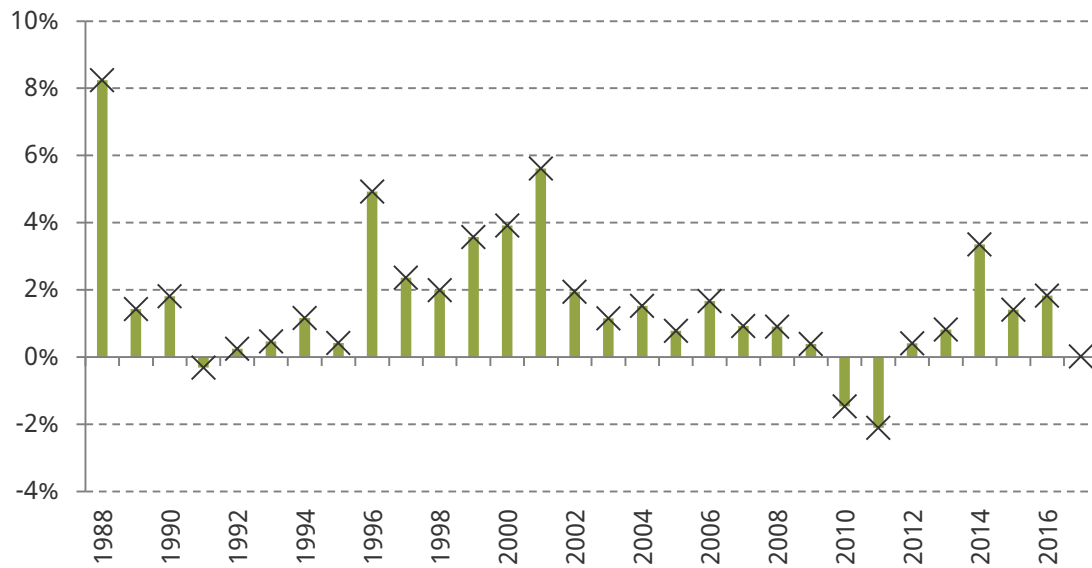
**Figure 2.2. Average real UK household income (measured BHC)**



Note: Incomes have been measured before housing costs have been deducted and are expressed in 2017-18 prices. All incomes 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 the Family Resources Survey, 2002-03 to 2017-18.

**Figure 2.3. Growth in median household income (before housing costs) over the last 30 years**



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted and are expressed in 2017-18 prices. All incomes have been equivalised using the modified OECD equivalence scale. Years refer to calendar years up to and including 1992 and to financial years from 1993-94 onwards. Data are representative of households in Great Britain between 1990 and 2001-02 and of households in Great Britain and Northern Ireland from 2002-03 onwards.

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

Figure 2.2 shows how mean and median income in the UK have evolved (after adjusting for inflation) since 2002-03.<sup>3</sup> Median and mean income have moved in a similar fashion over the past decade or so. Both were on a steady upwards path before the 2007-08 crisis, though they did rise at a rate lower than the historical average since the 1960s. In the immediate aftermath of the 2007-08 crisis, incomes continued to grow but they began falling sharply from 2009-10, reaching a low in 2011-12 (2012-13 for mean income) before beginning to recover.

Median income (similar to mean income) has recovered and grown by 8.1% since the post-recession low (2011-12). However, this is just 5.6% higher than it had been a decade earlier before the recession, and the recovery in median income stalled completely in 2017-18. It is worth noting, though, that median incomes grew at a rate of 1.6% a year from their low point in 2011-12 until 2016-17. This is actually slightly faster than the pre-recession rate of 1.2% a year growth seen between 2002-03 and 2007-08.

Mean household income has grown by 5.8% since 2011-12 and is now 2.8% above its pre-crisis (2007-08) level. However, from 2016-17 to 2017-18, it grew by just 0.6%.<sup>4</sup>

<sup>3</sup> Figure 2.2 starts at 2002-03 as this is the first year for which we have data for the whole of the UK.

<sup>4</sup> From 2015-16 to 2016-17, mean income fell slightly. As we noted in last year's report (Cribb, Norris Keiller and Waters, 2018), due to increases in dividend taxation in April 2016, this may have been driven by individuals shifting their dividend income forward from 2016-17 to 2015-16; thus one should be wary about drawing any conclusions regarding changes in mean income over those years. If indeed mean income in 2016-17 was low

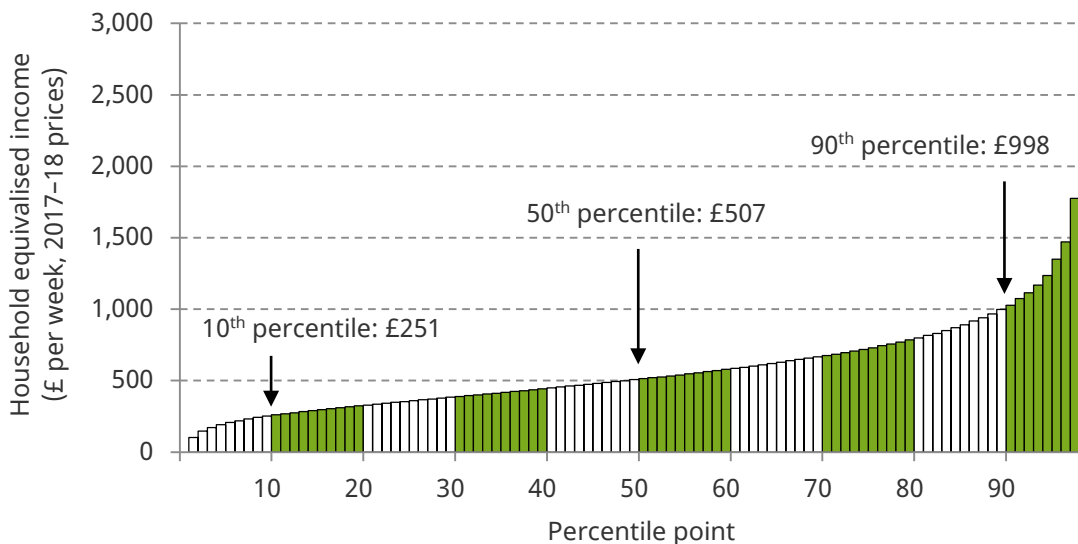
Figure 2.3 presents growth in median household income over the last 30 years. It shows that not only was 2017–18 the first year since 2011–12 in which median income did not grow, but it was only the fourth year (and second non-recession year) in the last 30 years where median income did not grow. The stalling of median income growth is not surprising given what was happening at the time: as we show in Section 2.2, the largest source of households’ incomes (on average) – employee earnings – fell in real terms in 2017–18.

### Trends in income inequality

To look at inequality in household incomes, Figure 2.4 presents weekly net household incomes (again in cash equivalents for a childless couple) at each percentile point. To do this, we first rank people by their weekly net household incomes and divide them into 100 equal-sized groups. The figure shows that median net income at the 50<sup>th</sup> percentile (£507) is around twice as high as that at the 10<sup>th</sup> percentile (£251). Income at the 90<sup>th</sup> percentile (£998) – the amount required to have an income higher than 90% of the population – is around four times higher than that at the 10<sup>th</sup> percentile.

Appendix Figure B.1 shows that the distribution of income differs slightly for individuals of different household types. The distributions for individuals in pensioner households and for individuals in working-age households with children are fairly similar; however, pensioners are less likely to have low incomes. Conversely, individuals in working-age households without children have higher incomes on average across virtually the full income distribution.

**Figure 2.4. Weekly net equivalised household income at each percentile point in 2017–18**



Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted. Cash figures are equivalents for a childless couple.

Source: Authors’ calculations using the Family Resources Survey, 2017–18.

due to income shifting, then we are in fact underestimating the extent to which mean income growth has slowed over the last year.



**Table 2.1. Annualised net household income at different percentile points of the 2017–18 distribution**

Percentile	Single individual	Couple with no children	Couple with two children under 14
10 <sup>th</sup>	£8,700	£13,100	£18,300
50 <sup>th</sup>	£17,600	£26,400	£37,000
90 <sup>th</sup>	£34,700	£52,000	£72,800
99 <sup>th</sup>	£86,700	£130,100	£182,100

Note: Figures rounded to the nearest £100.

Source: Authors' calculations using the Family Resources Survey, 2017–18.

In Figure 2.4, different deciles are marked by alternate white and green colouring. This demonstrates that not only are there large differences in income levels between the low- and high-income households, but there is also substantial inequality amongst the highest income decile. Average household income at the 99<sup>th</sup> percentile (top 1%) is 2.5 times higher than that at the 90<sup>th</sup> percentile. Moreover, the gap between the top 1% and the rest is actually understated by the HBAI (Burkhauser et al., 2018). Additionally, there is a high degree of inequality within the top 1% of the distribution, which is not shown by Figure 2.4 (nor captured by the HBAI).

As explained earlier, incomes in this report have been equivalised – i.e. they take into account the size and composition of households and we express them in cash equivalents for childless couples. Table 2.1 presents the annualised unequivalised net household incomes required for individuals in a specific type of household to be at different points of the distribution. Remember that these are post-tax-and-benefit incomes, not individuals' pre-tax annual salaries. Clearly, larger households need more income to reach a specific point in the distribution. For example, a couple with two children under 14 would require a combined net income of £37,000 to belong to the median after adjusting for household composition, while a couple without children would require £26,400 and a single individual £17,600.

In order to have an income at the 99<sup>th</sup> percentile, single individuals would require £86,700, whereas a childless couple would require £130,100 and a couple with two children under 14 would require £182,100. These numbers, even though they are net of tax, may seem low for the top 1%. However, they are what is required to get into the bottom of the top 1%. There is extremely high dispersion in incomes within the top 1%. The public debate often associates the top 1% with the so-called 'super-rich', when in fact they only make up a small fraction of the top 1%. Using tax data, Brewer (2019) shows that those at the very top of the income distribution (looking at the top 0.1% or top 0.01%) are disproportionately aged 45–54, based in London and work in financial services, insurance or real estate.

To look at how inequality in household incomes has changed, Figure 2.5 presents real income growth from 2016–17 to 2017–18 (the latest year of data) by percentile point, as well as the growth in incomes from 2011–12 to 2016–17. It shows that income growth was close to zero across most of the income distribution in 2017–18, though incomes did fall slightly for individuals at the bottom and rise somewhat for richer individuals. While the

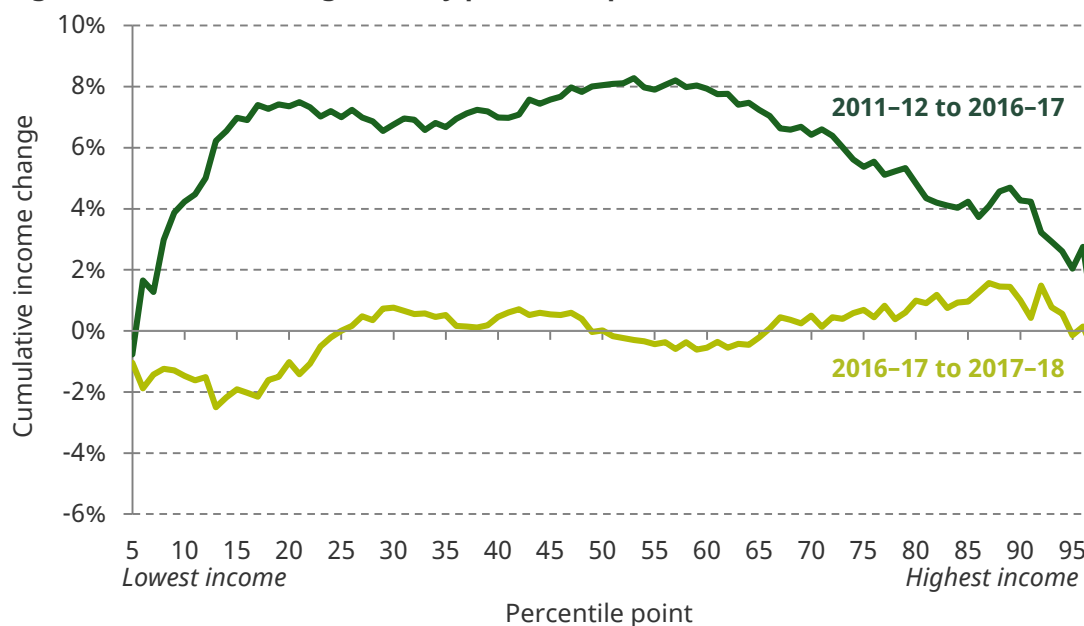
bottom fifth of the income distribution on average saw its income decline by 1.6% in 2017–18, the top fifth saw it grow by 0.8% and the middle fifth on average saw no movement in income over this period.<sup>5</sup> However, these changes are quite small and are not statistically significantly different from zero.

The pattern seen in the latest year of data differs from that seen over the preceding recovery period (2011–12 to 2016–17), when income growth was stronger for individuals living in middle-income households than for individuals in high- or low-income households. The change in pattern is in part due to cuts in working-age benefit and tax credit entitlements that occurred in 2017–18, made more severe by the rise in inflation, as will be explored further in the next section.

We now discuss what implications the patterns we have seen have on summary inequality measures. Overall, the patterns observed imply not much change in overall inequality as movements across the distribution were relatively small and mostly insignificant.

The Gini coefficient is a broad measure of income inequality that ranges from 0 to 1. The Gini would be 0 if everyone had the same income and 1 if a single person received all of the country’s income. Figure 2.6 shows that, on this measure, indeed there was little change in overall income inequality in 2017–18. The Gini remained at 0.34.

**Figure 2.5. Real income growth by percentile point (UK)**

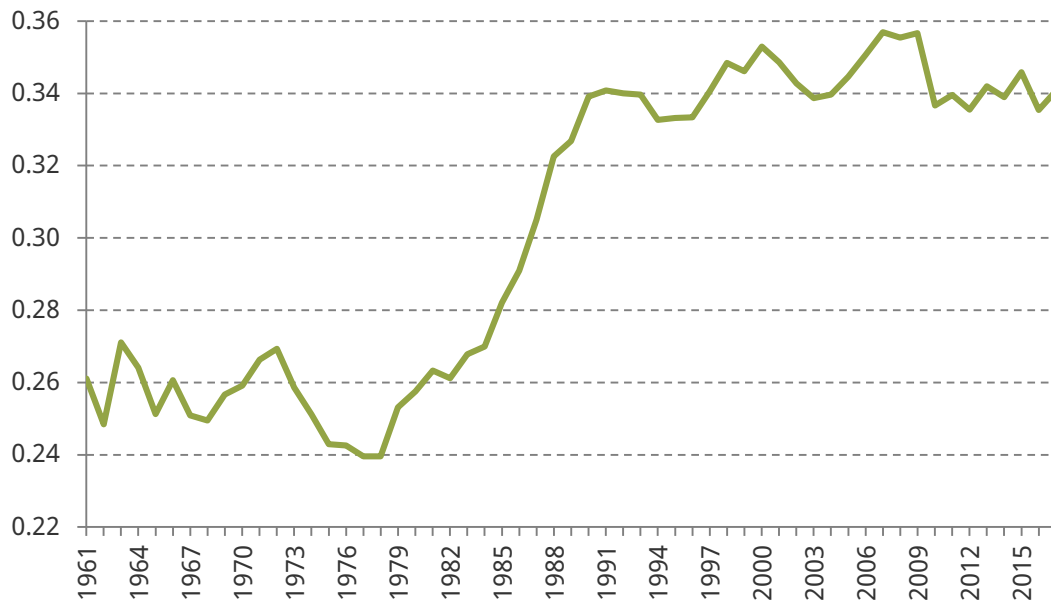


Note: Incomes have been measured net of taxes and benefits but before housing costs have been deducted and are expressed in 2017–18 prices. All incomes have been equivalised using the modified OECD equivalence scale. Percentiles 1–4 and 98–99 are excluded because of large statistical uncertainty.

Source: Department for Work and Pensions (2019) and authors’ calculations using the Family Resources Survey, various years.

<sup>5</sup> We do not include the bottom four or the top two percentiles in these calculations due to large statistical uncertainty.

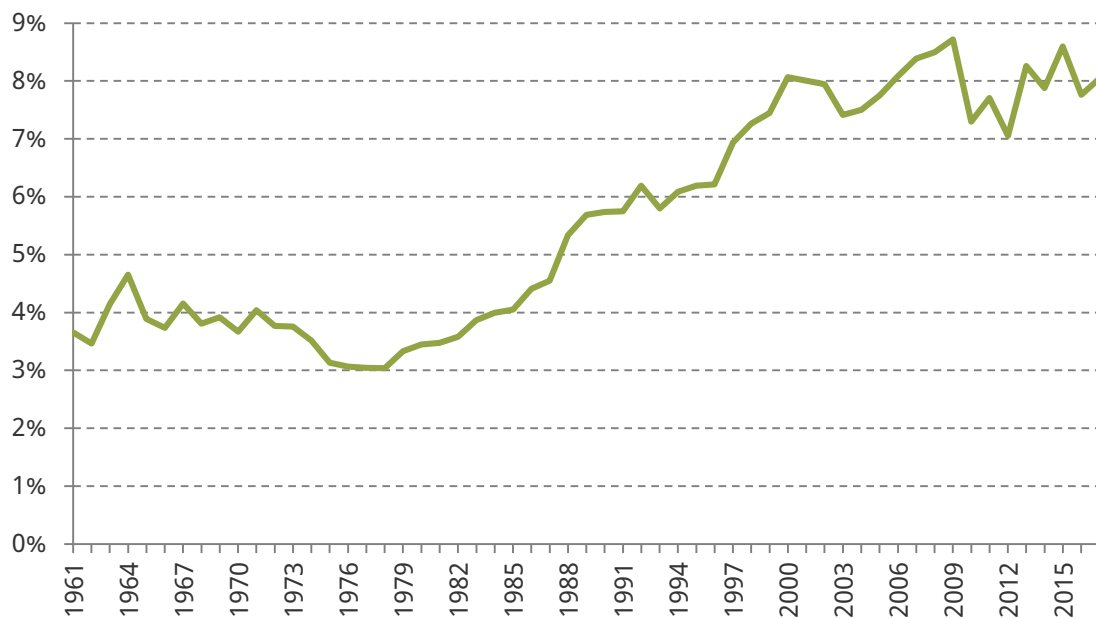
**Figure 2.6. The Gini coefficient of income inequality**



Note: Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards. Figures relate to UK households from 2002–03 onwards and to GB households for earlier years.

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

**Figure 2.7. The top 1%'s share of income (GB)**



Note: Years refer to calendar years up to and including 1992 and to financial years from 1993–94 onwards.

Source: Authors' calculations using the Family Expenditure Survey and Family Resources Survey and a 'top incomes' adjustment using administrative tax data (see Appendix A), various years.

In terms of long-run trends, Figure 2.6 shows that since the 1990s, the Gini coefficient has remained quite constant, but it is much higher than it was before the sharp increase of around 8 percentage points (ppts) that occurred during the 1980s. Belfield et al. (2017) have shown that this lack of change in overall income inequality since the early 1990s reflects two countervailing trends: a fall in income inequality across most of the distribution (partly due to income growth for the middle) and a rise in income inequality at the very top. The latter trend can be seen in Figure 2.7.<sup>6</sup>

The Gini coefficient tries to account for inequalities across the whole distribution. Figure 2.7 presents the top 1%'s share of income – a measure that focuses on income inequality between the very top and the rest. In 2017–18, this was at 8%, nearly unchanged since the previous year. Year-to-year trends of this statistic have recently often been affected by changes in the timing of when high-income people take their income due to changes in tax rates that mostly affect those with very high income. For example, the top rate of tax increased to 50% in 2010–11 and then was reduced to 45% in 2013–14. Additionally, in 2016–17, dividend taxation increased. Therefore, it is very difficult to draw any firm conclusions about underlying trends in top incomes from recent changes in the top 1%'s income share.

The story is much clearer over a longer period though. Figure 2.7 shows that between 1961 and around 1990, the top 1%'s share moved in a similar fashion to the Gini – i.e. not much movement until 1980, followed by a sharp increase. However, in contrast to the Gini, which has changed little since 1990, the top 1%'s share of income continued to increase in almost every year between 1990 and 2009–10. It has fluctuated between 7 and 9% ever since.

## 2.2 Determinants of income growth in recent years

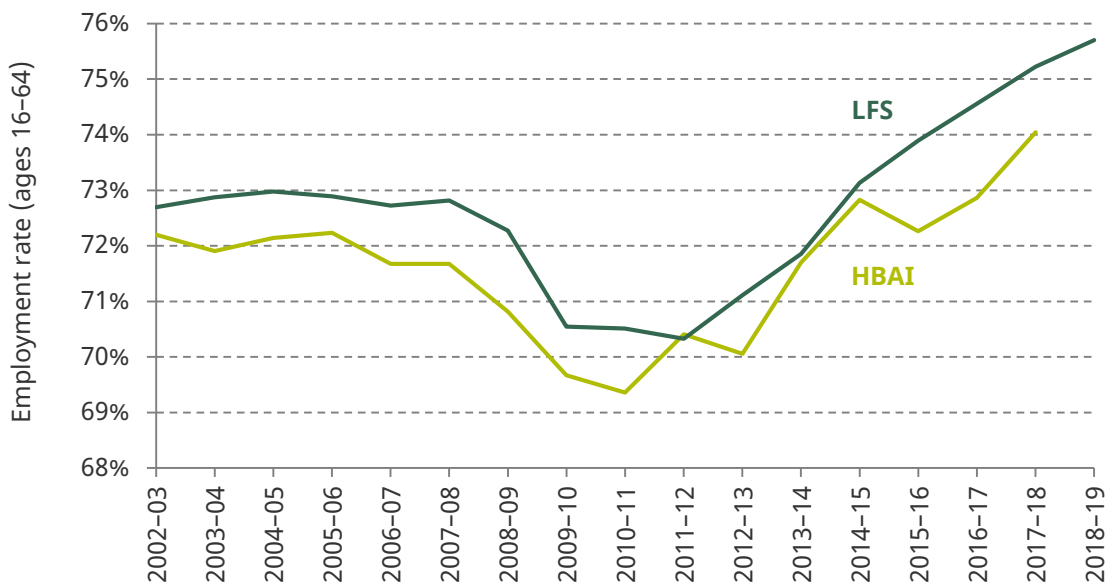
This section explores the determinants of income growth on average as well as for different parts of the income distribution.

An important starting point is to look at what has happened to gross earnings from employment, as these on average made up 85% of net household income in 2017–18 (net earnings made up 61% of net income) and so were the largest source of income for households on average.<sup>7</sup> We therefore first show how employment and earnings of employees have changed in recent years and then examine how these trends, together with changes in other income sources, have driven income growth and inequality on average and across the distribution.

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<sup>6</sup> Note that Burkhauser et al. (2018) have shown that the HBAI, even though it does adjust for the under-reporting and under-representation of top incomes, actually understates the income inequality at the very top.

<sup>7</sup> These numbers will differ substantially across individuals belonging to different household types. For pensioners, for example, employee earnings are much less important. On average, gross earnings made up 20% of net household income in 2017–18 for individuals in pensioner households (net earnings made up 13% of net income).

**Figure 2.8. Employment rate (ages 16–64) in HBAI and LFS (UK)**

Note: Due to data availability, the employment rate recorded by the LFS for 2018–19 does not include the last financial quarter of 2018–19.

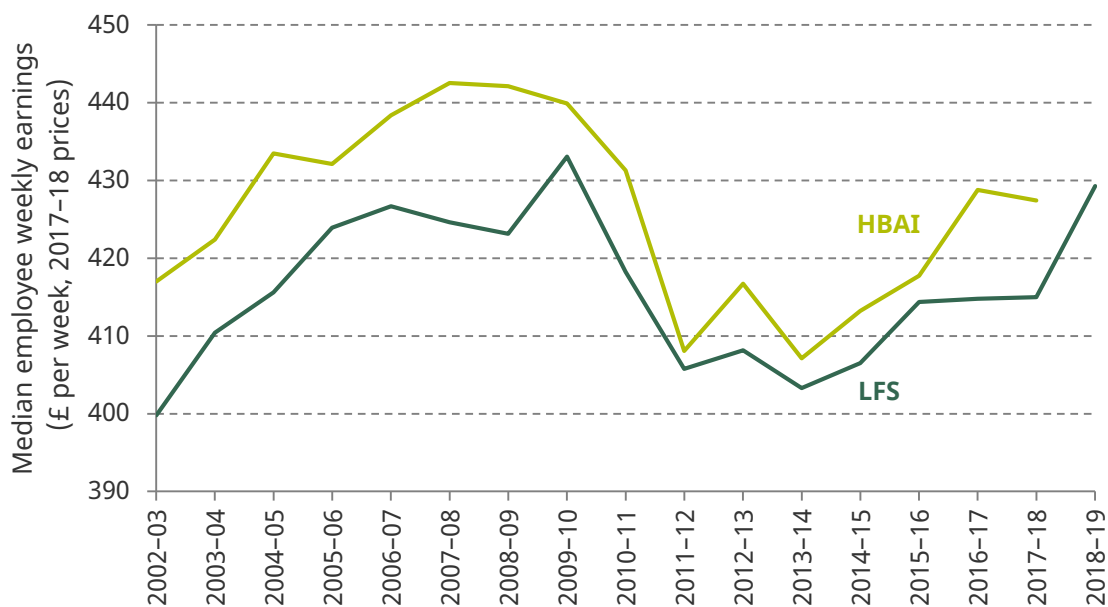
Source: Authors' calculations using the Family Resources Survey and Labour Force Survey, 2002–03 to 2018–19.

Figure 2.8 presents the employment rate from 2002–03 to 2017–18. We compare results using two different data sets: the HBAI data and the Labour Force Survey (LFS) – the data set used to create the government's headline labour market statistics. The HBAI recorded an employment rate of 74.0% for 2017–18, while the LFS recorded one of 75.2%. Both series show similar patterns in the employment rate over time, with an increase of 1ppt since 2016–17 and 4–5ppts since 2011–12, leaving the employment rate 2ppts above pre-recession levels. The LFS suggests a further slight increase in the employment rate in 2018–19, to 75.7%. This is the highest rate since records began in 1971.

The growth in the overall employment rate from 2011–12 to 2017–18 was highest for the poorest fifth of the population, at 5ppts; it was 2ppts for the middle fifth and 1ppt for the richest fifth (in terms of household income). However, over the last year, the increase in the employment rate slightly favoured those with higher incomes. This differs from the trends seen in recent years, when changes in the employment rate were much higher for low-income households.

A large part of the growth in the overall employment rate since 2011–12 has been driven by those aged above 50: while, for example, the employment rate for those aged 21 and under fell by 1ppt over this period (because people are staying in education for longer), it increased by 6ppts for those aged 50–64 over the same period.<sup>8</sup> In terms of their impact on household living standards, the increase in the employment rate over the last year has been somewhat offset by lack of growth in real employee earnings.

<sup>8</sup> From 2011–12 to 2017–18, the employment rates for those aged 22–30 and 31–49 both increased by 3ppts. For those aged 65 and above, it increased by 2ppts. Since 2002–03, the employment rate has fallen by 17ppts for those aged 21 and below and grown by 1ppt for ages 22–30, 3ppts for 31–49, 9ppts for 50–64 and 4ppts for 64+.

**Figure 2.9. Real median weekly earnings of employees in HBAI and LFS (UK)**

Note: Due to data availability, the real median employee earnings recorded by the LFS for 2018-19 do not include the last financial quarter of 2018-19.

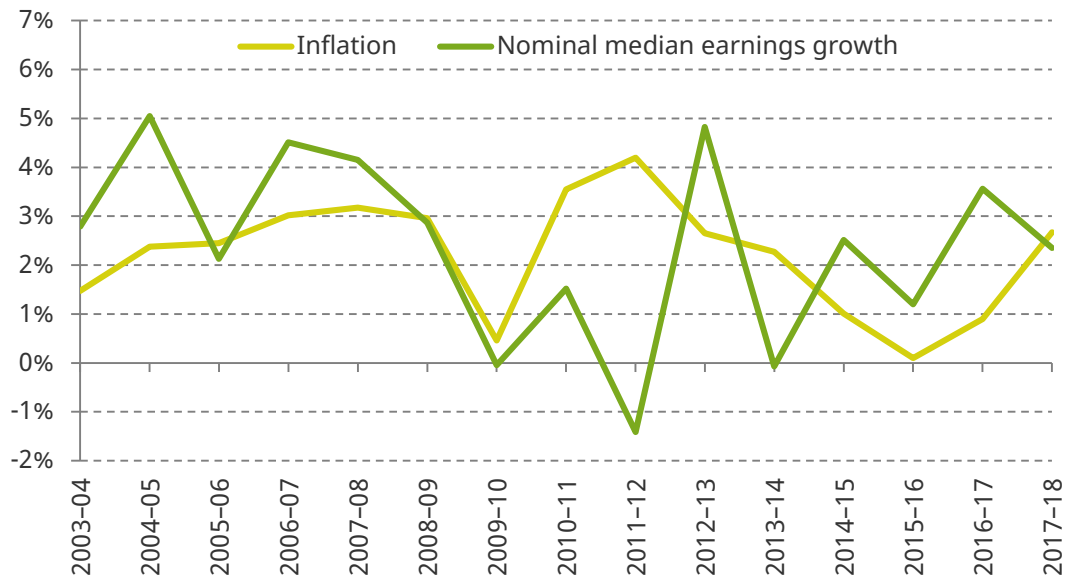
Source: Authors' calculations using the Family Resources Survey and Labour Force Survey, 2002-03 to 2018-19.

Figure 2.9 presents average (median) weekly earnings of employees (once using the HBAI and once using the LFS). The two series give similar indications of the paths of real median weekly earnings. Average employee earnings in 2017-18 were £427 (£415 according to the LFS). There is essentially no growth in median employee earnings in either the HBAI or LFS data in 2017-18 (the exact figure for the HBAI data is -0.3%).

The LFS data for 2018-19 imply that employee earnings rose in 2018-19, most likely catching up after two years of standstill which had not been fully mirrored in the HBAI data.

The lack of growth in average employee earnings in 2017-18 can partly be explained by rising inflation. In 2017-18, cash-terms weekly earnings growth was actually similar to the two preceding years (and higher than the 2011-12 to 2014-15 period). However, inflation rose from 0.9% in 2016-17 to 2.7% in 2017-18, resulting in employee earnings falling on average in real terms. This is shown by Figure 2.10, which plots nominal weekly earnings growth against the HBAI inflation measure.

The pattern of employee earnings did not differ much at different points in the individual earnings distribution in 2017-18. Since 2011-12, though, earnings growth has been strongest among low-earning individuals (partly due to the introduction of, and increase in, the National Living Wage). It is important to note here that many people who are in the bottom of the *earnings* distribution are in fact in the middle of the *income* distribution. This is partly because many lower-income households do not have anyone in work, so that growth in earnings for those in the bottom of the earnings distribution does not necessarily imply higher income for those in the bottom of the income distribution. Furthermore, net household earnings from employment make up a smaller share of net

**Figure 2.10. Nominal median earnings growth and inflation**

Note: The inflation measure is CPI plus mortgage interest payments.

Source: Authors' calculations using the Family Resources Survey, 2002-03 to 2017-18.

household income for the poorest fifth than they do for the richest and thus changes in earnings are not as indicative of trends in income growth for poorer households as they are for middle- or high-income households. So, though the trends in employment rates and average earnings are important in understanding income growth, they do not present the full story.

In order to understand these trends better, Table 2.2 presents average growth rates of all net income components that make up total net household income for three different time spans: 2016-17 to 2017-18, 2011-12 to 2017-18 and 2007-08 to 2017-18. Figures 2.11-2.13 show how these income components have contributed to overall net income growth over these different periods for all individuals on average as well as for the top, middle and bottom income quintiles. The components that we divide net household income into include employment earnings (pooling employee and self-employment earnings), benefits and tax credits (split into working-age and pensioner benefits), net income from savings, investments and private pensions, and other net income and deductions.

We exclude individuals with negative net household incomes from this analysis, as we are not able to calculate a sensible decomposition of income for this group (as the HBAI methodology sets their household incomes to zero). We also exclude individuals whose incomes have been adjusted by the Survey of Personal Incomes (SPI)<sup>9</sup> as income components have not been adjusted in a similar way. Therefore, the numbers given in the following will not exactly match those presented in previous sections.

Figure 2.11 shows the decomposition of mean net income growth for 2016-17 to 2017-18, by quintile as well as overall. The black diamonds in the figure show that, on average, total net household income grew by 0.5% for all individuals, by -1% for the bottom quintile, 0%

<sup>9</sup> See Appendix A.

for the middle and 1% for the top. As touched upon earlier, this pattern differs substantially from the one seen since the beginning of the recovery period (2011–12), where on average the middle has grown faster than the top and the bottom (shown by the black diamonds in Figure 2.12). Figure 2.11 shows that higher employment income pulled up income in 2017–18. As shown in Table 2.2, this was in part driven by a rise in self-employment income (which has ‘bounced back’ after large falls between 2007–08 and 2011–12) and also by the rise in the employment rate discussed earlier.

In contrast, falling working-age benefit incomes (down 5% in 2017–18) pushed incomes down. Total benefit receipt can vary both because of changes to the benefit system and because of changes in families’ circumstances (e.g. employment, increased earnings). However, in 2017–18, benefit incomes have in fact fallen across the distribution of gross earnings (so for those out of work as well as for low- and high-earning households).<sup>10,11</sup> Only around a quarter of the decrease in working-age benefit and tax credit income over the last year can be explained by changes in the employment rate or people at the bottom moving up the earnings ladder.

**Table 2.2. Average growth in net income sources across all individuals**

	Net employment earnings (employee earnings; self-employment earnings)	Benefits to pensioner families	Benefits and tax credits to working-age families	Net income from savings, investments and private pensions	Other net income and deductions	Total net income
2016–17 to 2017–18	2.5% (2.0%; 5.9%)	-0.2%	-5.1%	-5.1%	11.6%	0.5%
2011–12 to 2017–18	8.6% (6.3%; 28.1%)	3.6%	-14.8%	4.6%	-34.0%	6.2%
2007–08 to 2017–18	2.3% (0.7%; 14.1%)	9.9%	-6.7%	5.7%	-41.3%	3.7%

*Note and Source to Table 2.2 and Figures 2.11–2.13*

Note: The numbers relate to a subsample of households in HBAI that excludes those with negative incomes and excludes those whose incomes have been adjusted by the SPI. All incomes have been equivalised and are measured at the household level and before housing costs have been deducted. ‘Benefits to pensioner families’ are defined as benefits received by households containing at least one pensioner. This will include some benefits that can also be received by working-age people (e.g. housing benefit) and some benefits actually received by working-age individuals who live with pensioners.

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

<sup>10</sup> See Appendix Figure B.2, which shows proportional changes in mean benefit income for non-pensioners according to their total family earnings (expressed in 2017–18 prices) over the last year as well as from 2011–12 to 2016–17.

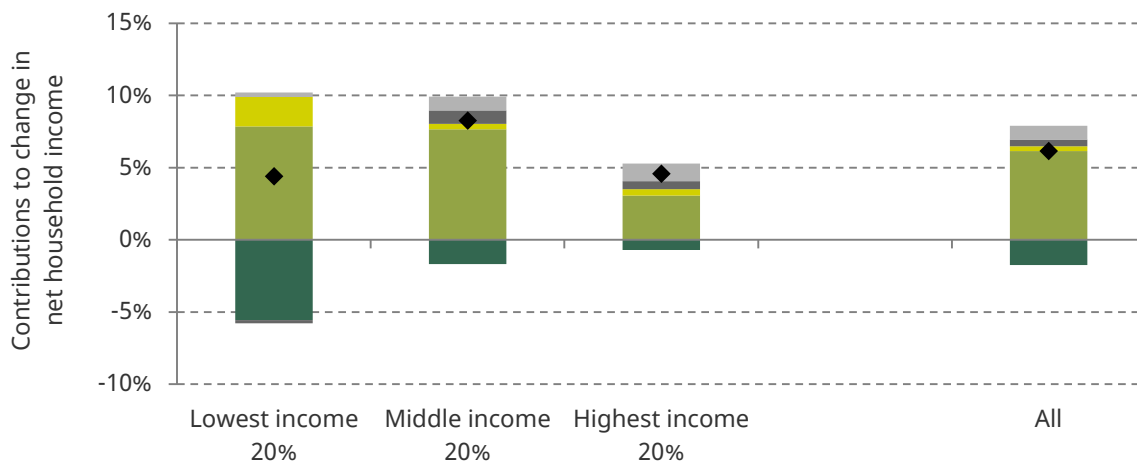
<sup>11</sup> Note that the large proportional falls in benefit receipt among higher-earning families since the start of the recovery period are likely to be partly due to the removal of child benefit and the family element of child tax credit for high-earning families, which for some would have been the only benefits they were entitled to.



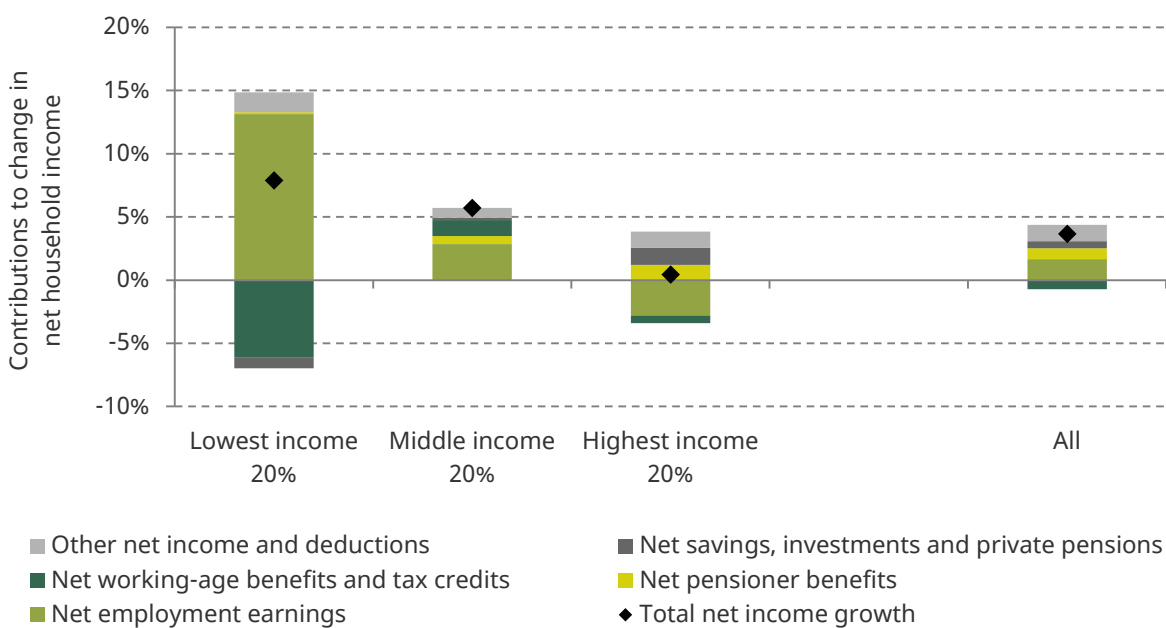
**Figure 2.11. Contributions to mean net income growth by quintile, 2016-17 to 2017-18**



**Figure 2.12. Contributions to mean net income growth by quintile, 2011-12 to 2017-18**



**Figure 2.13. Contributions to mean net income growth, by quintile 2007-08 to 2017-18**



Note and Source: See below Table 2.2.

Figure 2.11 shows that the growing employment income and the falling benefit incomes have affected people differently across the income distribution. Rising employment income has benefited higher-income households, pushing up their incomes, whereas falls in benefit incomes have pushed down the incomes of low-income households. This key difference is the main explanation for why higher-income households have done better than low-income households in 2017–18.

The patterns are different when looking over the recovery period as a whole. Figure 2.12 shows that since 2011–12, income growth has been higher for the middle of the income distribution than for the bottom or the top. As is made clear in the figure, this is driven by the fact that lower- and middle-income households have benefited more from employment income growth (particularly driven by an increasing employment rate), but that lower-income households have been hit by lower benefit incomes, which have suppressed their income growth.

Finally, the pattern varies once again when looking at the last decade, from 2007–08 (pre-crisis) to 2017–18. Figure 2.13 shows that, over this period as a whole, lower-income households have done better than higher-income households, driven (again) by changes in employment income. This pattern is different because real earnings fell significantly between 2007–08 and 2011–12, particularly for higher earners, which pushed down their incomes.

### 2.3 Trends in living standards by age

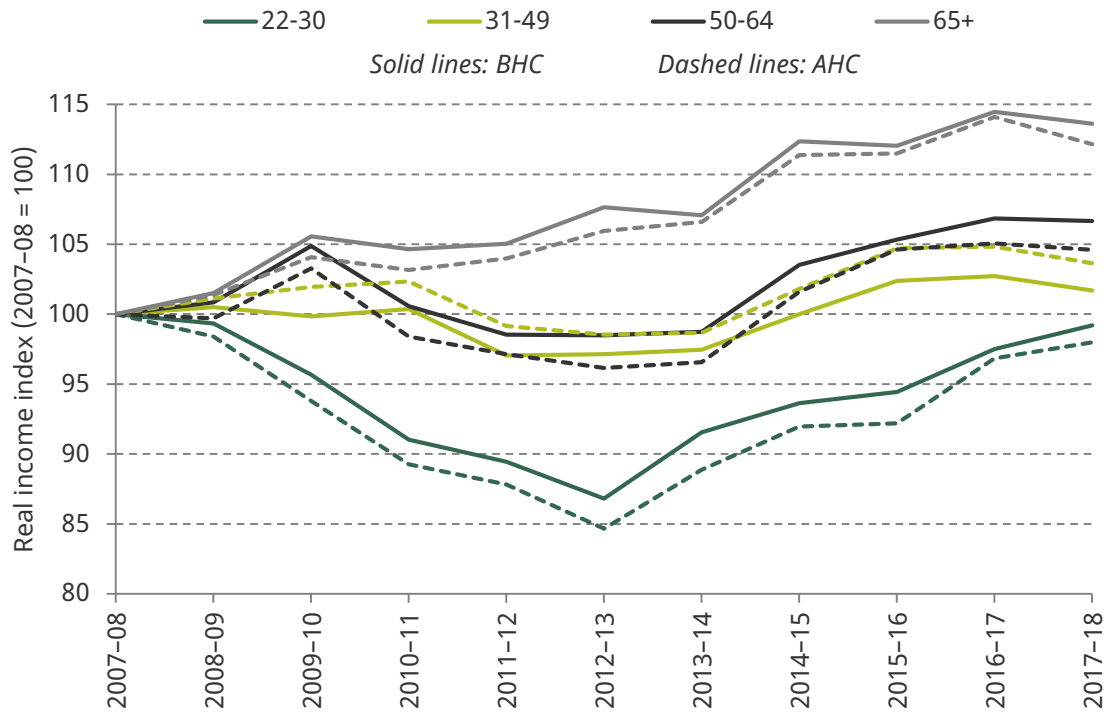
There is great interest in how trends in household income have differed not only across the income distribution, but for different groups in society, such as younger and older people. In this section, we examine how trends in income growth over recent years have differed by age.

Figure 2.14 shows real median income for people of various age groups, each indexed to its level in 2007–08, once measured before housing costs (solid lines) and once measured after housing costs (dashed lines). It demonstrates that while incomes for those in the youngest age category (22–30) on average were hit the hardest in the aftermath of the financial crisis, since 2012–13 they have been steadily recovering and are now just below their pre-crisis level. This is driven by a strong recovery in their labour market prospects, with strong employee earnings growth for this group in recent years.

The middle age groups (31–49 and 50–64), which also saw (to a much lesser extent) decreases in incomes in the aftermath of the recession, have also recovered since 2012–13. However, incomes for these age groups stalled or even fell slightly in 2017–18. This is most likely due to the fall in earnings. For those aged 65 and above, average income since 2007–08 has grown by nearly 15%, but this growth seems to have come to a halt in 2017–18. Overall, the pattern of income growth across the age groups has been much more similar in the last five years than it was in the aftermath of the financial crisis.

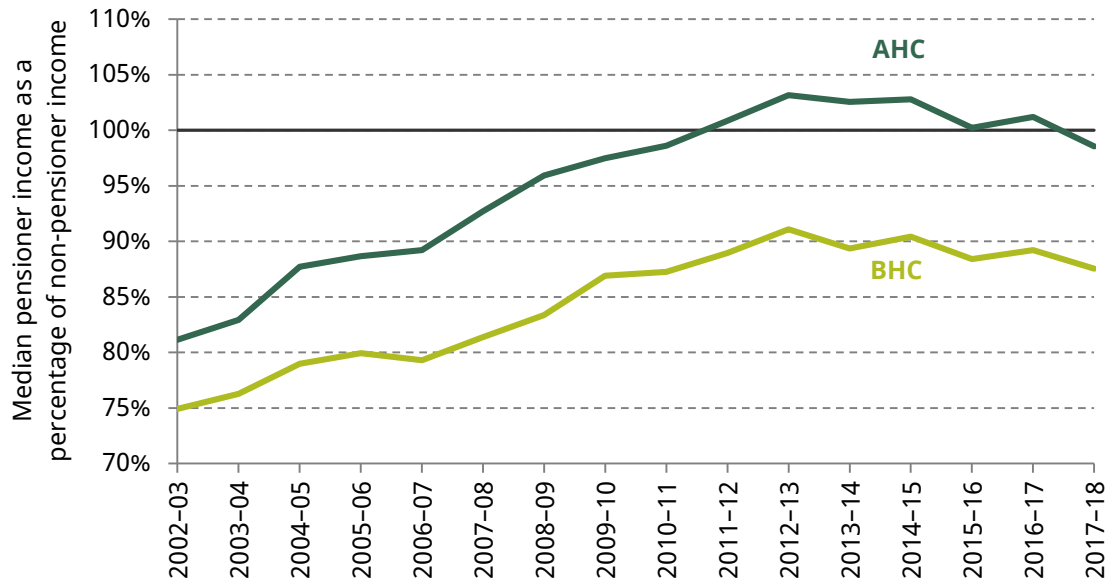
While Figure 2.14 shows the differences in the growth of incomes between different groups, it does not show the different *levels*. Figure 2.15 shows median pensioner income as a percentage of median non-pensioner income, with incomes measured both before and after housing costs. The relative incomes of pensioners look higher on an AHC basis

**Figure 2.14. Real median income (BHC and AHC) by age, indexed to 2007-08 = 100**



Source: Authors' calculations using the Family Resources Survey, 2007-08 to 2017-18.

**Figure 2.15. Median pensioner income as a percentage of median non-pensioner income (AHC and BHC)**



Note: Pensioners are here defined as men aged 65 or over and women aged 60 or over. Non-pensioners are everyone else (including children).

Source: Authors' calculations using the Family Resources Survey, 2002-03 to 2017-18.

as this accounts for the fact that they have lower housing costs on average (because more of them own their own property outright, therefore having very low housing costs). However, the trends since 2002–03 for BHC and AHC median incomes for pensioners relative to those of non-pensioners have been similar for the two measures. Between 2002–03 and 2012–13, there was a remarkable catch-up of pensioners as their AHC incomes grew 24% while those of non-pensioners fell by 2%. But since 2012–13 a small amount of that has been reversed, leaving median pensioner and non-pensioner incomes almost exactly the same after housing costs.

The strong performance of median income among pensioners compared with that among non-pensioners in the pre-recovery period is largely due to sizeable increases in private pension incomes – as successive generations of pensioners tended to be entitled to higher occupational pensioners than their predecessors – alongside modest increases in pensioner benefits (especially compared with working-age benefits). Part of the reason that growth in non-pensioner median income has, however, kept up with pensioner income growth in more recent years, despite weak average earnings growth, is that growth in employee earnings has been stronger towards the bottom and middle of the distribution than at the top (except for the last year).

## 2.4 Prospects for living standards and inequality

As the official HBAI data are released with a lag, we are only able to analyse incomes up to 2017–18. Other, more timely data sources can give an indication of what the HBAI data might show for 2018–19 and beyond.

The LFS recorded a slight increase of 0.5ppts in the employment rate between 2017–18 and 2018–19. Furthermore, data from both the LFS and the average weekly earnings (AWE) index suggest that real earnings growth did return in 2018–19. Overall, this suggests higher median income growth than experienced in 2017–18 and a catch-up in living standards after the stall in 2017–18.

What might we expect for the path of living standards over the following years? The Office for Budget Responsibility (OBR)'s latest macroeconomic forecasts were made prior to the major parliamentary votes relating to Brexit that took place in March 2019. Those forecasts were for modest but steady growth in average earnings of around 1% per year, and a stable employment rate. But they were predicated on the UK avoiding a disorderly exit from the European Union and entering a transition period on 29 March 2019 that would have lasted until the end of 2020 (Office for Budget Responsibility, 2019). The ongoing uncertainty over what will actually happen with respect to Brexit makes speculation over what will happen to incomes extremely difficult.

There are, however, some specific planned policies about which we can say more. The earnings of low-paid employees are likely to rise more quickly as the growth in the National Living Wage (NLW) continues to outpace growth in average earnings; in real terms, it is forecasted to grow by 11% from 2017–18 to 2022–23. However, a substantial fraction of those at the bottom of the weekly earnings distribution are there as they work a low number of hours (but have hourly wages above the minimum wage), which means their earnings will not necessarily be pushed up by increases in the NLW. Additionally, as previously emphasised, earnings make up a larger share of incomes for middle- and high-

income households than they do for low-income households. Finally, even if earnings growth is skewed towards those on lower incomes, it may not be enough for them to keep up with those on higher incomes – especially if benefits are being cut back at the same time.

Most working-age benefits remained frozen in cash terms in 2018–19, a policy that has continued into 2019–20. There are still substantial cuts planned for working-age benefits in the next years, especially because of the move from the ‘legacy’ benefits system to the overall less generous (in entitlements) universal credit (UC) system, which is now expected only to be fully rolled out by 2023–24.<sup>12</sup> In combination with cuts to tax credits, this means that benefit entitlements are likely to shrink in real terms, pushing down the incomes of poorer households.

In summary, of the factors affecting incomes in the coming years that are relatively clear – those relating to planned policy on minimum wages and benefits – it seems likely that the net impact will be to push up inequality in household incomes. Much of the rest of what happens will depend on the wider evolution of the economy, and what this means for jobs and wages – factors which have rarely been more uncertain.

One very recent development to keep an eye on is that those at the very top of the income distribution are seeing somewhat faster pay growth than the rest. The OBR’s most recent report found that in April–September 2018, annual cash-terms pay growth was 5.9% for the top 0.1% of earners, compared with an average of 3.7% over the whole distribution using the same measure (Office for Budget Responsibility, 2019). This is not something that has generally been the case in recent years (broadly, since the financial crisis), and it remains to be seen whether it will be sustained.

## 2.5 Conclusion

After five years of recovery, real income growth ground to a halt in 2017–18. This was mainly driven by the decline in real employee earnings, resulting from higher inflation after the depreciation of sterling in light of the vote for Brexit, as well as real cuts to working-age tax credits and benefits, which were also made more severe by the rise in inflation.

Median income is just 5.6% above its level a decade earlier in 2007–08 – which is very slow growth by historical standards. Over this period, pensioners’ incomes have performed better than those of any other age groups, while younger working-age people have done the least well. However, that was really the result of changes between 2007–08 and 2012–13. Since then, income growth for different age groups has been much more similar. If anything, the recovery has been strongest for those in their 20s, and weakest for pensioners, as their incomes have fallen back slightly relative to the rest of the population.

In 2017–18, income growth was close to zero across the whole distribution, resulting in income inequality among individuals remaining virtually unchanged. Although overall

<sup>12</sup> Note that the OBR actually estimated that the government’s benefit spending will be around £2 billion *higher* under UC in 2023–24 than it would have been under the legacy system. This is because UC is expected to increase the take-up of benefits. Furthermore, in 2023–24, the government will be spending £1 billion on transitional protection (Office for Budget Responsibility, 2018).

inequality did not change much, there is some evidence that net income growth was lower for low-income than for high-income households, as a result of falling income from benefits and tax credits. Income inequality overall is not much different – on the Gini index measure of income inequality – from what it was in the late 1980s, but is much higher than it was in the 1970s.

### 3. Income poverty

#### Key findings

- **Absolute poverty remained virtually unchanged at 19% in 2017–18, using incomes measured after housing costs are deducted (AHC).** This comes after gradual but continuous falls in AHC absolute poverty since 2012–13. Absolute poverty remains at its lowest ever level, 16 percentage points lower than in 1997–98.
- **Since last year, a new measure of poverty has been proposed by the Social Metrics Commission (SMC).** The SMC measure accounts for costs of childcare and disability, and the amount of savings that households have, among other differences. The trends in the SMC measure are similar to AHC relative poverty, although pensioner poverty is materially lower on the SMC measure than in the official statistics.
- **Absolute child poverty rose by 1 percentage point in the latest year as working-age benefits and tax credits were reduced in generosity.** Rates of material deprivation among children also rose very slightly. However, rates of child material deprivation are considerably – over 5 percentage points – lower than in 2012–13.
- **The official data show relative pensioner poverty rising since 2011–12, and absolute pensioner poverty stagnating, after decades of almost continuous falls.** However, upon closer inspection, this may be due to issues with data quality, particularly in the 2017–18 data. The slowdown in income growth among low-income pensioners, which underlies the reversal in pensioner poverty trends, is fully explained by an apparent decline in private pension incomes. The decline among younger pensioners may reflect the introduction of pension freedoms, which means that pensioners who choose to draw their entire defined contribution pensions as a lump sum are not recorded as having private pensions in the survey data. But this cannot explain all of the decline, as the share of older pensioners with private pension incomes (most of whom will have already annuitised their pension pots) has also fallen since 2014–15.
- **A number of other developments have affected income growth among low-income pensioners since 2011–12, but these approximately offset each other.** Pensioners' housing costs have continued to rise, reflecting a sustained rise in private and social rents. Prior to 2011–12, these rent rises were offset by a shift from social renting to homeownership, but the housing tenure composition among pensioners has changed little since 2011–12. A slowdown in income growth from employment also contributed slightly to lower net income growth. However, these changes were offset by higher incomes from state benefits, as the state pension has been made more generous.

- Rates of material deprivation among pensioners have continued to fall, which is consistent with the observed rise in pensioners' income poverty being a data quality issue. Since 2010–11, the share of pensioners who reported being unable to afford items in the material deprivation index has fallen across most items, with the largest falls in the shares of pensioners who were unable to go out socially at least once a month or take a week-long holiday at least once a year.**

The previous chapter examined living standards and inequality across the entire population. In this chapter, we focus specifically on low-income households by looking at the prevalence of income poverty and recent changes in poverty rates.

There are several ways of measuring poverty. Throughout this chapter, we refer to two main measures that identify poverty based on individuals' household income. The first is the 'absolute poverty rate', which measures the fraction of the population who have a household income below a fixed 'poverty line'. We follow the Department for Work and Pensions (DWP)'s official Households Below Average Income (HBAI) statistics in defining the absolute poverty line as 60% of median income in 2010–11. As with all income amounts referred to in this report, we uprate the absolute poverty line in line with a measure of inflation based on the Consumer Prices Index (CPI). The second income-based measure of poverty is the 'relative poverty rate'. This measures the fraction of individuals whose household income is lower than 60% of median income in the same year. Any rise in real incomes among the poor will lead to a fall in the absolute poverty rate, but incomes need to rise faster than median income for a reduction in relative poverty to be recorded.

It is useful to track how both relative and absolute poverty have changed over time. Because society's view about what is an acceptable standard of living evolves over time, we judge it particularly appropriate to use a relative poverty measure when looking at long-run trends. In the short run, however, there is less reason to think that social norms change in real time with year-to-year volatility in median income, and there is often more interest in whether people are getting better or worse off in absolute terms. We therefore tend to focus on absolute poverty when looking at short-run trends and relative poverty when examining how poverty has changed over several decades.

Household income can be measured before or after housing costs are deducted (BHC or AHC respectively). There is clearly an element of choice in many people's housing spending. Some households may choose to spend more on housing and others may choose to spend more on other things. These differences in preferences do not in themselves signify that one household is better off than the other, and the BHC measure ignores differences in spending on housing in much the same way as we do not assess poverty by looking at incomes after spending on other specific items. However, variation in housing costs may not reflect differences in housing quality, especially in the social rented sector. Further, the BHC measure includes housing benefit as income but does not deduct rent. An increase in rent covered by housing benefit shows up as an increase in BHC income, which makes households appear better off even though their disposable income remains unchanged. In areas where rents are high, households that receive large amounts of housing benefit for their rents appear better off than similar households in



areas with lower rents. For these reasons, our analysis focuses on poverty measured after housing costs.<sup>13</sup>

As in the rest of this report, incomes are adjusted ('equivalised') to account for differences in the size and composition of different households. This reflects the idea that larger households need more income than smaller households to enjoy a comparable standard of living. To give a sense of monetary amounts, in 2017–18 the relative poverty line (after housing costs) for a single person was £152 per week, compared with £367 a week for a couple with two young children. Relative and absolute poverty lines (AHC and BHC) for different family types are shown in Appendix Table C.1.

Household income is clearly a major determinant of household living standards. However, the link between low living standards and low household income is not perfect. For example, households might have different levels of essential costs (e.g. those associated with disability), and some might be able to maintain their living standards despite low incomes if they only temporarily have a low income. We therefore also examine 'material deprivation' as an alternative indicator of low material living standards. The measure of material deprivation used here involves asking families whether they can afford a range of items (e.g. warm winter coats for any children in the household) and activities (e.g. taking children to a regular leisure activity). A family is classified as materially deprived if it is unable to afford a certain number of these items, with more weight given to items that most families already have.<sup>14</sup>

Since our report last year, a new measure of poverty has been constructed by the Social Metrics Commission (SMC).<sup>15</sup> The SMC measure of poverty is quite distinct from the official government HBAI measures, and it aims to tackle what are perceived to be some of the disadvantages of traditional measures of income poverty. As Joyce (2018) sets out, there are a number of conceptual differences between the HBAI and SMC measures, including the fact that the SMC measure combines elements of absolute and relative poverty, by comparing the incomes of poor people with a three-year rolling average of median income. In this sense, the SMC measure is really a relative measure of poverty but one that operates with some lag. It also attempts to correct for the costs of childcare and disability, and decides that if people have large amounts of liquid financial savings, they cannot be in poverty as they have a stock of assets to draw upon.

In many ways, the SMC measure is an appealing alternative to the HBAI measures of income poverty; for example, it is better correlated with measures of material deprivation than are the HBAI measures. Nevertheless, there is also great value in using the more traditional HBAI measures of poverty, which are consistent with those published in other European countries and for which we have an unbroken series of data running back over 50 years to the early 1960s. We therefore focus on the HBAI measures in this chapter.

The main sections in this chapter are as follows. Section 3.1 analyses recent trends in poverty and material deprivation. We focus on changes in child poverty, as the main

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<sup>13</sup> Other reasons for focusing on AHC poverty are given in Appendix A.

<sup>14</sup> Interested readers can find more details on the construction of these measures in chapter 6 of Cribb, Joyce and Phillips (2012) and chapter 5 of Belfield et al. (2015).

<sup>15</sup> Social Metrics Commission, 2018.

changes in the latest year were among families with children. Section 3.2 examines why progress in reducing pensioner poverty has halted in recent years. Section 3.3 concludes.

### 3.1 Recent trends in poverty and material deprivation

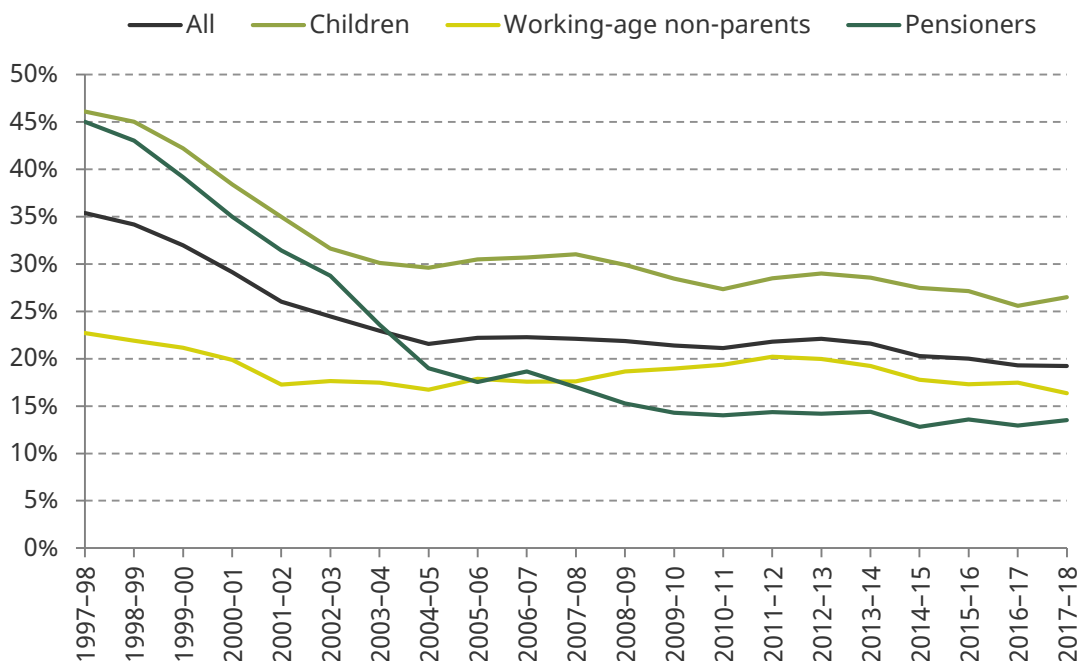
#### Absolute poverty

Figure 3.1 shows the absolute (AHC) poverty rate in the UK over the last two decades (1997–98 to 2017–18) for the whole population and for major demographic groups.<sup>16</sup> Across the population as a whole, absolute poverty fell between 1997–98 and 2004–05 and remained broadly stable between 2004–05 and 2012–13. After 2012–13, absolute poverty fell each year until 2016–17.

However, in the latest year of data (2017–18), absolute poverty remained virtually unchanged. This compares with the average fall of 0.85 percentage points (ppts) that occurred in each year between 1997–98 and 2016–17.

Absolute poverty rates are much higher among children than among other demographic groups. In 2017–18, 26.5% of children were in absolute income poverty – double the 13.5%

**Figure 3.1. Absolute poverty rates (AHC) since 1997–98: overall and by demographic group**



Note: The absolute poverty line is defined as 60% of median income in 2010–11. Incomes are measured after housing costs have been deducted. ‘Working-age non-parents’ is a shorthand for adults of working age who are not living in the same household as any of their dependent children.

Source: Authors’ calculations using the Family Resources Survey, 1997–98 to 2017–18.

<sup>16</sup> We exclude working-age parents from this graph and others in the chapter as trends for this group are very similar to trends for children.

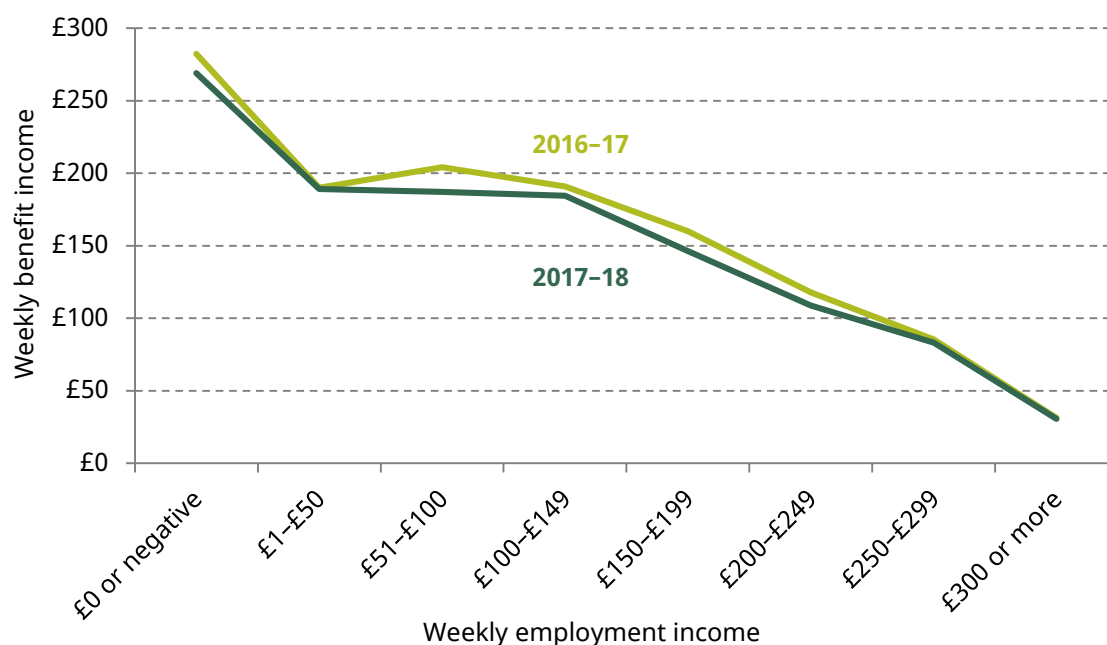
poverty rate among pensioners, and nearly two-thirds higher than the poverty rate among working-age adults without dependent children (16.4%). After falling for most of the last two decades, the share of children in absolute poverty rose by 0.9ppts between 2016–17 and 2017–18, though this change was not statistically significantly different from zero.

The uptick in absolute child poverty in the latest year reflects a 6% fall in benefit income for families with children. In 2017–18, benefits accounted for 47% of gross household income for the poorest 30% of households with children, who are close to the absolute poverty line.

The fall in benefit incomes affecting children was not simply the result of rising employment. Figure 3.2 plots average weekly benefit income (adjusted for inflation and household size) for households with children by their pre-tax weekly income from employment in 2016–17 and 2017–18. It shows that for any level of employment income, households' average benefit incomes were lower in 2017–18 than in 2016–17. Average benefit incomes fell by 5% for those with no employment income and by 3–9% for those earning between £51 and £299 a week.

Meanwhile, the distribution of employment income across households with children remained essentially unchanged between 2016–17 and 2017–18, with the share of households with no employment income falling by just 0.7ppts.

**Figure 3.2. Average mean real weekly equivalised benefit income by mean real weekly equivalised employment income for households with children, 2016–17 and 2017–18**



Note: Employment income includes income from employment and self-employment. Household income is deflated using AHC deflators. Households are weighted by their number of children.

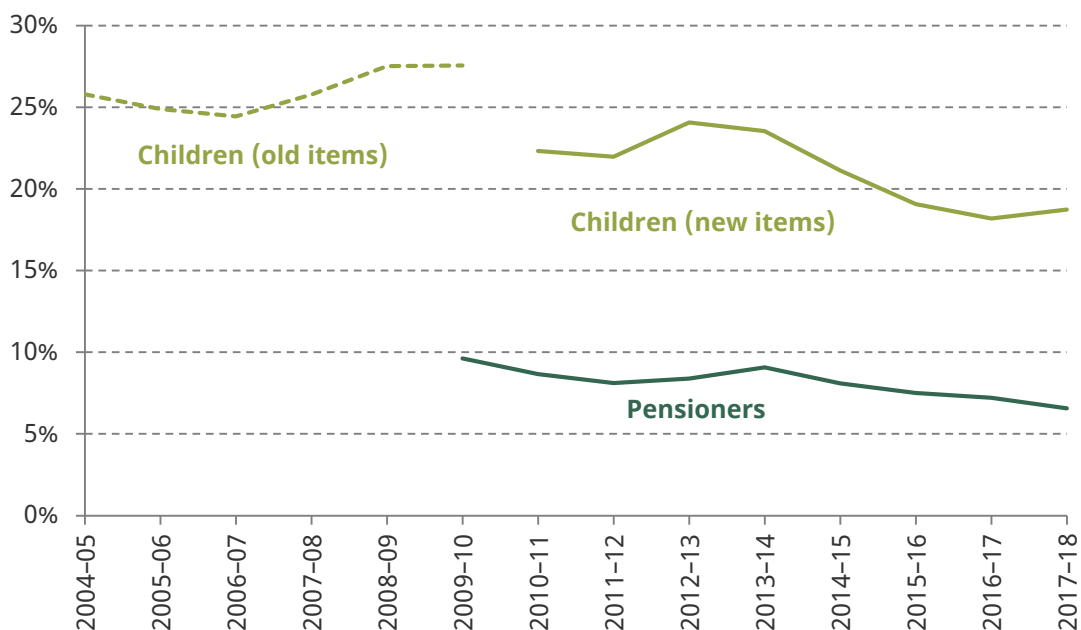
Source: Authors' calculations using the Family Resources Survey, 2016–17 and 2017–18.

A number of changes in 2017–18 are likely to have contributed to the fall in benefit incomes. First, a sharp rise in inflation<sup>17</sup> from 1% in 2016–17 to 3% in 2017–18 reduced the real value of working-age benefits, most of which remained frozen in cash terms.<sup>18</sup> Because benefits to pensioners are protected from the freeze, and because low-income working-age families without children get a much lower share of their income from benefits, the benefit freeze and rising inflation have particularly hit poor working-age families – especially those with children – in 2017–18. Second, the ‘two-child limit’ came into force in 2017–18, which meant that families no longer receive child elements in child tax credit and universal credit for third or subsequent children born on or after 6 April 2017. Third, the family element in child tax credit of £545 a year was also abolished in 2017–18 for families with an eldest child born on or after 6 April 2017. Fourth, more low-income families with children were affected by the removal of the family premium in housing benefit, which applied to new claimants and new births since 1 May 2016.

### Material deprivation

To examine whether recent trends in absolute poverty are borne out by other measures of low living standards, Figure 3.3 shows how material deprivation among children and pensioners has changed since it was first measured in the FRS data (in 2004–05 for children and 2009–10 for pensioners). As explained in the introduction to this chapter, families are classified as materially deprived if they feel they cannot afford a certain number of items or activities, with greater weight assigned to items that most families already have.

**Figure 3.3. Child and pensioner material deprivation rates**



Note: The figure refers to material deprivation only, not the government’s combined measure of relative low income (below 70% of median) and material deprivation.

Source: Authors’ calculations using the Family Resources Survey, 2004–05 to 2017–18.

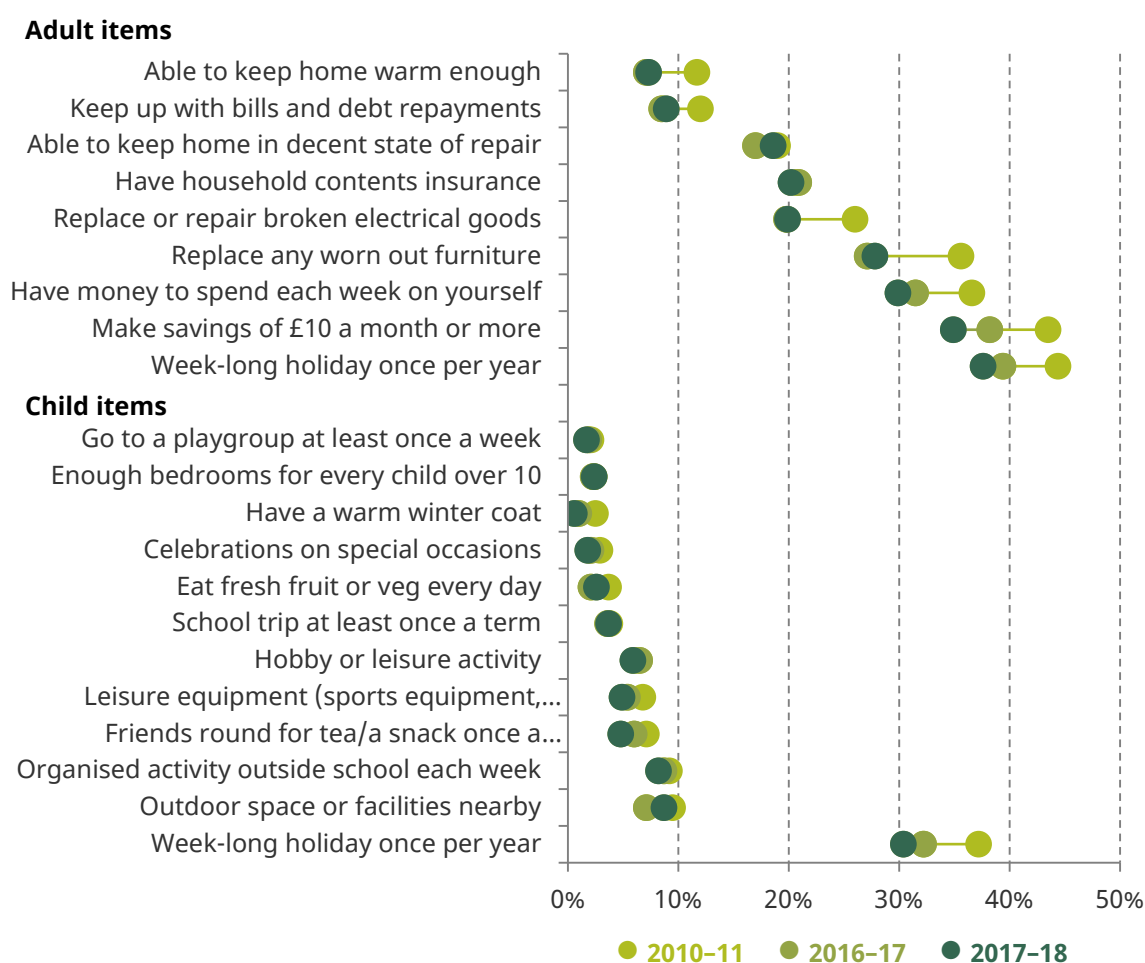
<sup>17</sup> Based on a measure of the Consumer Prices Index (CPI) excluding housing costs.

<sup>18</sup> Disability and incapacity benefits are exempt from the benefit freeze.

Because the set of items used to calculate material deprivation among children changed in 2010–11, rates of material deprivation after 2009–10 are not comparable to those before. But since 2010–11, trends in children’s material deprivation broadly mirror trends in absolute child poverty (though, conceptually, the construction of material deprivation means that it seems somewhere between an ‘absolute’ and a ‘relative’ measure of low living standards, as explained in more detail in the next chapter). Material deprivation among children rose at the start of the post-recession recovery, fell between 2012–13 and 2016–17, and ticked up again in the latest year by 0.5ppts. The latest uptick is not statistically significant, but it is consistent with the partial reversal of progress seen on absolute child poverty seen in 2017–18. Nevertheless, material deprivation among children is still 3ppts lower than it was in 2010–11.

Figure 3.4 plots the share of households with children that reported not being able to afford specific items or activities in the material deprivation index in 2010–11, 2016–17 and 2017–18. It shows that across most items, the inability to afford an item is lower now than it was in 2010–11, in some cases by more than 5ppts. This implies that there has been an across-the-board reduction in the inability of families with children to afford the items that compose the material deprivation index since 2010–11.

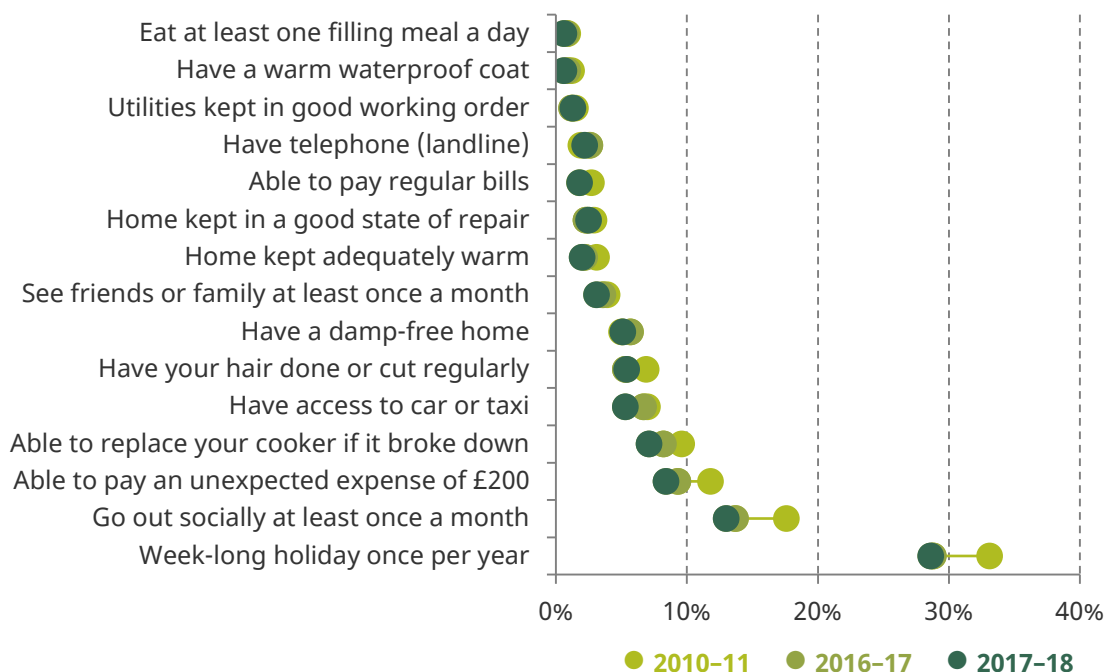
**Figure 3.4. Share of families with children that do not have or do specific items or activities because they say they cannot afford them, 2010–11 to 2017–18**



Note: Families are weighted by their number of children.

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

**Figure 3.5. Share of pensioner families that do not have or do specific items or activities, 2010–11 to 2017–18**



Note: Families are weighted by their number of pensioners.

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

Between 2016–17 and 2017–18, when child material deprivation rose slightly, the share of families who did not have the item because they could not afford it fell by 1ppt or more for eight of the 21 items in the children’s material deprivation index. However, material deprivation rose by 1–2ppt for four of the items in the index – namely, the inability to keep the house in a decent state of repair, replace worn-out furniture, eat fresh fruit or veg daily (for children) and access outdoor space or facilities nearby for children to play safely.<sup>19</sup> These rises outweighed the falls for the other items in the latest year.

Material deprivation among pensioners has continued to fall in recent years. In 2017–18, 7% of pensioners were classified as materially deprived, compared with 10% in 2009–10 and 9% in 2010–11. Figure 3.5, which plots the share of pensioner households that did not have specific items, shows a fall in most items since 2010–11. The largest falls were in items that were less commonly afforded in the entire population in 2010–11 – namely, going out socially at least once a month or taking a week-long holiday at least once a year. Note that child and pensioner rates of material deprivation are not comparable as they are asked about different items, and because the pensioner measure incorporates health and social constraints whereas only financial constraints are considered consistent with ‘material deprivation’ for families with children.

### Relative poverty

Relative poverty provides another measure of living standards among low-income households. Broadly speaking, it captures the extent to which low-income households are

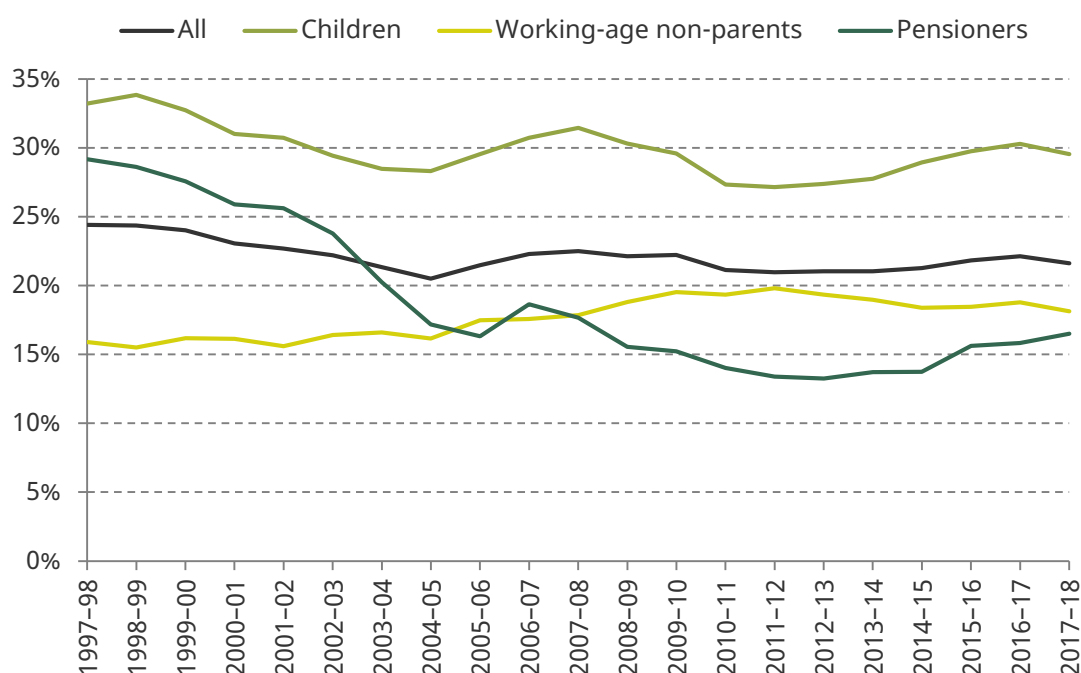
<sup>19</sup> For the remaining nine items, the share of families with children who did not have the item because they could not afford it changed by less than 1ppt.

catching up with, or falling behind, middle-income households in a particular year. It is therefore essentially a measure of inequality between middle- and low-income households. Because society's view about what is an acceptable standard of living evolves over time, relative poverty is probably a more useful measure of long-run trends in poverty.

Figure 3.6 shows trends in relative (AHC) poverty over the last two decades. The share of all households in relative poverty has remained broadly stable since the early 2000s. In the latest year, a complete lack of growth in average (median) incomes led to a slight fall in relative poverty. However, given the stagnation in absolute poverty, this should not be taken as an indication of rising living standards among low-income households.

Recent trends in relative poverty vary across different demographic groups. Relative child poverty has risen since 2011–12, though it fell slightly in the latest year and is still lower than its immediate pre-recession level and its height in the late 1990s. Relative poverty among working-age adults without dependent children rose between 1997–98 and 2011–12 but has broadly fallen since then, and was about the same in 2017–18 as in 2007–08. Relative poverty among pensioners fell steeply between 1997–98 and 2011–12, after which it stagnated and then began to rise. 2017–18 is the fifth consecutive year of rising relative pensioner poverty, which is now back at about the same level as it was on the eve of the financial crisis.

**Figure 3.6. Relative poverty rates (AHC) since 1997–98: overall and by demographic group**



Note: The relative poverty line is defined as 60% of median income in each year. Incomes are measured after housing costs have been deducted. 'Working-age non-parents' is a shorthand for adults of working age who are not living in the same household as any of their dependent children.

Source: Authors' calculations using the Family Resources Survey, 1997–98 to 2017–18.

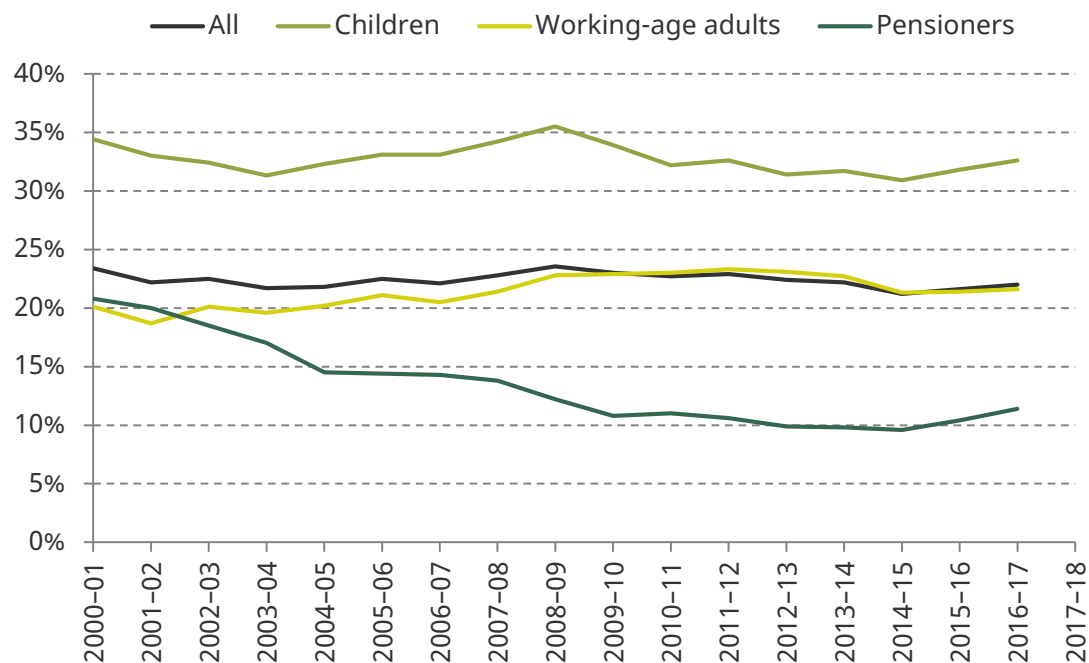
### Social Metrics Commission poverty measure

A new measure of poverty was constructed by the Social Metrics Commission (SMC) in 2018, to tackle some of the perceived disadvantages of traditional measures of income poverty (Social Metrics Commission, 2018). The SMC measure compares the incomes of poor people with a three-year rolling average of median income, and can therefore be thought of as a relative measure of poverty that operates with some lag, so is less sensitive to sudden shocks to median incomes. It departs from HBAI measures in other ways too:

- by taking account of the available liquid assets that families have, not just incomes;
- by accounting for the ‘inescapable’ costs that some families face – for example, the extra costs of disability and the costs of childcare; and
- by broadening the approach of poverty measurement to include an assessment of housing adequacy.

Figure 3.7 shows poverty rates measured using the SMC approach since 2000–01. In 2016–17 (the latest available year), the overall poverty rate calculated using the SMC measure was 22%, which was equal to the AHC relative poverty rate in that year. The SMC poverty rate was slightly higher than the relative poverty rate during the recession (24% compared with 22%). Both poverty rates fell in the years after the recession, before ticking up again between 2014–15 and 2016–17. Long-term trends in SMC poverty rates by demographic group broadly mirror relative AHC poverty rates, though it is clear that pensioners have a

**Figure 3.7. Social Metrics Commission poverty rates since 2000–01: overall and by demographic group**



Note: In contrast to the ‘working-age non-parents’ series shown in HBAI statistics, the ‘working-age adults’ series here includes both parents and non-parents,

Source: Social Metrics Commission, 2018.



considerably lower poverty rate on the SMC measure than in the HBAI methodology – although it, like the HBAI measure, has risen recently, as is discussed in the next section.<sup>20</sup>

## 3.2 The rise in pensioner poverty

As discussed in Section 3.1, the main changes to poverty and material deprivation rates in the latest year were among families with children. But taking the last few years as a whole, one of the most striking trends is the recent rise in relative pensioner poverty, putting an end to the rapid reductions in pensioner poverty to which we had become accustomed. After more than two decades of virtually continuous falls, relative pensioner poverty rose from 13% in 2011–12 to 16% in 2017–18.

### The rise in the female state pension age

It is worth noting that the female state pension age changed over this period, rising gradually from 60 in 2009–10 to around 64 in 2017–18. This meant that women in their early 60s who would previously have been classified as pensioners were now classified as working age, and therefore no longer featured in pensioner statistics. The change in the composition of pensioners could mechanically increase pensioner poverty if older pensioners are more likely to be poor.

To explore this possibility, we compute adjusted pensioner poverty rates holding the state pension age fixed at its current level, by reclassifying women aged 60–63 as working age in each year between 2009–10 (when the state pension age started to change) and 2016–17. We find that doing so has essentially no effect on rates of relative and absolute pensioner poverty.<sup>21</sup>

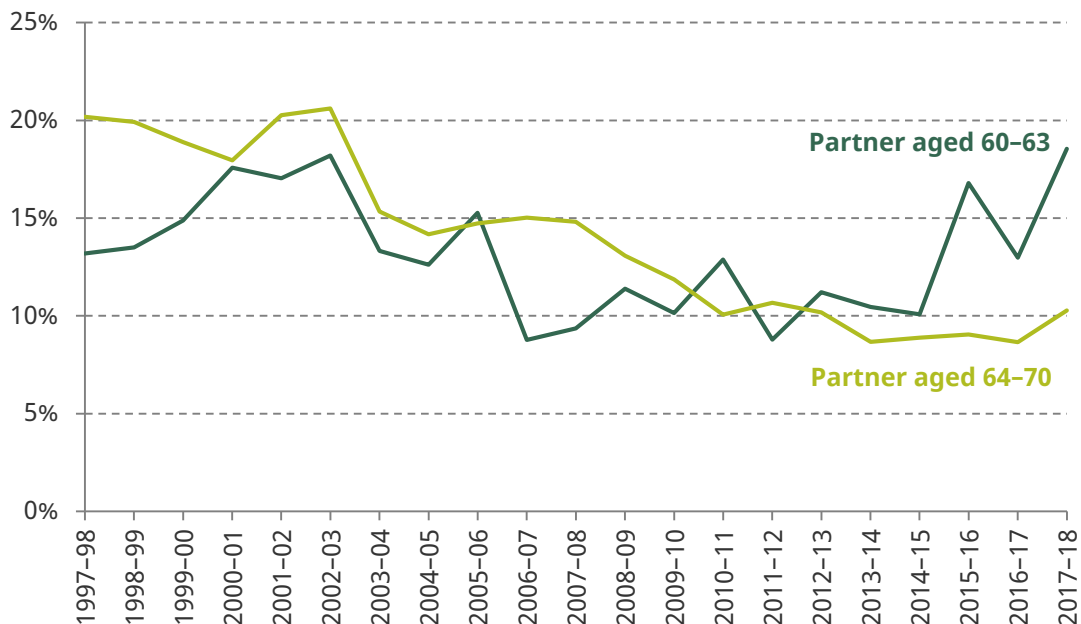
The rise in the female state pension age did reduce average incomes among the affected women (Cribb and Emmerson, 2019). However, because these women are – by definition – no longer considered pensioners, this generally has no effect on pensioner poverty statistics.

The exception is when the affected women live with partners who are pensioners. Male pensioners living with women aged 60–63 made up just 3.4% of all pensioners in 2017–18, so are not a large enough group to affect overall rates of pensioner poverty. But as Figure 3.8 shows, relative poverty does appear to have risen among this group, both in absolute terms and relative to male pensioners with partners aged 64–70, who were not affected by the change. In 2009–10, male pensioners who lived with women aged 60–63 were slightly less likely to be in relative poverty than those who lived with women aged 64–70. In 2017–18, their relative poverty rate was 9ppts higher, indicating that, as was found by Cribb and Emmerson (2019), a higher female state pension age increased the poverty rates of directly affected families.

<sup>20</sup> Note that the SMC series shows poverty rates for all working-age adults, as opposed to working-age non-parents as in the HBAI series.

<sup>21</sup> The rise in the female state pension age had a small effect on income from employment, which slightly reduced income growth among low-income pensioners, as discussed in the following subsection.

**Figure 3.8. Relative poverty rate (AHC) among male pensioners with female partners aged 60–70 since 1997–98**



Note: The relative poverty line is defined as 60% of median AHC income in each year.

Source: Authors’ calculations using the Family Resources Survey, 1997–98 to 2017–18.

### Changes in pensioners’ income sources and deductions

Having established that the rise in pensioner poverty cannot be attributed to the rise in the female state pension age, we examine how different sources of income and deductions from income have contributed to recent changes in net pensioner incomes. To focus on low-income pensioners, we look at the bottom quartile of pensioners in terms of their AHC household incomes. An equivalent income decomposition for all pensioners is given in Appendix Table C.2.

Table 3.1 splits total AHC household income for the poorest 25% of pensioners into several income components, direct taxes and other deductions, and housing costs. It shows that in 2017–18, low-income pensioners derived a large majority of their gross (pre-tax) BHC income from state benefits (83%). Private pensions – including both occupational pensions (those arranged or facilitated by employers) and personal pensions (those arranged outside the workplace) – contributed 9% of gross BHC incomes, and income from paid work contributed a further 5%. Housing costs were substantial among low-income pensioners, although much of this will be covered by housing benefit.

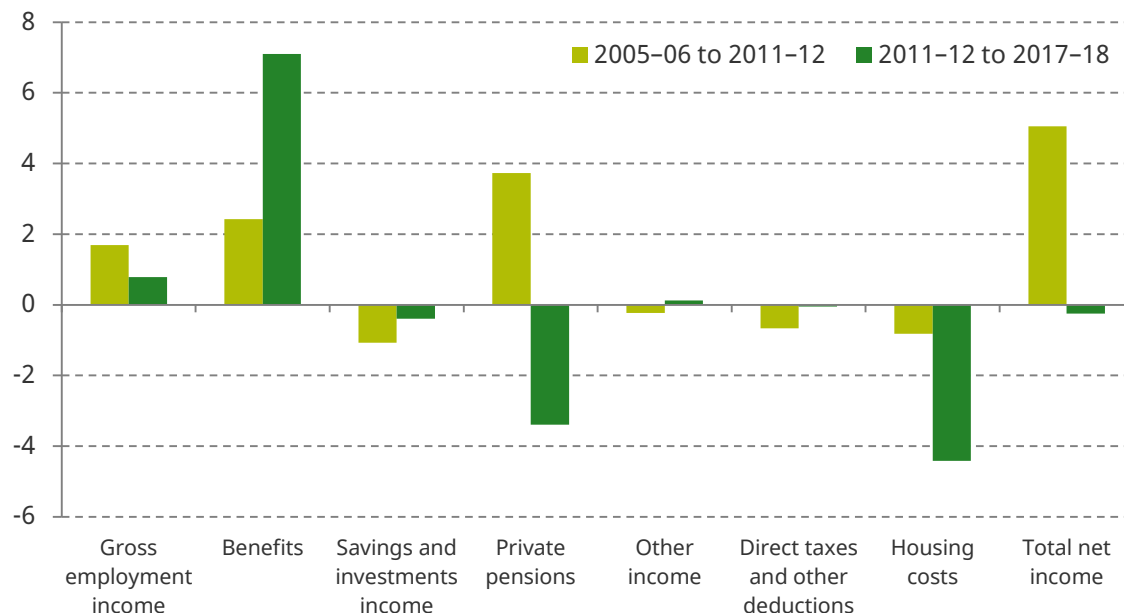
We consider changes in incomes and deductions across two six-year periods: 2005–06 to 2011–12, when pensioner poverty was falling, and 2011–12 to 2017–18, when relative pensioner poverty first stagnated and then began to rise. In the first period, average net household incomes among the 25% poorest pensioners rose by 5.1%. In the second, average net incomes were essentially unchanged (falling by 0.2%).

**Table 3.1. Changes in income sources and contributions to mean income growth for pensioners in bottom quartile of AHC household incomes, 2005–06 to 2017–18**

	Gross income from work	Benefits	Gross income from savings and investments	Gross income from private pensions	Other income	Direct taxes and other deductions from income	Housing costs	Total AHC net income
Share of gross BHC income (2017–18)	4.8%	83.4%	1.4%	9.4%	1.0%	-11.2%	-21.7%	
Share of net AHC income (2017–18)	7.2%	124.3%	2.0%	14.0%	1.4%	-16.7%	-32.3%	100.0%
<b>2005–06 to 2011–12</b>								
Growth of income source / deduction	33.5%	2.0%	-29.8%	25.6%	-14.6%	3.9%	2.9%	5.1%
Contribution to total income growth	1.7ppts	2.4ppts	-1.1ppts	3.7ppts	-0.2ppts	-0.7ppts	-0.8ppts	5.1ppts
<b>2011–12 to 2017–18</b>								
Growth of income source / deduction	12.3%	6.1%	-16.2%	-19.5%	9.3%	0.3%	15.9%	-0.2%
Contribution to total income growth	0.8ppts	7.1ppts	-0.4ppts	-3.4ppts	0.1ppts	0.0ppts	-4.4ppts	-0.2ppts
<b>2011–12 to 2014–15</b>								
Growth of income source / deduction	-12.2%	5.2%	26.4%	-0.7%	12.5%	-4.5%	12.5%	3.2%
Contribution to total income growth	-0.8ppts	6.1ppts	0.6ppts	-0.1ppts	0.2ppts	0.7ppts	-3.5ppts	3.2ppts
<b>2014–15 to 2017–18</b>								
Growth of income source / deduction	27.9%	0.8%	-33.7%	-19.0%	-2.8%	5.0%	3.0%	-3.4%
Contribution to total income growth	1.5ppts	1.0ppt	-1.0ppt	-3.2ppts	0.0ppts	-0.8ppts	-0.9ppts	-3.4ppts

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

**Figure 3.9. Contribution of income components to mean income growth for low-income pensioners, 2005–06 to 2011–12 and 2011–12 to 2017–18**



Note: Low-income pensioners are defined as pensioners in the bottom quartile of AHC household incomes. Other income includes income to children, private benefits, educational grants, maintenance payments and the cash value of free school meals, free school milk and other forms of income in kind. Components of income are presented gross of taxes.

Source: Authors’ calculations using the Family Resources Survey, 2005–06, 2011–12 and 2017–18.

To more clearly show why mean income growth among low-income pensioners in the last six years differed from that in the preceding six years, Figure 3.9 plots the contribution of various components to income growth between the two periods. The interpretation of this figure requires some explanation. Average net incomes rose by 5.1ppt between 2005–06 and 2011–12 and fell by 0.2ppt between 2011–12 and 2017–18, as shown in the final two bars on the right of the graph. This amounts to a total difference in growth of –5.3ppts between the two periods. The figure also shows that growth in employment income contributed 1.7ppts to growth in the first period, but only 0.8ppts in the second period (the first two bars on the left of the graph). This implies a difference of –0.9ppts between the two periods.

Figure 3.9 shows that the difference in income growth between the two periods reflects two main changes affecting the lowest-income quarter of pensioners:

- **Average income from private pensions fell by 20% in the last six years**, leading to a 3ppt fall in net total income over this period. The fall was concentrated in the latter half of the period: between 2014–15 and 2017–18, income from private pensions fell by 19%. The fall in private pension income over the last six years can account for a 7ppt difference in net income growth between the two periods.
- **Average housing costs for low-income pensioners increased at a much faster rate in recent years.** Between 2011–12 and 2017–18, housing costs rose by 16%, more than five times the rise in the preceding six-year period (3%). Most of this increase took place

between 2011–12 and 2014–15. Because of rising housing costs, net income growth in the last six years was 4ppts lower than in the preceding period.

In addition to the main changes listed above, falling income from employment (including self-employment) also contributed to slightly slower net income growth among low-income pensioners in the last six years, of around 1ppt compared with the preceding six years. Growth in income from paid work slowed from 34% between 2005–06 and 2011–12 to only 12% between 2011–12 and 2017–18. Appendix Table C.2 shows that this slowdown was not limited to low-income pensioners. It can be explained by changes in the age composition of pensioners, partly (but not solely) due to the rise in the female state pension age. Older pensioners are less likely to be in work and less likely to derive a large proportion of their income from work, so an older pensioner population in recent years has reduced income growth from paid work.

Income from state benefits – the main source of income for low-income pensioners – rose more quickly over the last six years than over the preceding period. This is in contrast to the factors set out above, which led to slower net income growth in recent years. As shown in Appendix Table C.2, average benefit income increased by 6% between 2011–12 and 2017–18 for all pensioners, not just low-income pensioners, reflecting a number of reforms to the state pension, which is by far the most important benefit for pensioners (Cribb and Emmerson, 2019). These reforms include a reduction in the number of years needed to gain a full state pension (from 44 years for men and 39 years for women before 2010 to 30 years for both sexes afterwards), the introduction of the single-tier pension in 2016 (which particularly benefited those who were self-employed for most of their working lives) and more generous indexation of the state pension through the ‘triple lock’ since 2010–11. Among the bottom quartile, rising benefit income contributed 5ppts more to income growth in the second period than in the first period. However, this was not enough to offset the effect of falling income from private pensions and rising housing costs.

The remainder of this section examines the two main changes to low-income pensioners’ income in recent years: the fall in incomes from private pensions and the rise in housing costs. We consider each of these components in turn.

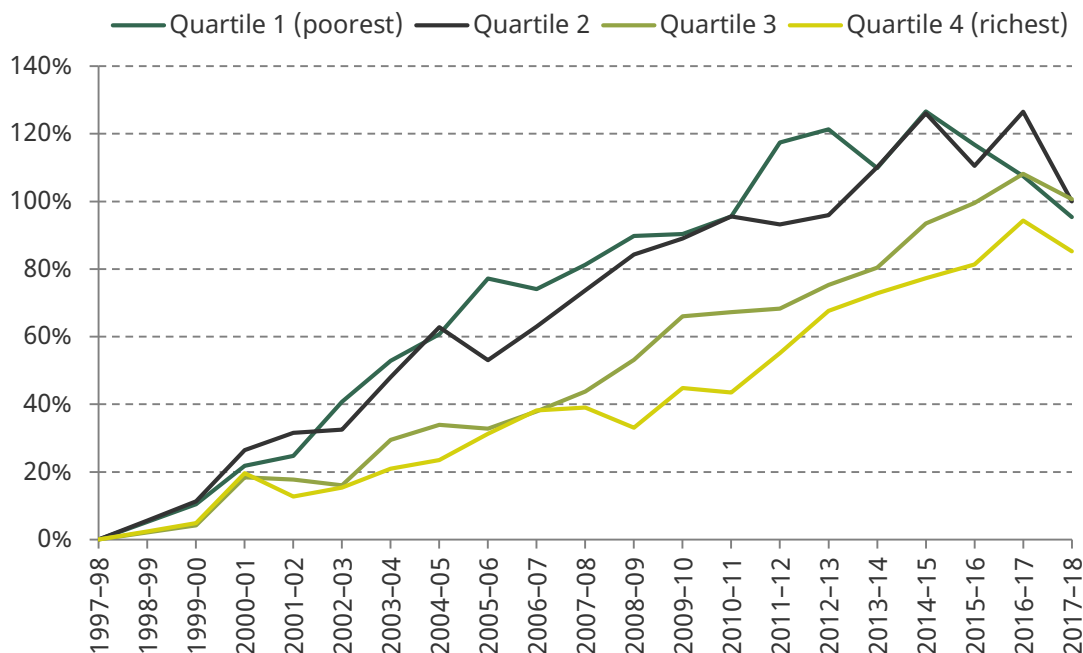
### Income from private pensions

Income from private pensions includes annuities, cash drawdowns and other withdrawals from all pensions. They include both pensions either run by or facilitated by a previous employer<sup>22</sup> and ‘personal’ pensions which are arranged outside the workplace, such as a self-invested personal pension (SIPP).

Table 3.1 shows that among the poorest quartile of pensioners, household incomes from private pensions fell by 20% between 2011–12 and 2017–18, which reduced net household incomes by 3ppts. Higher-income pensioners did not experience such a fall. As shown in Appendix Table C.2, private pension incomes rose by 8% over this period for the entire population of pensioners.

<sup>22</sup> Note that ‘private pensions’ include the receipt of ‘public service pensions’, which are received by former public sector employees, such as members of the Teachers’ Pension Scheme or the NHS pension scheme. Despite most public service schemes being paid for out of general government expenditure, they are not state benefits (like the state pension) and are therefore counted as part of ‘private pensions’.

**Figure 3.10. Change in real net private pension income by household income quartile since 1997-98 (relative to 1997-98)**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Net (after-tax) private pension incomes are deflated using AHC deflators. Data for 1998-99 are missing and imputed as an average of net private pensions for 1997-98 and 1999-2000.

Source: Authors' calculations using the Family Resources Survey, 1997-98 to 2017-18.

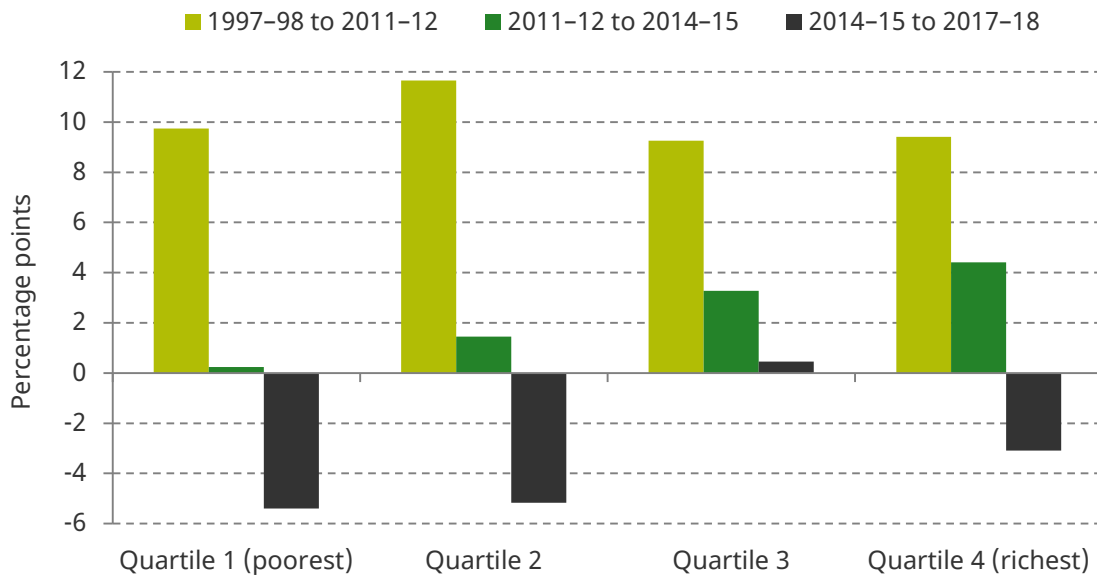
To try to understand this phenomenon, Figure 3.10 splits pensioners into four quartiles based on their household (AHC) incomes and examines the change in average net income from private pensions since 1997-98, adjusted for (AHC) inflation. The series for lower-income pensioners is a bit noisier than the one for higher-income pensioners, as fewer low-income pensioners have private pension income. Between 1997-98 and 2014-15, growth in private pension income among pensioners in the bottom two quartiles of household incomes outpaced growth in the top two quartiles. In 2014-15, average real net income from private pensions was more than twice as high as its 1997-98 level among the poorest half of pensioners.

However, since 2014-15, average real net incomes from private pensions have fallen among pensioners in the poorest quartile. Private pension income has stagnated for pensioners in the second quartile, but continued to grow for pensioners in the upper half of the income distribution until 2016-17. In 2017-18, there was a recorded fall in average private pension incomes across all income quartiles.

Nearly all of the fall (97%) in real net private pension income among the poorest quartile of pensioners between 2014-15 and 2017-18 reflects a decline in the share of pensioners with *any* private pension income.<sup>23</sup> Figure 3.11 shows that between 1997-98 and 2011-12, the share of pensioners who received income from private pensions rose by 9-12ppts

<sup>23</sup> Appendix Figure C.1 shows that among low-income pensioners with private pensions, average private pension incomes barely changed over this period.

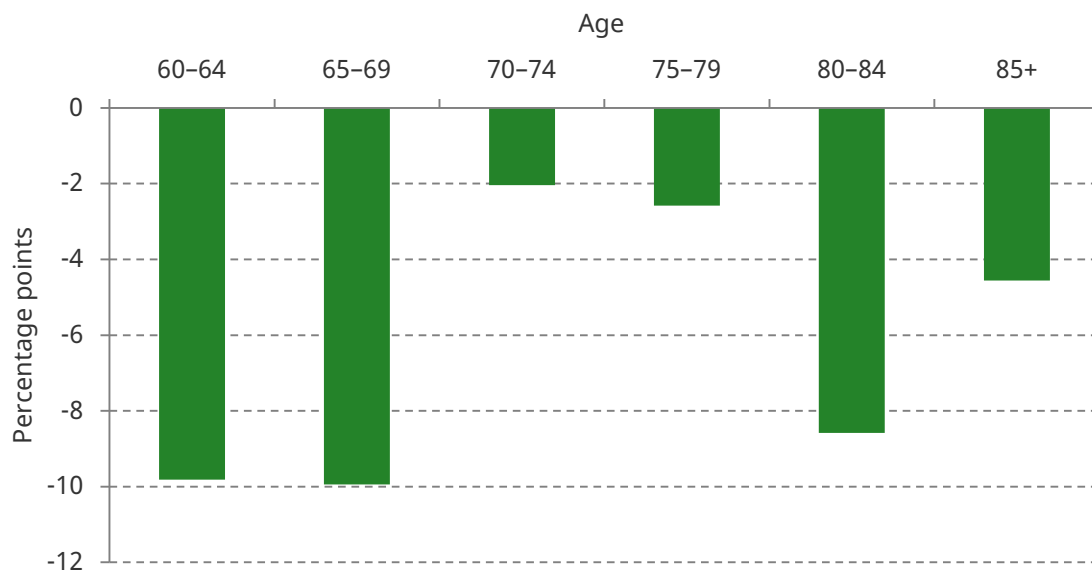
**Figure 3.11. Change in share of pensioners with private pensions by household income quartile**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Pensioners with private pensions are defined as those receiving any income from private pensions.

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

**Figure 3.12. Change in share of pensioners with private pensions in bottom quartile of household incomes, 2014-15 to 2017-18**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Pensioners with private pensions are defined as those receiving any income from private pensions.

Source: Authors' calculations using the Family Resources Survey, 2014-15 and 2017-18.

across all income quartiles. This share remained broadly unchanged in the bottom two income quartiles between 2011–12 and 2014–15, but rose by 3–4ppts among pensioners in the top two income quartiles. Between 2014–15 and 2017–18, the share of pensioners with private pensions in the bottom income quartile fell each year, resulting in a total fall of 5ppts over the period. The share of pensioners with private pensions also fell in the second and top income quartiles, driven by recorded falls in 2017–18.

One reason for the fall in private pension income might be the introduction of ‘pension freedoms’, which were announced in March 2014 and introduced in April 2015. Pension freedoms allowed individuals with defined contribution (DC) pensions to draw down the whole amount as a lump sum, rather than as an annuity, which means that pensioners who opted to do so would no longer be recorded as receiving private pension incomes in the survey data. However, this would only really affect younger pensioners, i.e. those who had not already annuitised their DC pension pots.

But, as shown in Figure 3.12, the decline in the share of pensioners with private pensions was also seen across older pensioners, with a large fall among pensioners aged 80–84. Appendix Figure C.2 shows that among the cohort of pensioners born in 1935–39 (aged 78–83 in 2017–18), the prevalence of private pensions declines in their late 70s. This makes them less likely to have private pensions at older ages than the previous cohort, even though they were more likely to have private pensions in their early 70s. More generally, there is a downturn in the share of pensioners with private pensions in many cohorts, driven particularly by the data in 2017–18. This is surprising as we would not normally expect the prevalence of private pensions to decline within a cohort as it ages.<sup>24</sup>

It is hard to rationalise exactly why the receipt of private pension incomes has fallen in recent years. The decline among younger pensioners may (or may not) reflect the introduction of pension freedoms, but this cannot explain the recorded falls among older pensioners, most of whom will have already annuitised their pension pots. It is possible that it partly reflects random variation in the data. It is also possible that the drop reflects a data quality issue – especially with the latest (2017–18) data – something we will continue to monitor in the coming years. We suggest that DWP investigates whether it believes there are data quality issues surrounding the questions relating to private pensions, particularly in the light of pension freedoms.

### Housing costs

A rise in housing costs among low-income pensioner households further reduced incomes measured after housing costs are deducted at the bottom of the income distribution and contributed to rising relative AHC pensioner poverty.

Housing costs include rent, mortgage interest payments, buildings insurance payments, water rates, ground rent and service charges. For low-income households that rent their homes, housing costs will affect the amount of housing benefit they receive. As explained in the introduction to this chapter, a rise in housing costs that is covered by an equivalent rise in housing benefit would not affect the household’s total AHC net income. As such, in

<sup>24</sup> The cohorts presented in Appendix Figure C.2 are synthetic cohorts based on multiple cross-sectional surveys, not a panel over time, so non-random deaths may bias the results. This is known as ‘survivor bias’. However, to the extent that we would expect richer pensioners to both be more likely to have private pensions and live longer, this should result in the observed share of private pensions increasing – not decreasing – at older ages.

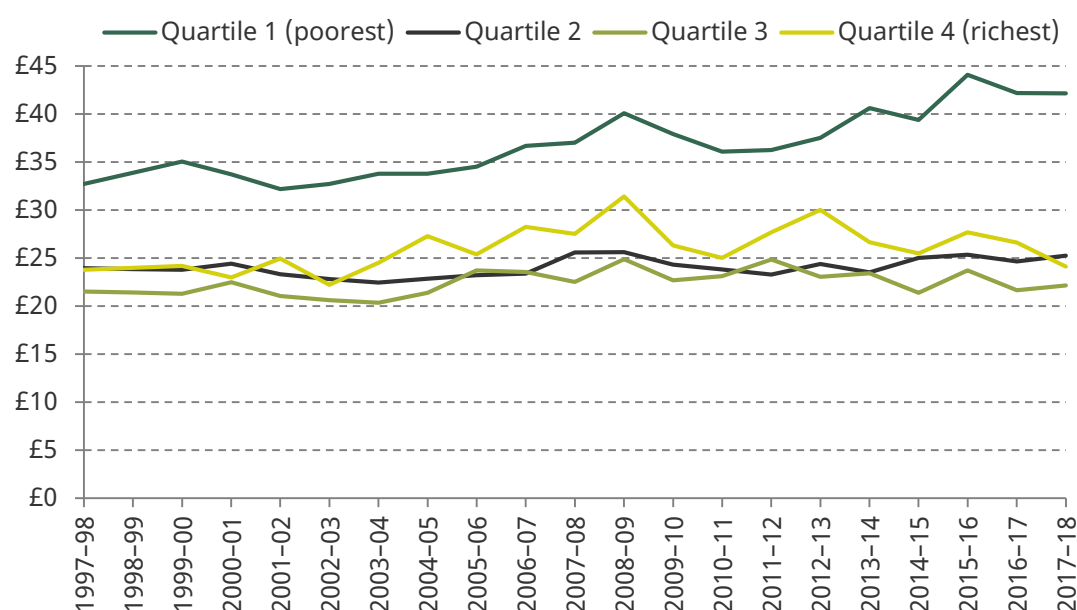


this subsection, we focus on housing costs that households pay out-of-pocket, net of any housing benefit received from the state.

Figure 3.13 plots average weekly housing costs net of housing benefit (adjusted for inflation and household size) by pensioners' household income quartile since 1997–98. There are two main things to note. First, the poorest quartile of pensioners spend considerably more on housing than do higher-income pensioners. Even net of housing benefit, average weekly housing costs are considerably higher among the poorest 25% of pensioners than among those in higher income quartiles.<sup>25</sup> As shown in Figure 3.14, this is because poorer pensioners are much more likely to rent their homes, whereas higher-income pensioners are much more likely to own their own home (usually 'outright', i.e. without a mortgage). Renting entails much higher housing costs than homeownership that are not fully covered by housing benefit. In 2017–18, average (equivalised) housing costs net of housing benefit were £122 and £55 per week for households in private and social rental accommodation respectively, compared with just £18 per week for homeowners.

Second, housing costs have risen over the last several years among the poorest 25% of pensioners, but have remained broadly constant among higher-income pensioners. Average housing costs (net of housing benefit) in the bottom quartile rose by 16% between 2011–12 and 2017–18, compared with just 1% in the entire pensioner population.

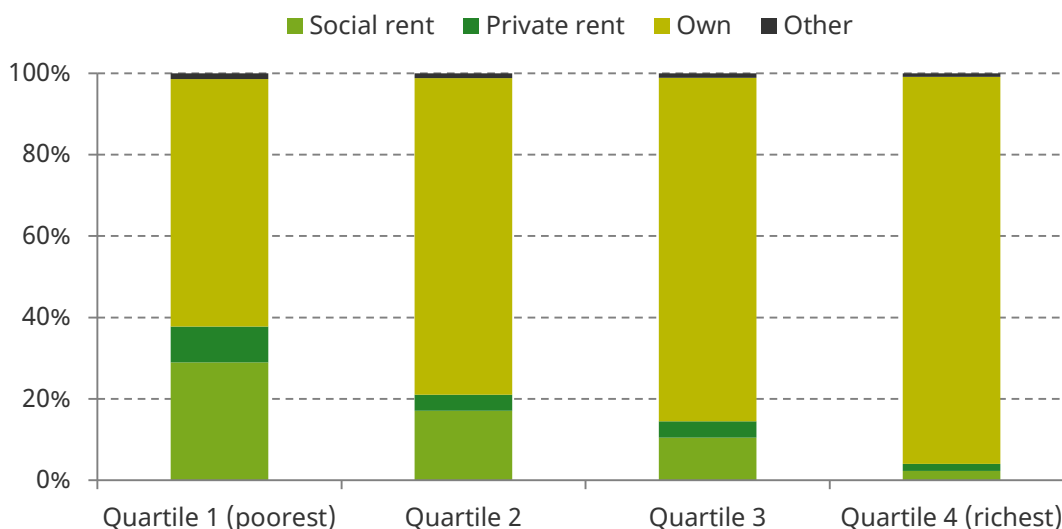
**Figure 3.13. Real equivalised weekly housing costs (net of housing benefit) by household income quartile since 1997–98**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Housing costs are deflated using AHC deflators and equivalised using the modified OECD equivalence scale. Data for 1998–99 are missing and imputed as an average of housing costs in each quartile for 1997–98 and 1999–2000.

Source: Authors' calculations using the Family Resources Survey, 1997–98 to 2017–18.

<sup>25</sup> The difference in total housing costs – gross of housing benefit – is much greater. Average total housing costs among the poorest quartile of pensioners are 80% higher than those among the second quartile, and 2.2–2.7 times higher than the top two quartiles.

**Figure 3.14. Pensioners' tenure by household income quartile, 2017-18**

Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Housing costs are equivalised using the modified OECD equivalence scale. The 'other' category includes living rent-free with friends and relatives and squatting.

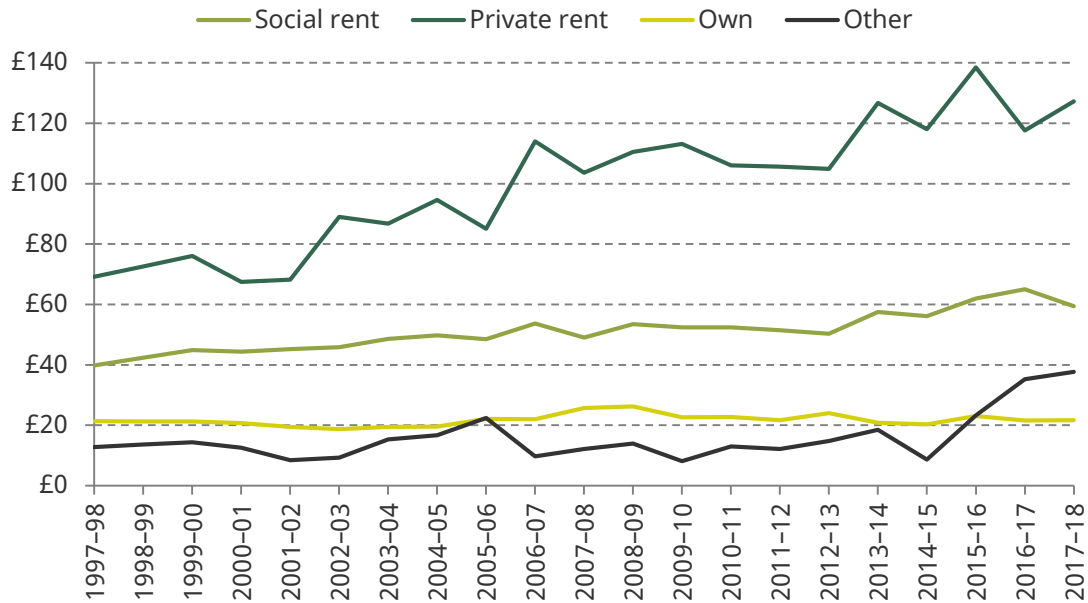
Source: Authors' calculations using the Family Resources Survey, 2017-18.

The relative stability of housing costs among low-income pensioners between 1997-98 and the early 2010s reflects two countervailing trends: (1) a large increase in social and private rents, offset by (2) a shift away from social renting towards homeownership.

1. Figure 3.15 shows that for the poorest 25% of pensioners, housing costs of socially rented accommodation – net of housing benefit and adjusted for inflation and household size – rose by 29%, from £40 per week in 1997-98 to £51 per week in 2011-12. For low-income pensioners living in privately rented accommodation, weekly housing costs rose by 53%, from £69 in 1997-98 to £106 in 2011-12.
2. However, the share of pensioners in the bottom quartile of household incomes living in socially rented accommodation fell dramatically between 1997-98 and 2011-12, by 16ppts, whilst the share who owned their homes increased by a corresponding amount (Figure 3.16). As Appendix Figure C.3 shows, this reflects rising homeownership among successive cohorts of pensioners born between 1920 and 1939. Because housing costs are much lower for owner-occupied than for socially rented homes, this change in housing tenures among low-income pensioners offset the increase in social and private rents.

In contrast, in the period between 2011-12 and 2017-18, rising rents were no longer offset by changes in housing tenure composition. Social and private rents for pensioners in the bottom quartile continued to rise, to £59 and £127 per week in 2017-18 respectively. But the composition of housing tenure changed little over these years – as homeownership rates stabilised among cohorts of pensioners born since 1940 – and if anything served to increase housing costs. Figure 3.16 shows that between 2011-12 and 2017-18, the share of low-income pensioners who lived in socially rented and owned accommodation both fell by around 1ppt, whilst the share living in privately rented accommodation (the highest-cost tenure type) rose by 2ppts.

**Figure 3.15. Real equivalised weekly housing costs (net of housing benefit) among pensioners in bottom quartile of household incomes by housing tenure since 1997-98**



Note: Housing costs are deflated using AHC deflators and equivalised using the modified OECD equivalence scale. The 'other' category includes living rent-free with friends and relatives and squatting. Data for 1998-99 are missing and imputed as an average of housing costs in each tenure type for 1997-98 and 1999-2000.

Source: Authors' calculations using the Family Resources Survey, 1997-98 to 2017-18.

**Figure 3.16. Change in housing tenure composition among pensioners in bottom quartile of household incomes**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. The 'other' category includes living rent-free with friends and relatives and squatting.

Source: Authors' calculations using the Family Resources Survey, 1997-98 to 2017-18.

**Table 3.2. Change in real equivalised weekly housing costs net of housing benefit for pensioners in bottom quartile of household incomes**

	1997–98 to 2011–12	2011–12 to 2017–18
<b>Overall change (%)</b>	10.7%	16.3%
<b>Percentage point change due to:</b>		
Social rent	13.6	6.5
Private rent	9.9	7.2
Own	0.9	-0.1
Other	0.0	1.2
Housing tenure composition	-13.6	1.5

Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Housing costs are deflated using AHC deflators and equivalised using the modified OECD equivalence scale. The 'other' category includes living rent-free with friends and relatives and squatting.

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

Table 3.2 decomposes the change in housing costs (net of housing benefit) among pensioners in the bottom quartile of household incomes in the last six years, between 2011–12 and 2017–18, and compares this with changes earlier on. Between 1997–98 and 2011–12, increases in social and private rent would have contributed to a rise in housing costs of 14 and 10ppts respectively among the poorest 25% of pensioners. But the change in housing tenure composition – away from social renting and towards homeownership – partly offset this, so that average housing costs increased by just 11% over this 14-year period.

In contrast, between 2011–12 and 2017–18, changes in housing costs for different tenures and the composition of housing tenure both put upward pressure on housing costs for low-income pensioners. Increases in social and private rents contributed to a 14ppt rise in housing costs. The shift from social renting and homeownership towards privately rented accommodation contributed to a further rise of 2ppts, resulting in a total increase in housing expenditure (net of housing benefit) of 16% over just six years.

### 3.3 Conclusion

After recent years of almost continuous improvement, progress towards reducing absolute poverty stalled in the latest year. Absolute child poverty rose by 1 percentage point, driven by falling benefit incomes among households with children, and the share of children classified as materially deprived also rose slightly. As is usual with single-year changes, these upticks are not statistically significant. But they do chime with the timing of reductions in entitlements to benefits and tax credits, most notably the working-age benefit freeze (which started to bite more as inflation rose) and the roll-out of the two-child limit. It will be important to monitor whether the increase in absolute child poverty in the latest year is part of a sustained trend in coming years.

Relative pensioner poverty, which fell from 29% in 1997–98 to 13% in 2011–12, has now risen, albeit gradually, for the fifth consecutive year. It currently stands at 16%, which is

similar to its level just before the financial crisis. The slowdown in income growth among low-income pensioners that underlies rising relative poverty rates is driven by a fall in private pension income. However, upon closer inspection, this looks highly likely to be due to a data quality issue – meaning that the apparent break in trend, which many have begun to remark upon, may in fact be erroneous.

A number of other developments have affected income growth among low-income pensioners since 2011–12, but these approximately offset one another. Pensioners' housing costs have continued to rise, reflecting a sustained rise in private and social rents. Prior to 2011–12, this was offset by a shift from social renting to homeownership, which entails much lower costs. A slowdown in income growth from employment also contributed slightly to lower net income growth among low-income pensioners. However, since 2011–12, these changes were offset by higher incomes from state benefits, due to reforms that made the state pension more generous. That is, had it not been for the observed fall in private pension income – which may reflect data quality issues – incomes among low-income pensioners would have likely continued to grow at a similar rate to the years prior to 2011–12.

It is hard to say how poverty will change in the coming years, partly because of uncertainty over changes in the macroeconomy and the labour market. That said, a number of working-age benefit reforms are likely to suppress the incomes of low-income non-pensioner households. The 'benefit freeze', which has continued into 2019–20, is expected to further reduce the real value of working-age benefits and tax credits. The two-child limit, which affects children born after 5 April 2017, will also start to affect more households in the years to come.

Benefit entitlements under universal credit (UC) are, on average, less generous than the legacy benefits it replaces. However, the Office for Budget Responsibility (OBR) estimates that there will be higher benefit take-up under UC. This combined with other effects means that the move to UC is expected to lead to higher benefit payments on average.

The rise in employment – which has bolstered incomes at the bottom end in recent years – is forecast to come to an end. The Office for Budget Responsibility (2019) forecasts some earnings growth over the next few years (of around 3% a year in nominal terms between 2019 and 2021), and increases in the National Living Wage will boost earnings among low-wage workers. However, because earnings are a more important source of income for middle- and high-income households than for the poorest households, this may not translate into a large reduction in poverty. Indeed, a rise in average incomes due to high earnings growth, coupled with a reduction in benefits among low-income households, may lead to a rise in relative poverty. Having said that, OBR forecasts have been wrong before, and if employment or earnings growth again turns out differently from expected then the outlook could be very different, particularly with uncertainty regarding the UK's departure from the European Union.

## 4. Severe poverty

### Key findings

- **Measuring severe poverty is challenging because surveys struggle to capture those with very low living standards – and so we investigate several measures.** ‘Headline’ relative income poverty is defined as having a household income below 60% of the median. We use three sorts of severe poverty measures: very low household income (below 50% or 40% of median), low household expenditure, and ‘material deprivation’ – defined as not being able to afford basic items (e.g. keeping the home warm or saving £10 each month). These are not measures of ‘destitution’ – such as homelessness or malnutrition – but of having living standards meaningfully below those at the headline poverty line.
- **Those with the lowest incomes do not always have the lowest living standards** – of those in severe income poverty, only about half are ‘materially deprived’ or in expenditure poverty. Part of the reason for this is that some of those with low incomes are only temporarily on low income (e.g. because they are between jobs) and so can maintain their living standards.
- **Material deprivation has clearly declined among working-age families since 2010–11.** Rates of material deprivation in 2017–18 were a fifth lower than in 2010–11. This decline is seen across all items, including those that seem most indicative of severe poverty (such as keeping the home warm and keeping up with bills). Declines in material deprivation were seen across the income distribution.
- **Headline income poverty, and income and expenditure measures of severe poverty, all suggest relatively little change since 2010–11.** This is in contrast to the falls seen in material deprivation. There is some (tentative) evidence that one reason for the difference may be that the items that material deprivation measures track access to have become cheaper (in real terms). In any case, these results suggest that a growth in severe poverty is not ‘hiding’ behind the little change seen in headline poverty.
- **In broad terms, the regions and nations of Great Britain that have more headline poverty also have more severe poverty.** London has the highest rate of poverty across all poverty measures, and the rest of the South the lowest. However, severe poverty is more concentrated in London than is headline poverty: the headline poverty rate in London is 31% higher than elsewhere in GB, but the rates of more severe forms of income and expenditure poverty and material deprivation are 37–47% higher.

- **Social renters account for a larger share of those in severe poverty than they do those in headline poverty – but severe poverty is increasingly becoming about private renters.** Headline income poverty is roughly equally split between social renters, private renters and owner-occupiers. But among those in the most severe forms of poverty, social renters outnumber private renters at least three to two. However – just as with headline poverty – this pattern is changing: in 2004–05 private renters made up 16–23% of those in severe poverty (depending on the measure used), but by 2017–18 this share had grown to 26–36%.
- **Compared with headline poverty, severe poverty is more concentrated among workless households than working households – but again this is a pattern that is changing.** Those in working households make up just under 60% of those in headline income poverty, but slightly (2–7 percentage points) less of those in more severe forms of poverty. However, they are accounting for a growing fraction of both: between 2004–05 and 2017–18, the share of those in headline poverty that are in working households grew by 10 percentage points (from 48% to 58%), and for severe poverty it grew by 5–26 percentage points (depending on the measure).

In the previous chapter, we discussed trends in poverty, using official measures under which someone is declared as in poverty if their income is below 60% of median income either in the year they were surveyed (relative poverty) or in 2010–11 (absolute poverty). Through this chapter, we term these measures of ‘headline’ income poverty.

But living standards vary among those who are in poverty, with some in more severe poverty than others. In this chapter, we attempt to measure severe poverty to analyse how it has changed over time and how its composition is different from the composition of those who are in headline income poverty.

Whereas there are official definitions of income poverty, there are no official definitions of severe poverty. Moreover, for reasons discussed in Section 4.1, severe poverty is difficult to measure. For both of these reasons, we present several measures of severe poverty – some based on income, others on expenditure and others on reported levels of material deprivation. Each of these tells us something different about those with very low living standards, and no one of them is definitive.

It is worth noting that the survey data we use do not permit us to analyse those in the most extreme forms of poverty (such as homelessness). What we can do is to look at the frequency and circumstances of those with material living standards that are meaningfully below those at the headline poverty line.

There are alternative statistics which do, in different ways, attempt to measure the most extreme forms of poverty. The government produces statistics on rough sleeping in England, which suggests that in Autumn 2018 there were around 4,700 rough sleepers, up

from 1,800 in 2010.<sup>26</sup> The Trussell Trust, a network of foodbanks, states that in 2018–19 it distributed 1.6 million food packs, up from 61,000 in 2010–11 and 3,000 in 2005–06.<sup>27</sup> These figures are difficult to interpret since there has also been an enormous growth in the number of foodbanks in the Trussell Trust network over the period, so it is not clear to what extent increased usage reflects greater frequency of severe poverty or greater availability of foodbanks (although, of course, the former may cause the latter).<sup>28</sup> The Joseph Rowntree Foundation has funded research into what it calls ‘destitution’, which suggests that 1.5 million people were destitute at some point in 2017 (Fitzpatrick et al., 2018).

The rest of this chapter proceeds as follows. Section 4.1 discusses the measures of severe poverty that we use in this chapter. Section 4.2 analyses the trends in these different measures. Section 4.3 compares severe poverty across different regions of Britain. Section 4.4 looks at the composition of those in severe poverty and compares it with the composition of those in headline income poverty. Section 4.5 concludes.

## 4.1 Measuring severe poverty

By definition, there are more people in ‘headline’ poverty than there are in severe poverty. As a result, measuring severe poverty is a more challenging task, since we are looking at a smaller share of the population. The problem is compounded by the fact that the typical instrument used to measure poverty – household surveys – may particularly struggle to find and get accurate information on those who are in more severe forms of poverty. For example, these surveys are limited to the household population, and so do not include the homeless and those in residential care or prison. More broadly, the reporting of incomes at the very bottom of the household income distribution is known to be poor (Brewer, Etheridge and O’Dea, 2017).

Because of these challenges, we present several measures of severe poverty, each of which has advantages and disadvantages.

### Income measures

Headline relative poverty is defined as having an equivalised household net income below 60% of the contemporaneous median. For income-based measures of severe poverty, we use thresholds of 50% and 40% of the median. As Belfield et al. (2015) argue, after-housing-costs (AHC) income probably gives a better indication of poverty rates, and this is only more true for severe poverty; so we focus on AHC measures in this chapter. Income measures of severe poverty have the advantage of being straightforwardly comparable to standard relative poverty.

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<sup>26</sup> <https://www.gov.uk/government/statistical-data-sets/live-tables-on-homelessness>. These statistics relate to the number of people rough sleeping at a particular point in time – a ‘snapshot’. The data are based on ‘street counts’ performed by local authorities and Homeless Link.

<sup>27</sup> See <https://trusselltrust.org/wp-content/uploads/sites/2/2015/06/BIGGEST-EVER-INCREASE-IN-UK-FOODBANK-USE.pdf> and <https://www.trusselltrust.org/news-and-blog/latest-stats/end-year-stats/>. These numbers will be greater than the number of people who used Trussell Trust foodbanks, since the same person can use a foodbank more than once; on the other hand, foodbanks not in the Trussell Trust network are not included.

<sup>28</sup> Forsey, 2014.



However, measures of severe poverty that are based on low levels of income are at a disadvantage because they are sensitive to those recorded as having a low income who may not have low living standards. This can occur for people with temporarily low income (e.g. an individual out of work for a short period of time) or for those whose income has been mismeasured. Research in the UK and the US suggests that measurement error is often a key cause of very low measured incomes.<sup>29</sup> These problems also affect headline measures of income poverty, but they are more problematic for severe poverty measures since they likely relate to a larger share of those recorded as having very low income.

### Expenditure measures

We also present a number of measures of poverty based upon equivalised household expenditure. As with income poverty, we use non-housing expenditure and define poverty as having an expenditure below different percentages of the median, with lower percentages indicating more severe poverty.<sup>30</sup> There are several advantages to this sort of expenditure measure. In so far as material living standards are comprised of (or at least strongly affected by) the goods and services that a household consumes, expenditure better approximates this concept than income. Expenditure measures also deal with temporary periods of low income better than income measures. The individual between jobs discussed above might be recorded as being in income poverty but, if they maintained their expenditure while out of work, they might not be recorded as being in expenditure poverty.<sup>31</sup>

While expenditure is, like income, subject to measurement error, Brewer and O’Dea (2012) give several pieces of evidence that suggest that it is measured more reliably than income, at least for those with the fewest resources. First, households with very low expenditure do have very low incomes, but those with very low incomes do *not, on average*, have very low expenditure (or very high material deprivation rates). Second, the poorest households also get a substantial share of their income from benefits, and household surveys are known to under-record benefit receipt. Third, while spending in household surveys is under-recorded relative to that suggested by the National Accounts, the goods and services that are *best* recorded in household surveys – as shown in Brewer and O’Dea (2012) – are those that make up the largest budget shares for poorer households (such as food and fuel). Fourth, Meyer and Sullivan (2012) compare income- and consumption-based measures of poverty in the US, and show that households that are in consumption but not income poverty are more likely to have other indicators of deprivation.

<sup>29</sup> For example, Brewer, Phillips and Sibieta (2010) show that those with incomes below 40% of the median are less likely to be materially deprived than those with incomes between 40% and 60% of the median, and that zero or negative incomes are often driven by implausibly high student loan repayments or private pension contributions. Brewer, Etheridge and O’Dea (2017) show that reported receipt of benefits and tax credits is significantly below that recorded by administrative data, and a substantial fraction of workers report earnings and hours that imply hourly wages below the minimum wage; both of these factors are suggestive of mismeasurement of income. Meyer and Sullivan (2003), writing in the US context, show that those at the bottom of the income distribution on average report expenditures considerably higher than their income, despite little evidence that they have much savings or debt.

<sup>30</sup> To measure non-housing expenditure, we deduct rent and all mortgage repayments from expenditure. This is in contrast to the measurement of incomes, where we deduct rent and mortgage interest payments (but not capital repayments) to obtain AHC incomes. This is because repaying the capital on a mortgage is best thought of as a form of saving; so it should be deducted from expenditure (as saving is not spending), but should not be deducted from income (because it is not a housing cost).

<sup>31</sup> For a further discussion of the relative merits of income- and expenditure-based measures of living standards, see Blundell and Preston (1995).

For all these advantages, expenditure measures of poverty are not without problems. Ultimately, we would want a measure of consumption of goods and services, not expenditure on them. The two can differ for a number of reasons. High-cost durable goods (such as cars) are purchased at one point in time – giving the household a high expenditure at that point – but are used (or ‘consumed’) for a longer period. Households can also face different prices, meaning that the same amount of expenditure can result in different amounts of consumption. Some goods and services are produced at home without any monetary expenditure (such as childcare provided by a parent).<sup>32</sup> Households can receive goods and services in kind (e.g. non-cash gifts), which is a form of consumption but will not show up in their expenditure.<sup>33</sup> In the analysis below, we simply use expenditure, rather than attempt to construct a measure of consumption, though we show in Appendix Figure D.1 that trends in expenditure poverty are little changed if we exclude durable goods.

Another disadvantage of expenditure measures of poverty is that we have to use the Living Costs and Food Survey (LCF), which unfortunately has a sample size of less than a third the size of the Family Resources Survey (FRS) which we use for income measures. Brewer and O’Dea (2012) have shown that total spending implied by the LCF is making up a declining fraction of aggregate spending in the National Accounts. Since we focus on measures of relative poverty, this will only affect our analysis of poverty trends if the declining coverage rates affect low- and middle-expenditure households differently. It is quite possible that this is the case, but since we do not have an alternative source to validate the distribution of spending there is no way to know.

Despite these difficulties, previous research has concluded that measuring very low living standards using measures of expenditure poverty is less problematic than using income poverty lines to capture severe poverty. Indeed, Brewer and O’Dea (2012) state that ‘Although the LCFS [Living Costs and Food Survey] provides a limited number of alternative measures of living standards, overall we conclude emphatically that having a low recorded consumption is a better guide to who has a low living standard than having a low reported income’.

### Material deprivation measures

Lastly, we present measures of severe poverty using data relating to material deprivation. The material deprivation survey questions are discussed further in Chapter 3, but essentially they ask families whether they have a range of basic items (e.g. keeping their house warm or going on holiday once a year) and, if not, whether that is because they cannot afford it or because they do not want it. Families are categorised as ‘deprived’ of an item if they do not have it *and* they say that this is because they cannot afford it. The answers to these questions are combined together into a single index. These material deprivation measures have the advantage of directly measuring families’ perceptions of their living standards, and are therefore less sensitive to problems such as temporary low income or the purchase of durable goods that affect income- and expenditure-based measures. Moreover, if households face different costs of living in ways we do not adjust for (either different prices for goods and services, or different economies of scale from

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<sup>32</sup> These last two points are illustrated by Aguiar and Hurst (2005), who show that, upon retirement, more time is spent shopping for food (in order to obtain lower prices) and preparing food. This results in food *consumption* changing little at the point of retirement, but food *expenditure* falling.

<sup>33</sup> For further discussion of these points, see Attanasio and Pistaferri (2016).

those implied by the equivalence scales we use), material deprivation measures can pick these effects up.

The material deprivation measures are not without downsides either, particularly with respect to how they are interpreted. Some of the items are clearly subjective (e.g. one asks whether the family ‘replaces worn-out furniture’ – but different people may interpret differently when exactly furniture is ‘worn out’); and there may be systematic differences across the population or across time in how likely a family with a given level of resources is to report being unable to afford an item. Moreover, the precise list of items included is obviously somewhat arbitrary. There are some further technical issues with these measures. First, the set of questions asked of pensioner families is different from that asked of working-age families. This makes it impossible to create a single index that is applicable to the whole population, and so we only present material deprivation measures for those in working-age families. Second, the set of questions used changed between 2009–10 and 2010–11, meaning that we cannot compare material deprivation before and after that time. Third, while there is an official material deprivation index above which a family is considered materially deprived, it is only defined for pensioner families and families with children. We therefore adopt the following approach: we calculate the material deprivation index that 20% of individuals are above in 2009–10, and define a family surveyed before then as materially deprived if they have an index above that threshold. We then calculate the equivalent threshold for 2010–11, and define anyone surveyed after then as deprived if they have an index above that threshold. We then repeat the procedure, calculating the thresholds that 10% of individuals are above in 2009–10 and 2010–11 (which capture families who are more materially deprived). We refer to these measures as material deprivation (lower threshold) and material deprivation (higher threshold) respectively.

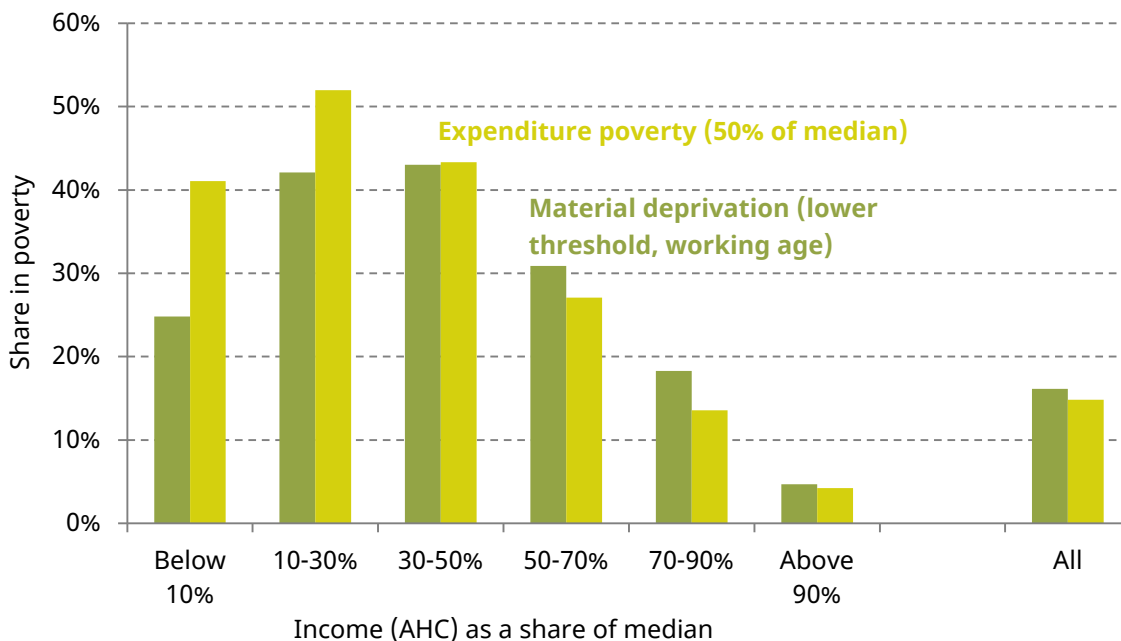
### Comparing measures of severe poverty

Given that the three types of measures of poverty we use are capturing different things, it is not surprising that it is possible for people to be in one form of poverty but not another. This point is illustrated by Figure 4.1, which shows rates of expenditure poverty (with a 50% of median threshold) and material deprivation (among working-age families, using the lower threshold), across the income distribution.

There are two things to note from the figure. First, a large fraction of those in income poverty are not in expenditure poverty or material deprivation and vice versa. If we adopt a 50% of median threshold for income poverty, then by definition everyone in the bottom three income categories is in income poverty and no one in the top three is. But only 45% of those with an income below 50% of the median are in expenditure poverty, and only 40% are in material deprivation. Part of the reason for this is that some of those on low income have savings that they can draw upon to maintain their living standards. Analysis of the Wealth and Assets Survey shows that, of those individuals in (BHC) income poverty, 60% live in households with gross financial assets of at least £1,000, and 20% of at least £14,000.<sup>34</sup>

<sup>34</sup> Authors’ calculations using Wealth and Assets Survey, 2016.

**Figure 4.1. Expenditure poverty and material deprivation by AHC income, 2015–16 to 2017–18**



Source: Family Resources Survey, 2015–16 to 2017–18; Living Costs and Food Survey, 2015–16 to 2017–18.

Second, Figure 4.1 shows that those with extremely low incomes (below 10% of the median) are *less* likely to be in expenditure poverty or material deprivation than those with somewhat higher incomes. For example, material deprivation rates are lower for those with incomes below 10% of the median than for those with incomes between 50% and 70% of the median. This underlines some of the points made above: very low recorded incomes are frequently a consequence of mismeasurement, and so income poverty rates that use low thresholds (such as 40% of median) are more susceptible to measurement error than those that use higher thresholds.

It is worth noting that the measures of severe income and expenditure poverty that we use are relative measures of poverty: all else equal, an increase (decrease) in median income or expenditure will mean that the share of those in poverty rises (falls). It is therefore possible for everyone to become better off in absolute terms and severe poverty to increase. Material deprivation is somewhere between absolute and relative poverty: the questions ask about what the family can afford (absolute) but weight the importance of different items by how many people in the population can afford them (relative).

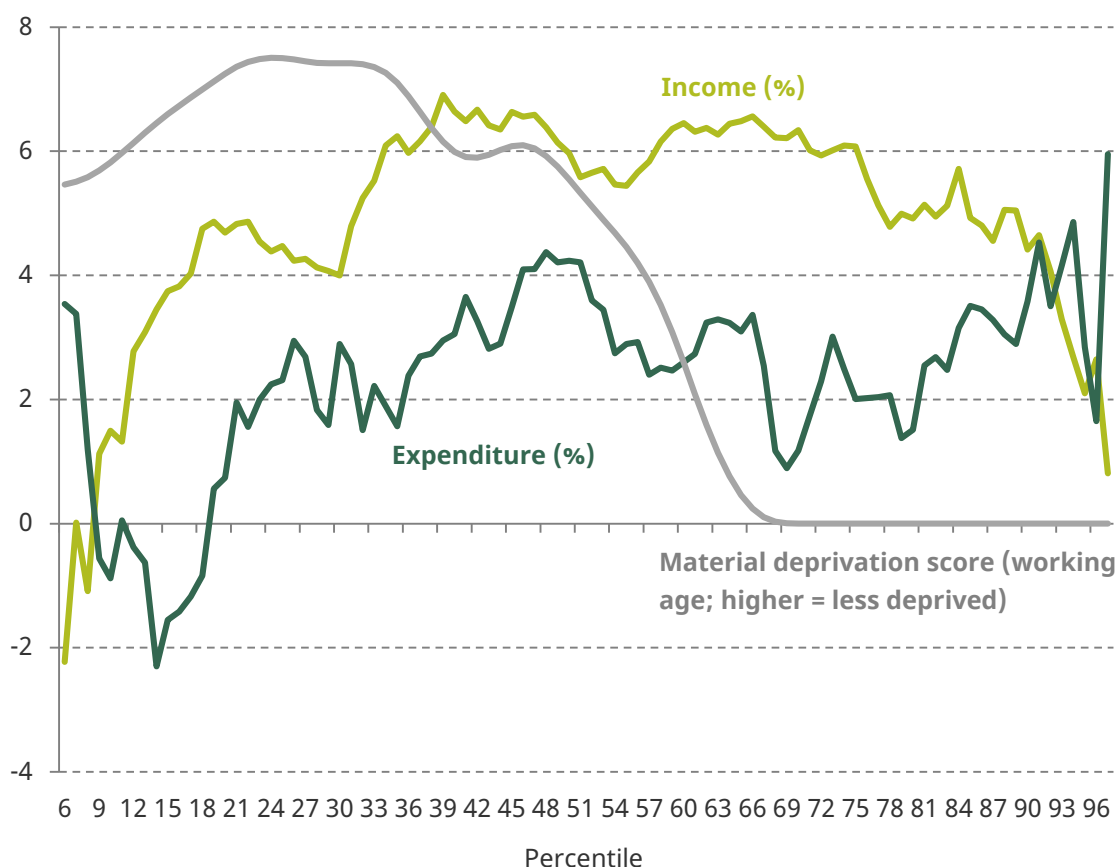
We do not use absolute measures of income and expenditure poverty in this chapter, for two reasons. First, we are analysing a long time period, and absolute measures become less useful over time as income growth means that they capture a dwindling portion of the population. Second, the declining coverage of expenditure in the LCF mentioned above would (all else equal) artificially push absolute expenditure poverty up.

Because we are interested in the trends in these measures of poverty over time, in this chapter we show poverty rates in Great Britain only, because Northern Ireland was not included in the FRS before 2002–03.

## 4.2 Trends in severe poverty

Before examining how different measures of severe poverty have changed over time, we look at how incomes, expenditure and material deprivation have changed between 2010–11 and 2017–18 (the period over which we have a consistent measure of material deprivation). Figure 4.2 shows that income growth has been strongest around the middle of the income distribution (with roughly 6% growth around the 30<sup>th</sup> to 75<sup>th</sup> percentiles) and weakest at the top and bottom. This is relevant for severe measures of income poverty – the 50% of median income poverty threshold is around the 15<sup>th</sup> percentile of the distribution (which grew by 4%) and the 40% of median threshold is around the 10<sup>th</sup> percentile (which grew by 1%). Incomes at the very bottom appear to have fallen over the period but, as shown in Figure 4.1, the people with these incomes do not appear to have low living standards and so we should interpret these results with caution. Patterns in expenditure growth are not too different, although across the distribution there is less growth in recorded expenditure. As discussed in Section 4.1, there is declining coverage of

**Figure 4.2. Percentile point changes in real income, real expenditure and material deprivation between 2010–11 and 2017–18**



Note: Percentiles 1–5 and 98–99 are excluded because of statistical uncertainty. The material deprivation distribution in each of 2010–11 and 2017–18 was smoothed using a locally weighted regression, and the values shown are the difference in the smoothed distributions. A consequence of this is that the figure shows a change in material deprivation up to the 70<sup>th</sup> percentile, though the difference in unsmoothed distributions would show a change only up to the 56<sup>th</sup> percentile. Material deprivation scores have also been reversed, so higher scores imply less deprivation. For expenditure, the figure shows the difference between 2010 and 2017–18.

Source: Family Resources Survey, 2010–11 and 2017–18; Living Costs and Food Survey, 2010 and 2017–18.

expenditure in the LCF; this is likely the cause of expenditure growth being lower than income growth, and so the pattern of growth across the distribution is probably more informative than its level.

Figure 4.2 also shows changes in material deprivation scores over the same period by percentile point of the material deprivation score distribution (material deprivation scores range from 0 to 100). The exact values of these changes do not have a straightforward interpretation, but the figure makes clear that reductions in material deprivation of roughly similar magnitudes have been seen across the bottom half of the distribution.

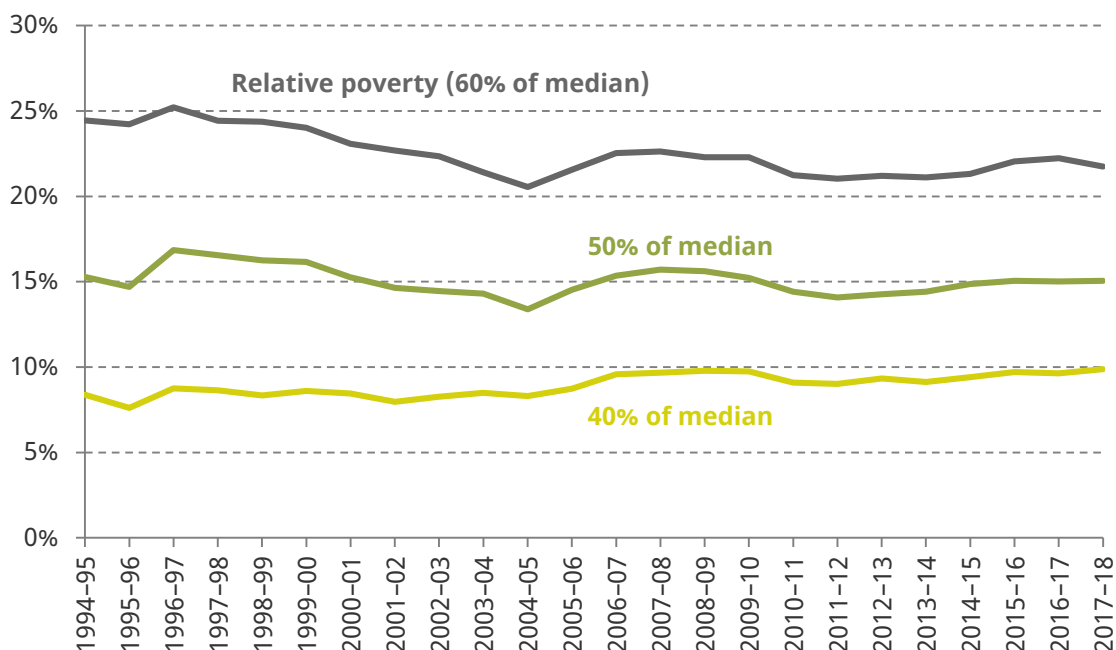
We analyse trends in severe poverty in this section. In Sections 4.3 and 4.4, we shall look at the composition of severe poverty according to different measures.

### Income poverty

Figure 4.3 shows the fraction of individuals who have an equivalised household net income, after housing costs, below 60%, 50% and 40% of median income in the year they were surveyed. 60% of contemporaneous median income is the official relative income poverty line, and so the grey line shows the official relative income (AHC) poverty rate (for Great Britain).

In broad terms, we see a similar pattern for relative poverty and the more severe form of 50% of median income poverty: a decline from the mid 1990s to 2004–05, then an increase over several years before a fall in the wake of the Great Recession, followed by a slight increase over the recovery. Over the period as a whole, relative poverty (60% of median) has declined since the mid 1990s by around 2½ percentage points (ppts), while the fraction of individuals with incomes below 50% of the median is roughly unchanged. The share with incomes under 40% of the median, though, has steadily increased, and so stands around 2ppts higher in 2017–18 than it did in the mid 1990s. However, around a

**Figure 4.3. Income poverty rates, after housing costs (HBAI)**



Source: Authors' calculations using the Family Resources Survey, 1994-95 to 2017-18.

quarter of this increase is driven by those recorded as having incomes below 10% of the median. As shown in Figure 4.1, those with the very lowest incomes are less likely to have very low living standards (as measured by material deprivation and expenditure), so at least some of this increase might not reflect a genuine increase in severe poverty.

Since 2010–11, all three measures of income poverty have seen a slight increase (0.5–0.8ppts). This is consistent with Figure 4.2, which shows middle incomes growing faster than low incomes. But a third of the increase in the most severe form of income poverty (40% of median) is driven by those reporting very low incomes (below 10% of the median), and so even this slight increase is probably an overstatement.

This evidence tentatively indicates that the declines in headline income poverty seen over the past 20 years have not been reflected in more severe forms of income poverty, and that since 2010–11 there has been relatively little change in severe income poverty. However, as discussed in Section 4.1, these measures are more subject to measurement error than headline income poverty. This means that we should interpret these results with some caution, especially those relating to the 40% of median income threshold. While remaining cautious about these results, what we can say is that we do not see large increases in severe income poverty in recent years that are at odds with the trend in headline ‘60% of median’ income poverty.<sup>35</sup>

### Expenditure poverty

We now turn to look at the share of individuals who are in poverty under expenditure-based measures. As with income poverty, we show the fraction of individuals who live in households with an equivalised expenditure below 60%, 50% and 40% of the median, with lower thresholds indicating more severe poverty.

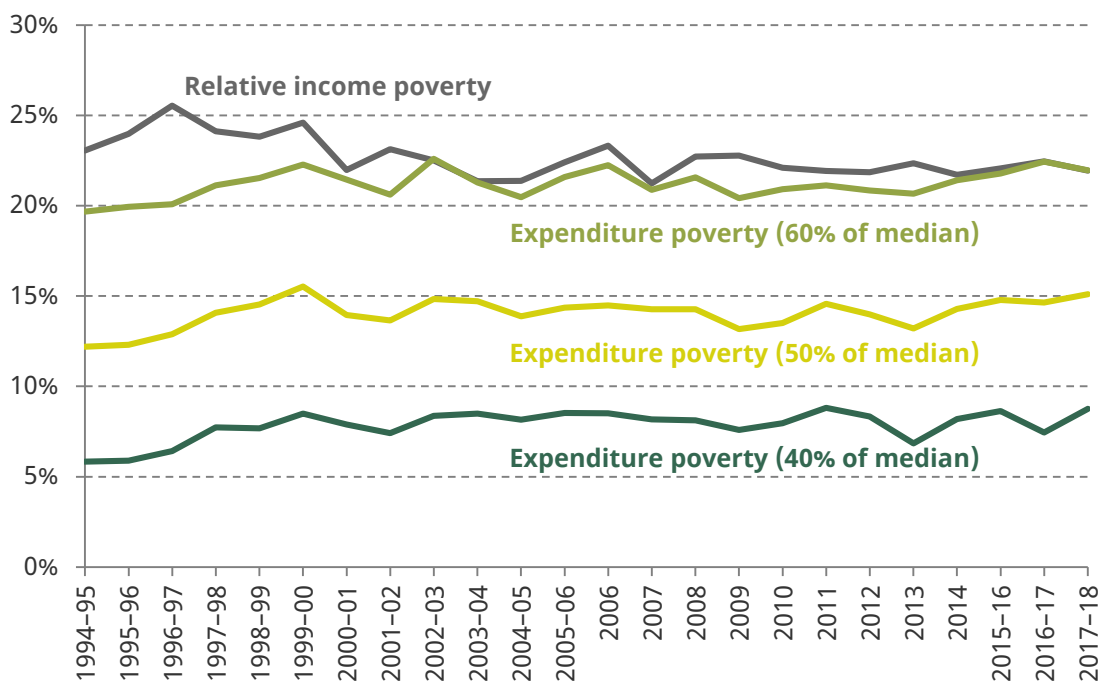
As discussed in Section 4.1, we need to use a different data set – the LCF – in order to measure expenditure. Therefore, as well as several measures of expenditure poverty, Figure 4.4 shows relative income poverty (the share of individuals with an equivalised net household income below 60% of the median) as measured in the LCF. The path is very similar to that seen in the HBAI.

The figure shows that all three measures of expenditure poverty have taken a very similar path: they all rose between 1994–95 and 2003–04 while income poverty fell, and have been roughly constant since then – though they have all shown a small increase since 2010. This is consistent with Figure 4.2, which shows that expenditure grew faster around the middle of the distribution than nearer the bottom between 2010 and 2017–18.

As with severe income poverty, these results suggest that falls in the headline measure of relative income poverty that have been seen since the mid 1990s have not been mirrored by declines in expenditure poverty, including its more severe forms; all three measures of expenditure poverty are in fact 2–3ppts higher in 2017–18 than they were in 1994–95. But

<sup>35</sup> Given that self-employment has been increasing in recent years, and given that self-employment incomes are more likely to be mismeasured than others, one might think that trends would differ for the non-self-employed. However, trends for all three income measures (and material deprivation and expenditure poverty) look similar if we exclude those in households with self-employment incomes. The one exception is that the fall in headline income poverty between 1994–95 and 2004–05 looks about 2ppts larger if the self-employed are excluded.

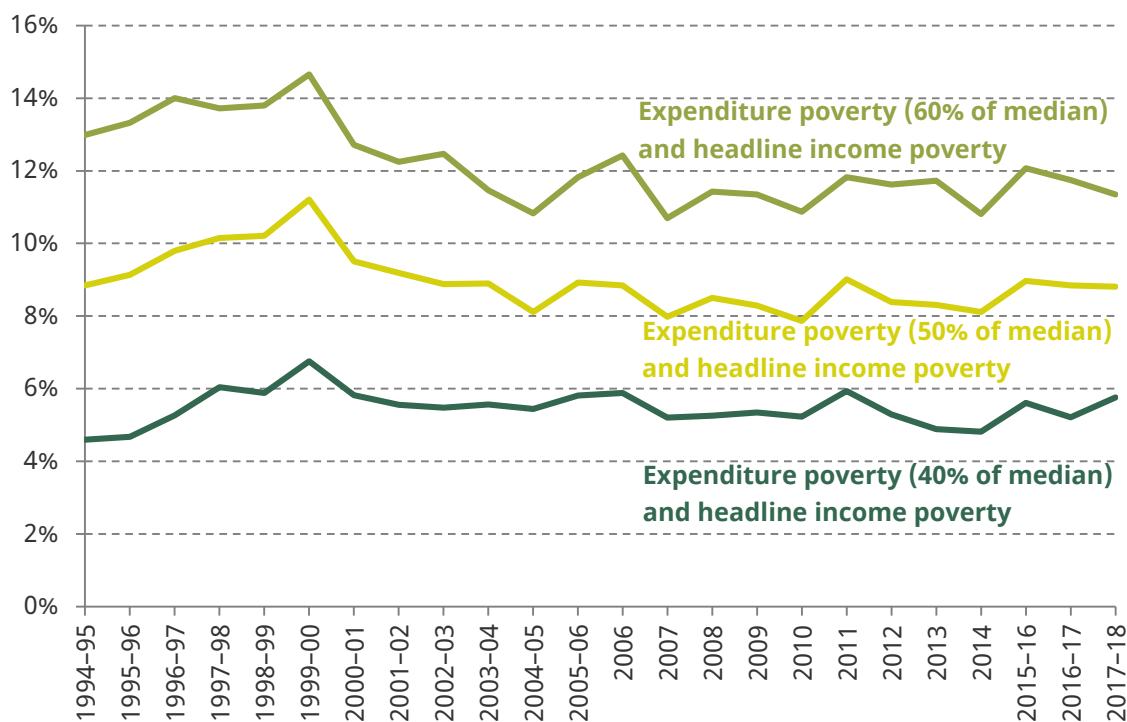
**Figure 4.4. Income and expenditure poverty rates, after housing costs (LCF)**



Note: Relative income poverty shows the fraction of the population with an AHC income below 60% of the contemporaneous median. Expenditure poverty shows the fraction with a non-housing-cost expenditure below 60%, 50% or 40% of the median. Between 2006 and 2014, the Living Costs and Food Survey (and its predecessors) was collected on a calendar-year rather than financial-year basis.

Source: Authors' calculations using the Living Costs and Food Survey and its predecessors, 1994-95 to 2017-18.

**Figure 4.5. Share in both expenditure poverty (various thresholds) and headline income poverty, after housing costs (LCF)**



Note and source: See Figure 4.4.



they again suggest that the relatively small changes in headline income poverty since 2010–11 are not masking more substantial rises in more severe forms of poverty.

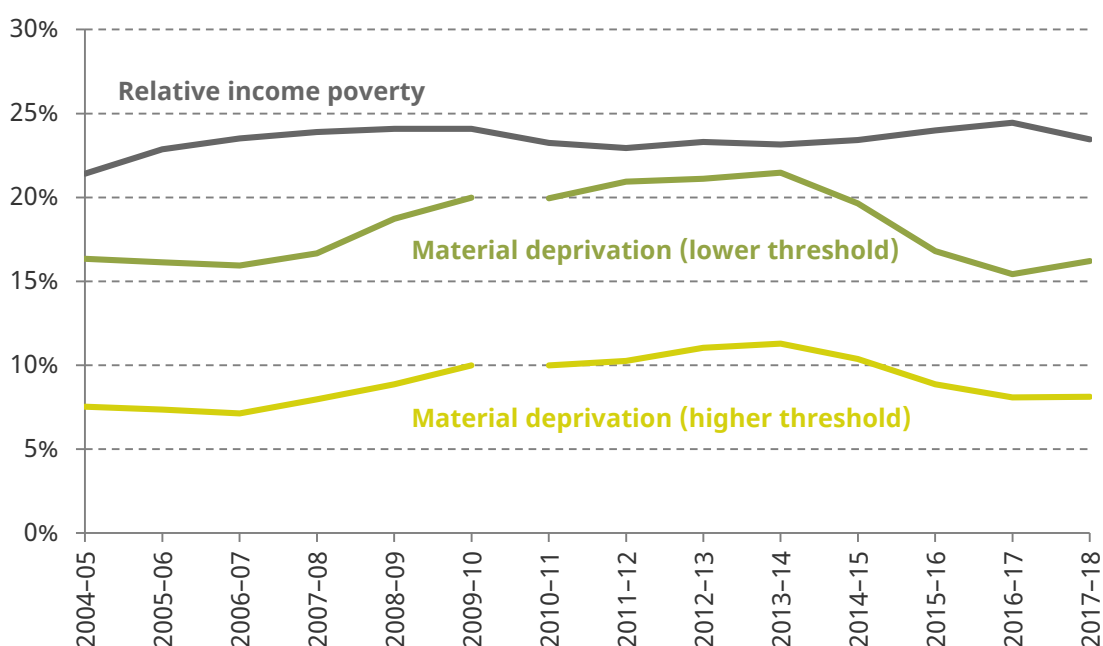
Another way of measuring severe poverty is to combine data from multiple different measures. Figure 4.5 looks at those who are in different measures of expenditure poverty at the same time as being in headline relative income poverty (below 60% of median AHC income). People who are in both expenditure and income poverty are clearly more likely to have very low material living standards than those who are only in one or the other form of poverty, and the former are the people for whom low expenditure is more likely to be due to lack of resources rather than a temporary state or measurement error.

Compared with expenditure poverty alone, these measures suggest even less change in severe poverty since 2010, strengthening the conclusion that severe poverty has been relatively constant over the period.

### Material deprivation

Our final measure of more severe poverty is based on material deprivation. Figure 4.6 shows material deprivation rates and relative income poverty rates for working-age families (because we are only able to analyse material deprivation for this group). As

**Figure 4.6. Income poverty rates (after housing costs) and material deprivation among working-age families (HBAI)**



Note: Figures shown correspond to those in families who answer at least some of the FRS material deprivation questions, and who contain no men aged 65 or older and no women aged 60 or older. Relative income poverty shows the fraction of the population with an AHC income below 60% of the contemporaneous median. Between 2009–10 and 2010–11, there was a change in the material deprivation survey methodology, meaning that periods since 2010–11 cannot be compared with periods before then. Material deprivation (lower threshold) shows the share of individuals with a material deprivation score above that which, in 2009–10 or 2010–11, would result in 20% of the population being materially deprived. Material deprivation (higher threshold) shows the share of individuals with a material deprivation score above that which, in 2009–10 or 2010–11, would result in 10% of the population being materially deprived.

Source: Authors' calculations using the Family Resources Survey, 2004–05 to 2017–18.

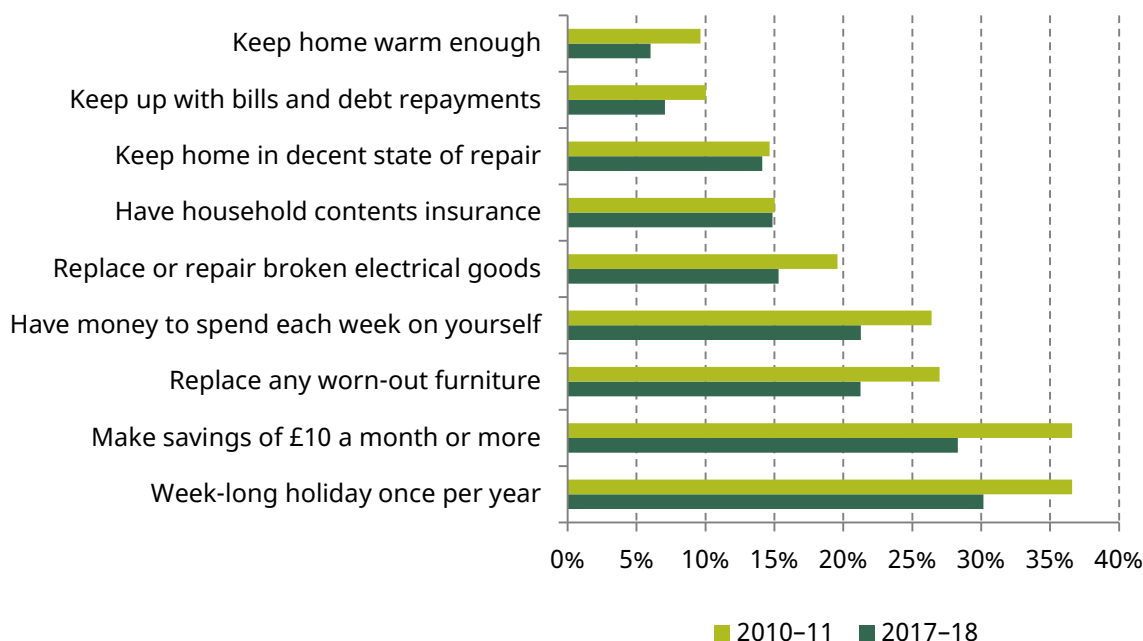
discussed in Section 4.1, we look at ‘higher’ and ‘lower’ thresholds of material deprivation, with the former defined such that 10% of the population are materially deprived in 2009–10 and 2010–11, and the latter such that 20% are materially deprived in those years.

Whichever material deprivation threshold is used, we see a similar pattern. The share of the working-age population that is materially deprived increases in the five years to 2009–10, at a time when there was also a modest increase in relative income poverty among this group. After 2010–11, relative income poverty and material deprivation diverge, with the former seeing little change, and the latter slightly rising up to 2013–14 and then rapidly declining to below its 2010–11 level – consistent with the picture seen in Figure 4.2, which showed improving material deprivation scores across the distribution.

This appears to indicate that material-deprivation-based measures of severe poverty have fallen in recent years even while headline income poverty has been relatively constant. Even though – as noted above – the material deprivation measure is somewhere between a relative and an absolute measure of poverty, these falls are also significantly larger than the falls seen in absolute measures of income poverty in recent years.

We can dig further into these results by looking at what is driving the material deprivation changes: the material deprivation index we use is comprised of nine items, and inability to afford some of them might be more indicative of severe poverty than inability to afford others. To some extent, this is already captured in the material deprivation index – the index is more sensitive to items that more people *do* have – but it is still possible for material deprivation to fall with no change (or even an increase) in the number of people who do not have these most ‘severe deprivation’ items.

**Figure 4.7. Share of those in working-age families who cannot afford various items**



Note: Figures shown correspond to those in families who answer at least some of the FRS material deprivation questions, and who contain no men aged 65 or older and no women aged 60 or older.

Source: Authors’ calculations using the Family Resources Survey, 2010–11 and 2017–18.

Figure 4.7 shows the share of individuals in working-age families who report that they are unable to afford each of the material deprivation items, for 2010–11 and 2017–18. The decline in material deprivation has been seen across all nine items.<sup>36</sup> The items that might be more indicative of more severe poverty – such as ability to keep the home warm or to keep up with bills and debt repayments<sup>37</sup> – have seen falls of a similar magnitude to other items. These results are therefore consistent with the overall results for material deprivation: material-deprivation-based measures of severe poverty suggest that it has declined in recent years.

### Comparing trends

Both income- and expenditure-based measures indicate that the falls in headline income poverty seen since the mid 1990s have not been reflected in severe poverty. In fact, if anything, there has perhaps been a small increase in severe poverty over the period, though mismeasurement of low incomes and the long-term decline in coverage of the LCF mean that we should be cautious about putting too much emphasis on these results.

If we look at trends since 2010–11 (the period over which we can analyse changes in material deprivation), we do not see so consistent a picture. Headline income poverty has seen at most a small increase over the period. The same is also true for more severe forms of income poverty, and for more or less severe forms of expenditure poverty. But material deprivation has fallen, whether we use a higher or lower threshold, or if we look just at those items that we might most associate with severe poverty. These results are even more pronounced if we just look at changes since 2013–14.<sup>38</sup> All this means that there is no evidence of a significant rise in more severe forms of poverty since 2010–11 that is not captured in the official income poverty statistics. Although, as discussed above, we are not able to pick up changes in destitution, or measure those who suffer a series of difficulties that leads to them becoming homeless or sleeping rough.

What accounts for the different patterns for material deprivation and expenditure and income poverty? Figure 4.8 provides some further explanation. It shows material deprivation rates (using the higher threshold) within each income quintile (one-twentieth of the population) in 2010–11 and 2017–18.<sup>39</sup> We clearly see that material deprivation rates have fallen across the income distribution since 2010–11. The overall decline in material deprivation is therefore not accounted for by reduced deprivation among those who are not in poverty – if anything, those in poverty have seen larger reductions.

One possible explanation relates to the prices of the goods and services that the material deprivation measures track. We investigate this point further in Table 4.1, which shows real price changes for a selection of goods and services between 2010 and 2017–18. These goods and services are related to six of the nine material deprivation items (the remaining

<sup>36</sup> Patterns are little changed if we restrict the sample to those with children or those in headline income poverty.

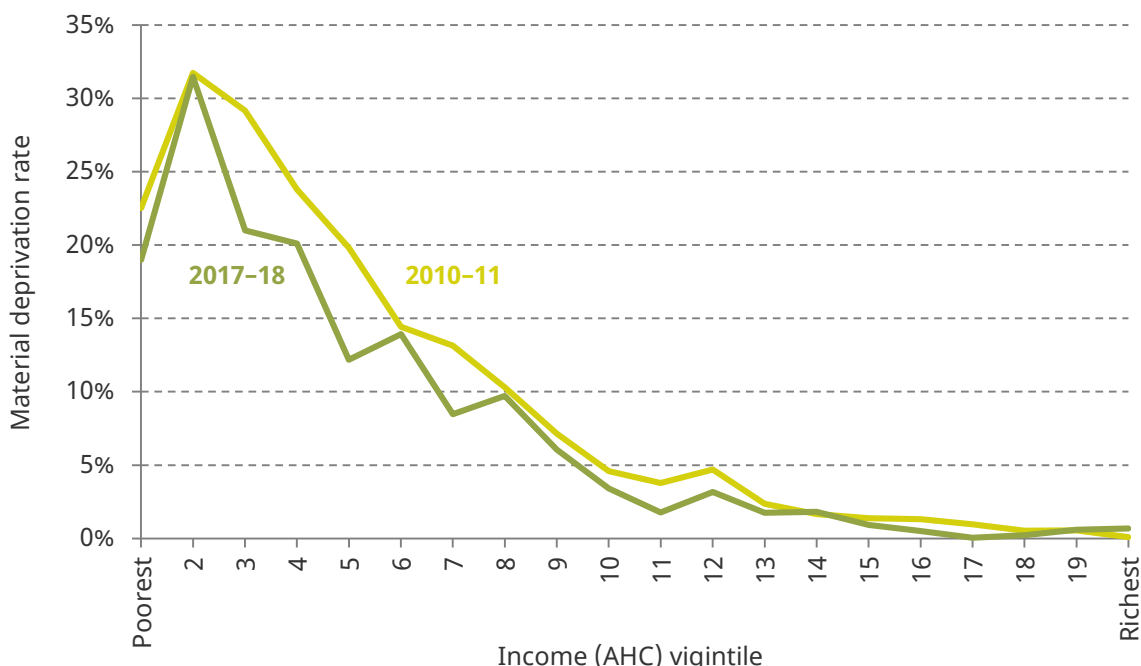
<sup>37</sup> These two items are the ones that get the highest ‘weight’ in the calculation of the material deprivation index, reflecting the fact that inability to afford them is indicative of more severe poverty.

<sup>38</sup> These differences are not a consequence of the material deprivation rates looking at working-age families and the expenditure poverty rates looking at all families. The rise in expenditure poverty among working-age families between 2010 and 2017–18 was slightly larger than that seen for all families.

<sup>39</sup> Patterns look similar if we use the lower threshold, or if we look at material deprivation by real income (rather than income quintile).

three – keeping up with bills, making regular savings and having money to spend on yourself – do not have an obvious associated price index).

**Figure 4.8. Material deprivation (higher threshold) rates by AHC income vigintile**



Note: Figures shown correspond to those in families who answer at least some of the FRS material deprivation questions, and who contain no men aged 65 or older and no women aged 60 or older. Vigintiles (20 equally sized groups) are calculated using the whole population.

Source: Authors’ calculations using the Family Resources Survey, 2010-11 and 2017-18.

**Table 4.1. Real price changes of selected goods and services between 2010 and 2017-18**

Good or service	Real price change, 2010 to 2017-18	Related material deprivation item
Electricity, gas and other fuels	13%	Keep home warm enough
House contents insurance	-20%	Have household contents insurance
Furniture, furnishings and carpets	-3%	Replace any worn-out furniture
Non-durable household goods	-10%	Keep home in decent state of repair
Maintenance and repair of dwelling	-9%	
Appliances and small electric goods	-6%	Replace or repair broken electrical goods
Repair of household appliances	-15%	
Package holiday	-2%	Week-long holiday once per year
Accommodation services	7%	

Note: Prices are deflated using the CPI.

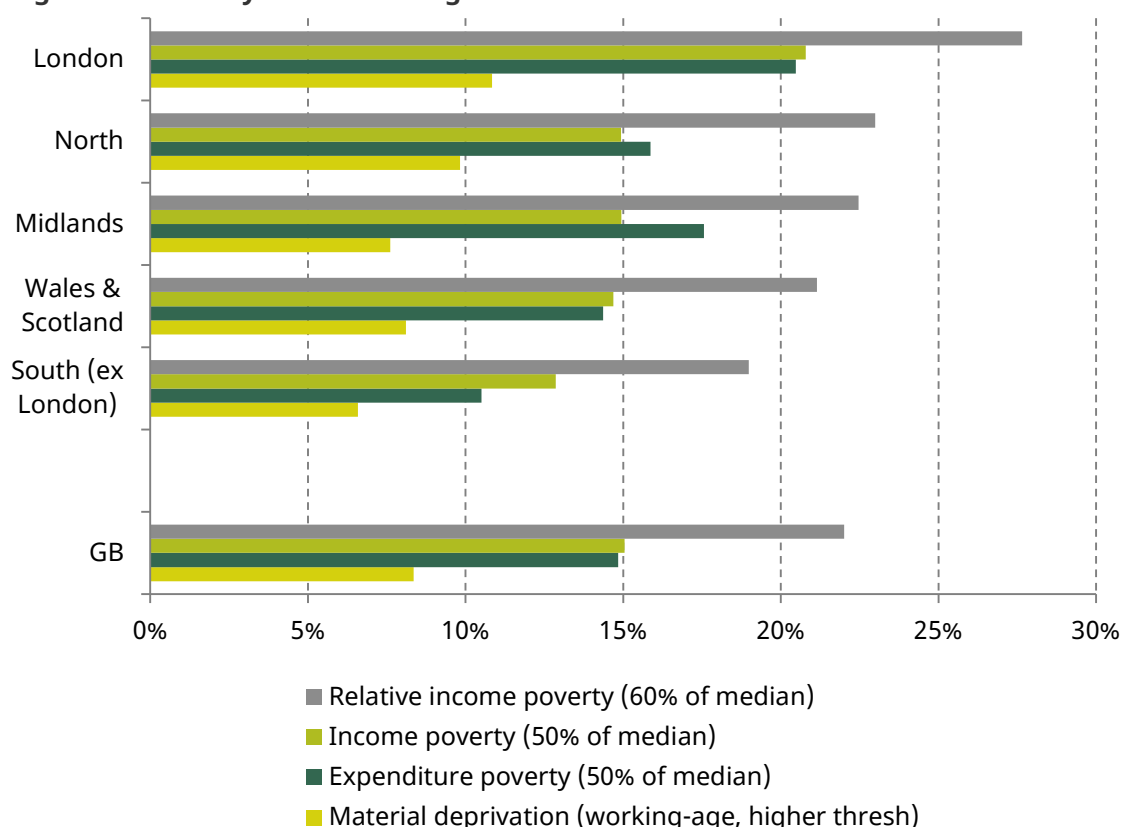
Source: Authors’ calculations using ONS Consumer Prices Index tables.

What the table shows is that – with the exception of household fuels and accommodation services (hotels and similar) – the real prices of these goods and services have all fallen over the period, in some cases by quite large amounts. This suggests that some of the material deprivation items may have become more affordable. This is only suggestive, for at least three reasons: there are three material deprivation items that do not have an easily comparable price; we have seen declines in material deprivation even for the item that has unambiguously become more expensive (keeping the home warm); and these prices will not always straightforwardly correspond to the prices that those in or near material deprivation face. But these results are indicative of a possible explanation of why we have seen a large decline in material deprivation but little change in income or expenditure poverty.

### 4.3 Regional severe poverty

So far, we have been looking at poverty and severe poverty across Great Britain as a whole. But we know that poverty rates differ markedly across the regions and nations of GB (Hood and Waters, 2017). We now analyse whether the same is true for severe poverty. In this section, we have to aggregate some regions and nations in order to make sure that we have a large enough sample size for the analysis to be robust.

**Figure 4.9. Poverty rates in GB regions and nations**



Note and source: See Figures 4.3, 4.4 and 4.6. Relative income poverty (60% of median) and income poverty (50% of median) are measured using HBAI. The material deprivation measure is the 'higher threshold' measure discussed in the note to Figure 4.6. Figures show average poverty rates between 2015–16 and 2017–18.

Figure 4.9 shows poverty rates, using a selection of measures, across GB regions and nations.<sup>40</sup> The main thing to note from the figure is that there is a very strong correlation between headline income poverty and these more severe measures of poverty. Those regions with higher headline poverty rates are also likely to have higher rates of severe poverty, whichever measure is used. Across every measure (and the other measures discussed in Section 4.2 that are not included in the figure), London has the highest rate of poverty and the rest of the South the lowest rate.

While in broad terms regional severe poverty rates reflect headline poverty ones, the composition of poverty does become somewhat more concentrated in some areas as we move from less to more severe forms. Again London and the rest of the South are the outliers. The headline poverty rate is 31% higher in London than in the rest of GB. But the rate for more severe forms of income poverty, expenditure poverty and material deprivation is 47%, 47% and 37% respectively higher in London. The inverse is true for the rest of the South: while the headline poverty rate is 19% lower, the rates for more severe forms of income poverty, expenditure poverty and material deprivation are 20%, 38% and 28% lower.<sup>41</sup>

#### 4.4 Characteristics of those in severe poverty

Given that the declines in headline income poverty over the past 20 years have not been seen in more severe forms of poverty, it is important to know what type of people are in severe poverty and how that differs from those merely in headline income poverty. This is important if policymakers are concerned about understanding the groups that have the lowest material living standards in society. We have already seen how the regions with higher rates of headline poverty tend to have higher rates of severe poverty. We now analyse whether the same is true for those with different housing tenures and household work statuses, in all cases focusing on how the composition of poverty changes as we move from less to more severe forms.

##### Housing tenure

Table 4.2 splits individuals in different definitions of poverty by their housing tenure (using data between 2015–16 and 2017–18). As with the previous section, we also show the composition of relative income poverty for the relevant data set (HBAI or LCF) and demographic category (working-age families or everyone). Because there are slight differences in the composition of relative income poverty across these groups, comparisons of alternative definitions of poverty with headline relative income poverty should be made using the appropriate measure of income poverty. For example, the composition of those in expenditure poverty should be compared with the composition of those in headline relative income poverty according to the LCF, rather than according to HBAI.

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<sup>40</sup> For simplicity, we do not show every variant of the measures that are included in Section 4.2; those not included show similar patterns to those included.

<sup>41</sup> The statistics in this paragraph refer to the variants of poverty shown in Figure 4.9.

**Table 4.2. Composition of individuals in various measures of poverty, by housing tenure***Panel A: All families*

	<b>Socially rented</b>	<b>Privately rented</b>	<b>Owner-occupied</b>
<b>Income poverty (HBAI)</b>			
Relative poverty (60% of median)	35%	32%	33%
50% of median	34%	35%	31%
40% of median	32%	37%	31%
<b>Expenditure poverty (LCF)</b>			
Relative income poverty	37%	33%	30%
Expenditure poverty (60% of median)	34%	27%	38%
Expenditure poverty (50% of median)	37%	29%	34%
Expenditure poverty (40% of median)	42%	28%	30%

*Panel B: Working-age families only*

	<b>Socially rented</b>	<b>Privately rented</b>	<b>Owner-occupied</b>
<b>Material deprivation (HBAI)</b>			
Relative income poverty	36%	37%	27%
Material deprivation (lower threshold)	48%	31%	21%
Material deprivation (higher threshold)	53%	31%	16%

Note and source: See Figures 4.3, 4.4 and 4.6. Rows may not sum to 100% because of rounding. Figures show average poverty composition between 2015–16 and 2017–18.

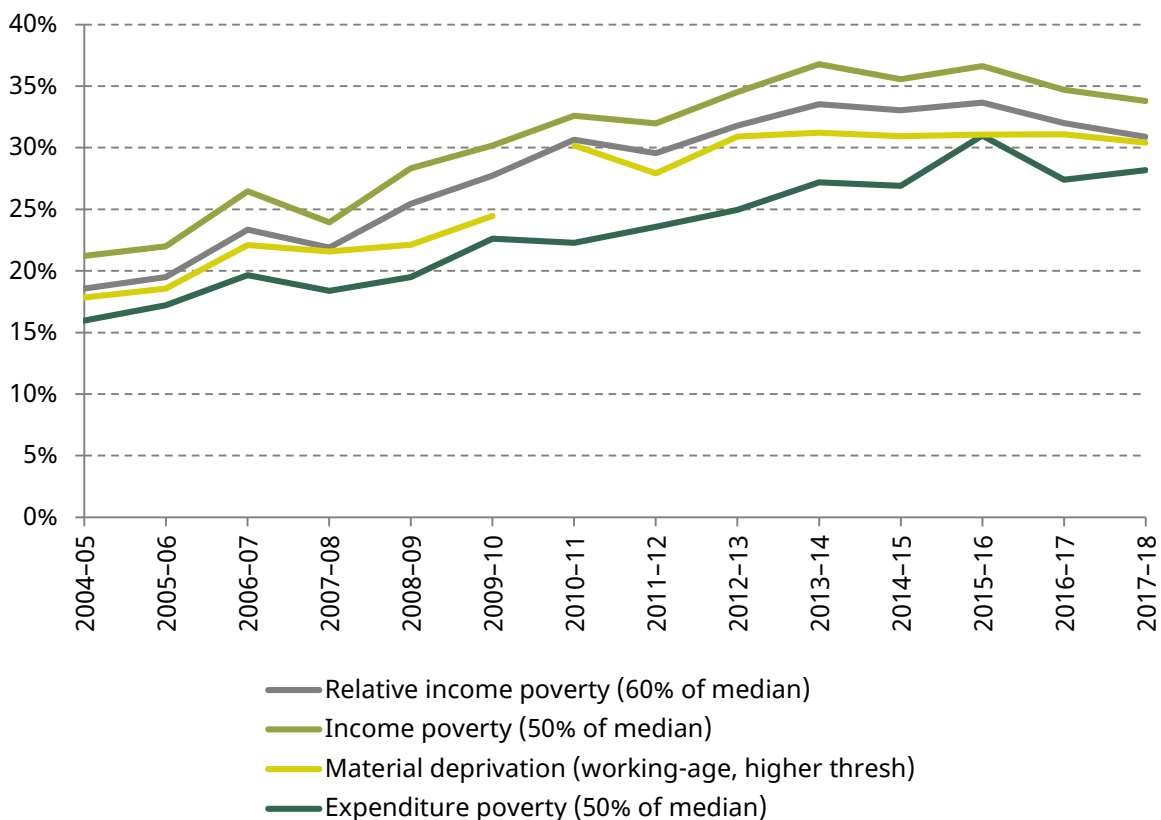
The table indicates that the composition of more severe forms of *income* poverty is more tilted towards private renters than less severe forms. The same is not true for expenditure poverty and material deprivation: as we move from less to more severe forms of these kinds of poverty, we see the concentration of social renters rising.

The discrepancy seems to be driven by private renters who do not report claiming housing benefit. This group makes up 20% of those in headline income poverty and 26% of those in more severe (40% of median) income poverty. If we exclude them, the tenure composition of those in more and less severe forms of income poverty is essentially identical. Conversely, when we move from headline income poverty to more severe forms of expenditure poverty or material deprivation, the share that is made up by private renters not claiming housing benefit declines (by 5 and 10ppts respectively). What may be happening here is that private renters who are temporarily on low income (and so in income poverty) do not claim housing benefit, but maintain their standards of living (and

hence are not in expenditure poverty or material deprivation) by drawing on other resources such as savings.<sup>42</sup> Because of this, expenditure and material deprivation measures probably give us a better guide to the tenure composition of severe poverty than does income.

Moreover, people who live in owner-occupied accommodation are much less likely to be in more rather than less severe forms of expenditure and material deprivation poverty (but are not much less likely to be in severe income poverty than headline income poverty). This probably reflects the fact that – even if they have very low incomes – homeowners are

**Figure 4.10. Share of those in poverty that are private renters, various poverty measures**



Note and source: See Figures 4.3, 4.4 and 4.6. Relative income poverty (60% of median) and income poverty (50% of median) are measured using HBAI. The material deprivation measure is the ‘higher threshold’ measure discussed in the note to Figure 4.6. Between 2006-07 and 2014-15, the expenditure poverty measure corresponds to the first calendar year in the financial year (e.g. 2006-07 refers to 2006).

<sup>42</sup> Renters on low incomes are also ineligible for housing benefit if their financial assets exceed £16,000; such people might be in income poverty, but may be able to use their assets to avoid expenditure poverty or material deprivation. In addition, receipt of housing benefit in the HBAI data is better recorded for those in the social than the private rented sector. The total expenditure on housing benefit among social renters implied by the HBAI data makes up 80% of that recorded in administrative records, whereas for private renters the figure is 72% (for caseloads, the shares are 92% and 79% respectively). We do not know whether the under-recording worsens more for private renters than for social renters as we go to more severe forms of income poverty. But it is possible that it does, which would also contribute to the patterns we see, and would give further reason to prefer expenditure and material deprivation measures to income-based measures.



more likely to have significant savings which they can use to maintain their living standards, and may even have the ability to borrow against the value of their house to fund a temporary period of low income.

While more severe forms of poverty are to a greater extent found among social renters than are less severe forms, it is well documented that private renters are an *increasing* share of those in headline income poverty (Cribb, Norris Keiller and Waters, 2018).<sup>43</sup> We now investigate whether this is true for more severe forms of poverty. Figure 4.10 shows the share of those in poverty that are private renters for various poverty definitions since 2004–05.<sup>44</sup> The trends for all measures of poverty shown are very similar. Just as headline income poverty is increasingly made up of private renters (though the trend has flattened for the past few years), the same is true for those in more severe forms of poverty, whichever definition is used.

Thus, while social renters make up a larger share of those in severe poverty than they do of those in headline poverty, severe poverty appears to increasingly be becoming about private renters, in a very similar way to what we have seen for headline income poverty.

### Working and workless households

Having seen how different forms of poverty have different housing tenure compositions, we now repeat the same exercise with working and workless households. For these purposes, we define a working household as one where at least one adult is in paid work. Table 4.3 splits those in different forms of poverty into categories according to whether they are a pensioner family or, if not, whether anyone in the household works. As with housing tenure, one should compare the composition of one type of poverty with headline relative income poverty using a consistent data set (HBAI or LCF) and age group (all or working-age only).

Across all three groups of measures, there is a clear pattern: as we move from headline income poverty to more severe forms, we see a greater share of those in poverty in workless households and a smaller share in working ones. In the case of income poverty, this is driven by a greater share of households that have been out of work for less than three years, while with material deprivation and expenditure poverty it is driven by a greater share of households that have been out of work for more than three years. This difference is probably because households that are temporarily out of work may not choose to claim benefits (and so are more likely to be in severe income poverty), but have more alternative resources to draw upon such as savings (and so are less likely to be in expenditure poverty or material deprivation).

As with private renters, it is well documented that headline income poverty is increasingly found among working households.<sup>45</sup> Figure 4.11 shows that the same is true for severe poverty: an increasing fraction of those in severe poverty are in working households, and

<sup>43</sup> This is entirely driven by the fact that there are more private renters: income poverty rates for each tenure were almost exactly the same in 2017–18 as they were in 2004–05.

<sup>44</sup> For simplicity, we do not include every measure that is shown in Table 4.2; the excluded measures show very similar trends to the included ones.

<sup>45</sup> See Bourquin et al. (2019), who also show that the rate of poverty *among* working households has also steadily increased.

this holds true whichever measure of severe poverty is used.<sup>46</sup> In fact, for expenditure poverty, the rise is even starker: while the share of those in headline income poverty that are in working households rose by 10ppts (or 21%) between 2004–05 and 2017–18, the share of those in expenditure poverty (with a 50% of median threshold) that are in working households rose by 22ppts (or 60%).

**Table 4.3. Composition of individuals in various measures of poverty, by work status and age**

*Panel A: All families*

	<b>Working household</b>	<b>Workless household</b>	<b>Pensioner family</b>
<b>Income poverty (HBAI)</b>			
Relative poverty (below 60% of median)	57%	26%	17%
Below 50% of median	56%	29%	15%
Below 40% of median	55%	31%	13%
<b>Expenditure poverty (LCF)</b>			
Relative income poverty	58%	23%	19%
Expenditure poverty (60% of median)	59%	19%	22%
Expenditure poverty (50% of median)	57%	22%	21%
Expenditure poverty (40% of median)	52%	26%	22%

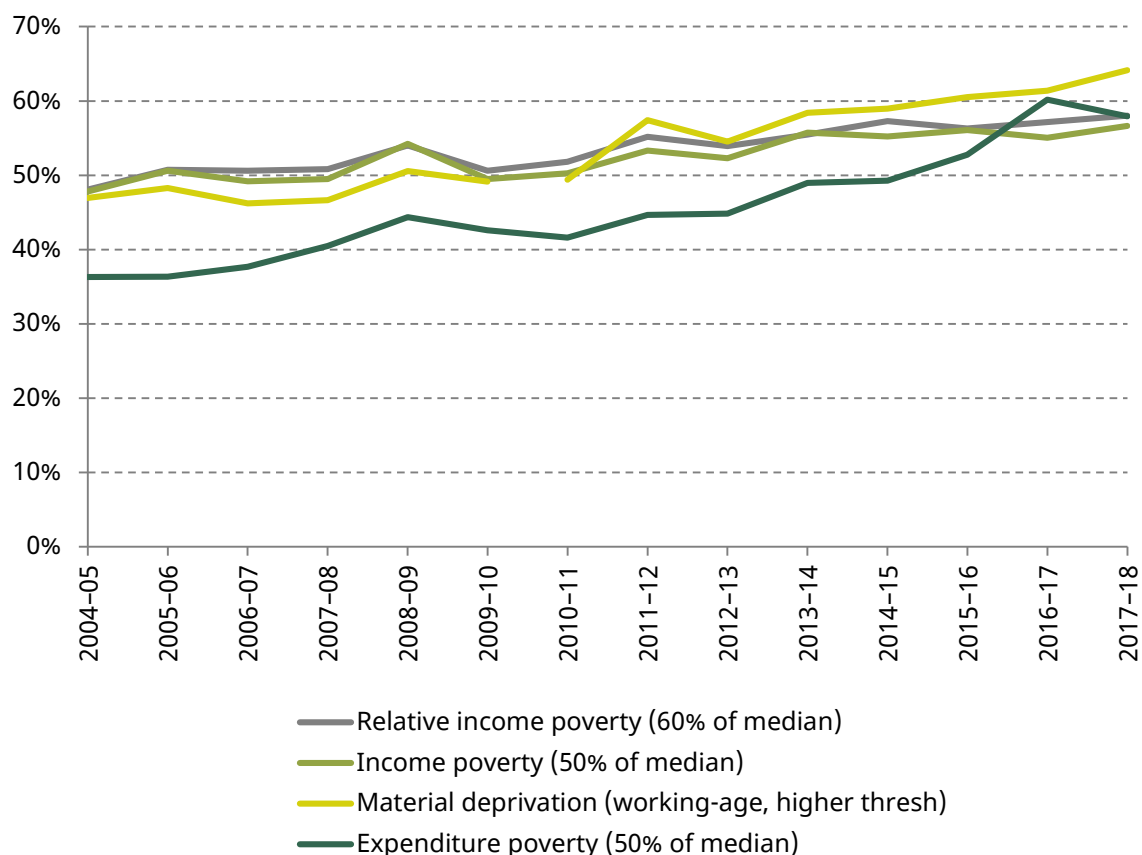
*Panel B: Working-age families only*

	<b>Working household</b>	<b>Workless household</b>
<b>Material deprivation (HBAI)</b>		
Relative income poverty	69%	31%
Material deprivation (lower threshold)	67%	33%
Material deprivation (higher threshold)	62%	38%

Note and source: See Figures 4.3, 4.4 and 4.6. Rows may not sum to 100% because of rounding. Figures show average poverty composition between 2015–16 and 2017–18. An individual is classified as in a ‘pensioner family’ if their family contains a man aged 65 or older or a woman aged 60 or older. Otherwise, they are classified as in a ‘working household’ if there is at least one person in work in the household and as in a ‘workless household’ if there is no one in work in the household.

<sup>46</sup> For simplicity, we do not include every measure that is shown in Table 4.3; the excluded measures show very similar trends to the included ones.

**Figure 4.11. Share of those in poverty that are in working-age families and working households, various poverty measures**



Note and source: See Figures 4.3, 4.4 and 4.6. Relative income poverty (60% of median) and income poverty (50% of median) are measured using HBAI. The material deprivation measure is the 'higher threshold' measure discussed in the note to Figure 4.6. Between 2006-07 and 2014-15, the expenditure poverty measure corresponds to the first calendar year in the financial year (e.g. 2006-07 refers to 2006).

## 4.5 Conclusion

Before summing up, it is worth reiterating a point we made in the introduction to this chapter. It is always likely to be difficult, even with the large-scale household survey data that are typically used to analyse the distribution of living standards, to pick up the *most* severe forms of poverty in the UK or, as some call it, destitution. Populations such as the homeless will, by definition, not appear in these surveys. Of those who can appear in a household survey, those in the most severe hardship may not reliably respond, or it may be difficult to distinguish them from people who are in fact much better off but whose resources have been under-recorded.

It is possible that there is increasing severe hardship among a very small proportion of the population which is simply undetectable with any confidence in these key data sources. There is some evidence in this respect, such as a rising number of people rough sleeping. But none of the analysis in this chapter has spoken to the frequency of destitution in the UK. We have, however, tried to assess what has happened to more severe forms of poverty than those measured by the headline statistics.

On none of our measures of severe poverty do we find any evidence of a significant rise in severe poverty 'hiding' behind the relatively small changes seen in headline measures of income poverty since 2010–11. Material deprivation rates (using both more and less severe thresholds) have clearly declined over the period, and the frequency with which people report being unable to afford those items most indicative of more severe poverty – such as keeping the home warm or keeping up with bills and debt repayments – has fallen by about as much as the frequencies for other items. Income and expenditure measures of severe poverty suggest little change, however. This discrepancy is not due to material deprivation falling only among those families not in poverty, because we see declines across the income distribution. It may be partly explained by the basic items, access to which is tracked by material deprivation measures, becoming cheaper (relative to other goods and services), though this evidence is only suggestive. Looking over a longer period, the modest declines in headline income poverty that have been seen since the mid 1990s do not appear to be reflected in more severe forms of poverty, with income- and expenditure-based measures suggesting a small increase over the period. However, some of this increase is driven by those with very low incomes who in fact on average have higher living standards; more generally, the unreliability of low incomes in survey data and the long-run fall in the coverage of spending in the LCF mean that we should be cautious in putting too much weight on these results.

In general, we find that those regions and nations of Great Britain that have higher rates of headline poverty also have higher rates of severe poverty, whichever measure of the latter we use; though severe poverty is slightly more concentrated in London and slightly less concentrated in the rest of the South than headline poverty.

We also find that the composition of those in severe poverty is more tilted towards social renters and workless households than for those in headline income poverty. But these trends are changing: just as private renters and working households are making up an increasing share of those in headline income poverty, they are also making up an increasing share of those in severe poverty.

As already stressed, drawing conclusions about those in severe poverty is made more challenging by the limitations of the data available. Some of these difficulties are at least partially surmountable. For example, the under-reporting of income could be made less acute if surveys were linked to administrative benefit and tax records. The increased use of internet shopping and credit and debit cards also may make higher-quality expenditure data possible. Surveys themselves could be improved by expanding the sample size and putting more resources into ensuring that as many households as possible respond.

Such improvements would by no means solve every difficulty with the analysis of severe poverty, which is by its very nature a challenging topic to study. But the ability of policymakers to tackle severe poverty, should they want to do so, is somewhat dependent upon the quality of the data available.

# Appendix A. The Households Below Average Income (HBAI) methodology

## Income as a measure of living standards

Most people would consider that well-being consists of more than a simple measure of material circumstances. However, even if we wanted to, it would be extremely hard to define an objective index of well-being, let alone to measure it. The main approach to measuring living standards taken in the government's HBAI document (and in this report) is to focus solely on material circumstances and, for the most part, to use household income as a proxy for them.

For families with children and pensioners, 'material deprivation' indicators are also used, to complement 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 3 provides analysis of changes in material deprivation according to these indicators. We also use these questions in Chapter 4, to construct an indicator of material deprivation for working-age adults (with or without children), in order to analyse trends in more severe forms of poverty.

Even as a measure of material living standards, the HBAI income measure has some important limitations. There is some evidence of under-reporting of income in the HBAI data, particularly among those households with extremely low reported incomes.<sup>47</sup> Even for those households whose income is measured correctly, HBAI provides a 'snapshot' measure – reflecting actual, or in some cases 'usual', income at around the time of the Family Resources Survey 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 current 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.<sup>48</sup>

## The treatment of housing costs

The government's HBAI publication provides information on two measures of income. One measure captures income before housing costs are deducted (BHC) and the other is a measure after housing costs have been deducted (AHC). The key housing costs captured

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<sup>47</sup> See Brewer, Etheridge and O'Dea (2017).

<sup>48</sup> See Brewer, Goodman and Leicester (2006), Brewer and O'Dea (2012), Brewer, Etheridge and O'Dea (2017) and Office for National Statistics (2018).

in the HBAI data are rent payments and mortgage interest payments, but they also include water rates, community water charges, council water charges, structural insurance premiums for owner-occupiers, and ground rents and service charges. Mortgage capital repayments are not included, on the basis that these represent the accumulation of an asset (they increase net housing wealth) and are therefore better thought of as a form of saving than as a cost of housing. Costs such as maintenance, repairs and contents insurance are also not included.

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

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

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

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

Third, measuring income AHC may be more appropriate than BHC when comparing households that own their home outright (and so pay no rent or mortgage interest costs) with those that do not. On a BHC basis, an individual who owns their house outright will be treated as being as well off as an otherwise-identical individual who is still paying off a mortgage; an AHC measure, though, would indicate that the former was better off.<sup>49</sup> This

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<sup>49</sup> 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.

is particularly important when comparing incomes across age groups – pensioners are much more likely to own their homes outright than working-age adults.

Fourth, comparing changes in AHC incomes may provide better information about relative changes in living standards when some households have seen large changes in their housing costs that are unrelated to changes in housing quality. This is particularly relevant when looking at the period between 2007–08 and 2009–10, as rapid falls in mortgage interest rates reduced the housing costs of those with a mortgage significantly, while the housing costs of those who rent their homes (or own them outright) were not directly affected. When incomes are measured BHC, changes over time in the incomes of all households are adjusted for inflation using a price index that accounts only for *average* housing costs. This will understate the effect of falling housing costs on living standards for those with a mortgage and overstate it for those without a mortgage. Changes in income measured AHC do not suffer from this issue, since changes in housing costs are accounted for by subtracting each household’s actual housing costs from its income. This difference is important to bear in mind when looking at changes in poverty and inequality. Those towards the bottom of the income distribution (around the poverty line), as well as the youngest and oldest adults, are less likely than average to have a mortgage.

## Income sharing

To the extent that income sharing takes place within households, the welfare of any one individual in a household will depend not only on their own income, but also on the incomes of other household members. By measuring income at the household level, the HBAI statistics implicitly assume that all individuals within the household are equally well off and therefore occupy the same position in the income distribution. For many households, this assumption provides a reasonable approximation – for example, many couples benefit roughly equally from income coming into the household, no matter who the income is paid to. For others, it is unlikely to be appropriate. Students sharing a house are one probable example. 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<sup>50</sup> of a household but not *between* them, by measuring incomes at the benefit unit level rather than at the household level (and making an assumption about how housing costs are split across benefit units). However, given the data available, perfect income sharing is one of the least arbitrary and most transparent assumptions that could be made.

## Comparing incomes across households

Controlling for household size and structure is important when comparing living standards across households. If two households, one composed of a single adult and the other composed of a couple with two children, both have the same total income, the living standard of the couple with children will usually be significantly lower than that of the

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<sup>50</sup> Benefit units are the level at which benefits are paid to people. A benefit unit can be either a single person or a couple, plus any dependent children of that single person or couple. For this reason, a benefit unit is frequently described as a ‘family’. However, people living together who are related can be in two separate benefit units. For example, a household composed of a couple living with one of their parents would be two separate benefit units, as would a household composed of two adult siblings living together.

**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

single adult, as the larger household normally has a greater need for material resources. Therefore, if household income is to reflect the standard of living that household members experience, and if we are to compare these incomes across different household types, then some method is required to adjust incomes for the different needs that different households face.

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

The modified OECD scale only takes into account the ages and number of individuals in the household, but there may be other characteristics 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.<sup>51</sup>

### 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 households not answering them, and such non-response may differ according to family type and according to income. This

<sup>51</sup> See section 5.3 of Brewer et al. (2008).



'non-response bias' is dealt with in two ways. First, weights are applied to the data to ensure that the composition of the sample (in terms of age, sex, partnership status, region and a number of other variables) reflects the true UK population.<sup>52</sup> For example, if there are proportionately fewer lone parents in the sample than there are in the population, then relatively more weight must be placed upon the data from those lone parents who actually do respond.

Second, a special adjustment is applied to correct for the particular problems in obtaining high response rates from individuals with very high incomes and for the volatility in their reported incomes. This adjustment uses projected data from HMRC's Survey of Personal Incomes (SPI) – a more reliable source of data for the richest individuals based on income tax returns.<sup>53</sup> Individuals with an income above a very high threshold are assigned an income level derived from the SPI, which is an estimate of the average income for people above that threshold in the population (the threshold and replacement income value are set separately for pensioners and non-pensioners). Note that this procedure will therefore not capture the *inequality* within the very richest section of the population. The weights referred to above are also adjusted to ensure that the number of households containing very high-income individuals in the weighted data is correct. 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 people with the very lowest incomes.

## Adjusting for inflation

All of the description of the HBAI methodology so far sets out how we, following the government's HBAI methodology, measure living standards in any one year. However, because of inflation, the same cash incomes do not bring the same purchasing power over time. It is therefore necessary to adjust for inflation and express all figures in real terms, which we do in the prices of the latest year of data (2017–18 in this report).

We account for inflation using variants of the Consumer Prices Index (CPI). For comparing BHC measures of income over time, we use a variant of the standard CPI that includes owner-occupiers' housing costs (mortgage interest payments, and insurance and ground rent for owner-occupiers); for AHC measures, we use a variant of the CPI that excludes all housing costs (including rent and water costs, which are part of the standard CPI). These variants are available from the Office for National Statistics back to 1996 and 2000 respectively.<sup>54</sup> Before that, we use an approximation to those indices generated by combining RPI-based indices that are available back to 1961 with an estimate of the historical 'formula effect' (the amount by which the Retail Prices Index overstates inflation).<sup>55</sup>

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<sup>52</sup> See Department for Work and Pensions (2019).

<sup>53</sup> See Burkhauser et al. (2018) for an analysis of the limitations of this adjustment and a discussion of alternatives.

<sup>54</sup> See <https://www.ons.gov.uk/economy/inflationandpriceindices/adhocs/007202consumerpriceindicesseriesexcludingrentsmaintenancerepairsandwaterchargesfortheperiodjanuary1996tomay2017alsoanexperimentalcpiseriesincludingmipsgroundrentanddwellinginsurancefortheperiodjanuary2000tomay2017>.

<sup>55</sup> For more details on the construction of this series, see Department for Work and Pensions (2019). The resulting 'deflators' are available online at

## The income measure summarised

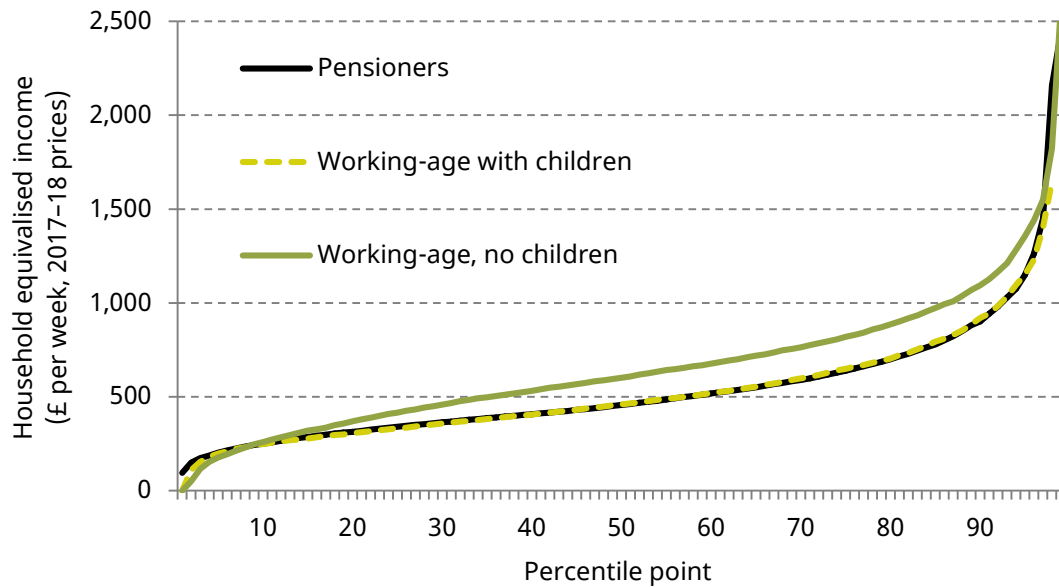
In the analysis in this report, our main measure of living standards is *household equivalised income after deducting taxes and adding benefits and tax credits*, expressed as the equivalent income for a couple with no dependent children and in average 2017–18 prices. For brevity, we often use this term interchangeably with ‘income’.

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<https://www.ifs.org.uk/uploads/publications/data/Inequality%2C%20poverty%20and%20living%20standards%20data.xlsx>.

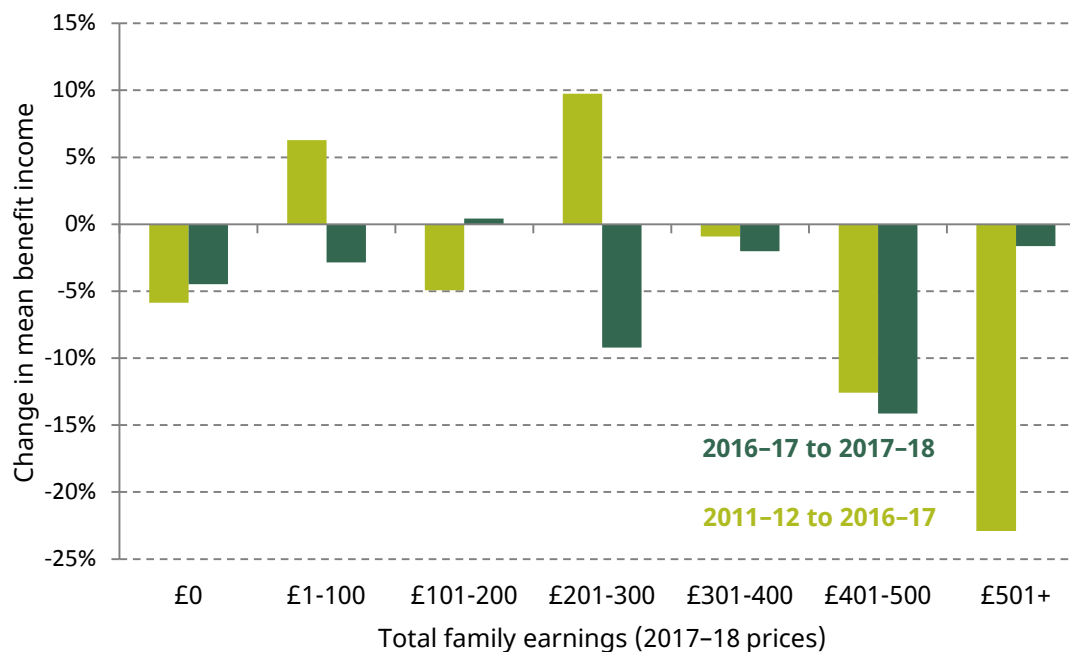
## Appendix B. Additional figures for Chapter 2

**Appendix Figure B.1. Weekly net equivalised household income at each percentile point in 2017–18 by household type**



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

**Appendix Figure B.2. Change in mean benefit receipt among non-pensioners by family earnings, 2011–12 to 2016–17 and 2016–17 to 2017–18**



Note: Each bar shows the mean level of benefit and tax credit income of non-pensioners who live in families with gross earnings in each £100 band, with the exception of the bottom band, which contains those with zero or negative family earnings, and the top band, which contains those with family earnings over £500.

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

## Appendix C. Additional tables and figures for Chapter 3

**Appendix Table C.1. Cash values of poverty lines for example families in 2017–18 (£ per week)**

	After housing costs		Before housing costs	
	Absolute poverty line	Relative poverty line	Absolute poverty line	Relative poverty line
Childless couple	247	262	288	304
Single adult	143	152	192	203
Lone parent, one child	193	204	250	263
Couple, one child	296	314	346	365
Couple, two children	346	367	403	426

Note: Children are assumed to be aged 13 or younger. For families with older children, the poverty lines are slightly higher. The absolute poverty line is defined as 60% of median income in 2010–11 and the relative poverty line as 60% of median income in 2017–18.

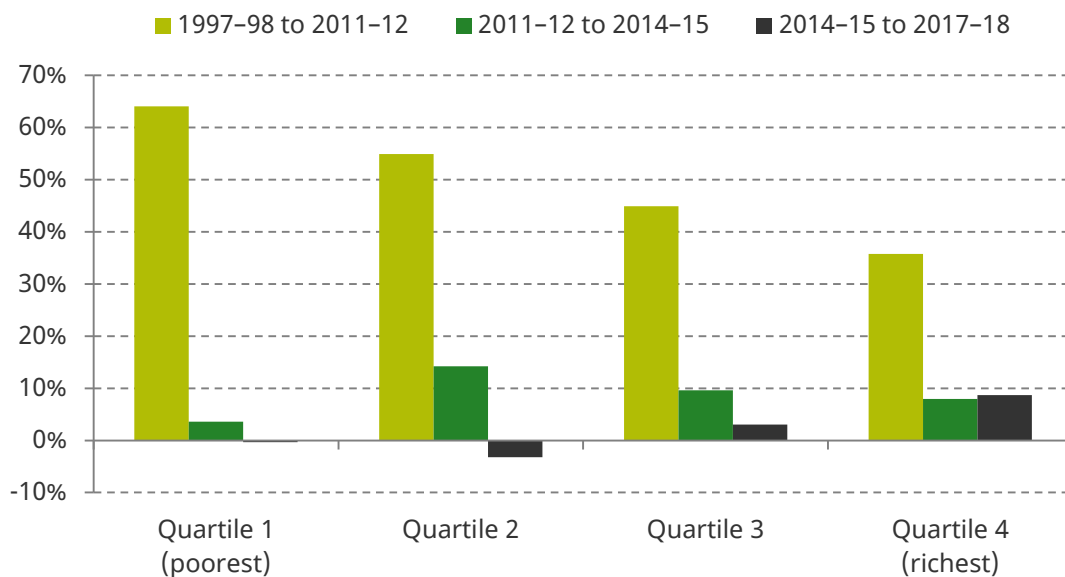
Source: Authors' calculations using the Family Resources Survey, 2010–11 and 2017–18.

**Appendix Table C.2. Changes in income sources and contributions to mean income growth for pensioners**

	Gross income from work	Benefits	Gross income from savings and investments	Gross income from private pensions	Other income	Direct taxes and other deductions from income	Housing costs	Total AHC net income
Share of gross BHC income (2017–18)	17.8%	42.7%	7.0%	31.6%	0.9%			
Share of net AHC income (2017–18)	22.9%	54.9%	9.0%	40.7%	1.2%	-20.7%	-7.9%	100.0%
<b>2005–06 to 2011–12</b>								
Growth of income source / deduction	12.4%	0.5%	-15.0%	21.2%	-21.3%	9.0%	-1.3%	7.0%
Contribution to total income growth	2.8ppts	0.3ppts	-1.6ppts	7.6ppts	-0.3ppts	-1.9ppts	0.1ppts	7.0ppts
<b>2011–12 to 2017–18</b>								
Growth of income source / deduction	2.8%	6.2%	13.2%	8.0%	29.2%	3.6%	1.5%	7.9%
Contribution to total income growth	0.7ppts	3.5ppts	1.1ppts	3.3ppts	0.3ppts	-0.8ppts	-0.1ppts	7.9ppts
<b>2011–12 to 2014–15</b>								
Growth of income source / deduction	2.5%	2.7%	16.6%	11.6%	5.0%	5.2%	0.6%	7.1%
Contribution to total income growth	0.6ppts	1.5ppts	1.4ppts	4.7ppts	0ppts	-1.1ppts	-0.1ppts	7.1ppts
<b>2014–15 to 2017–18</b>								
Growth of income source / deduction	0.2%	3.4%	-2.9%	-3.2%	23.0%	-1.5%	0.9%	0.8%
Contribution to total income growth	0ppts	1.8ppts	-0.3ppts	-1.3ppts	0.2ppts	0.3ppts	-0.1ppts	0.8ppts

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

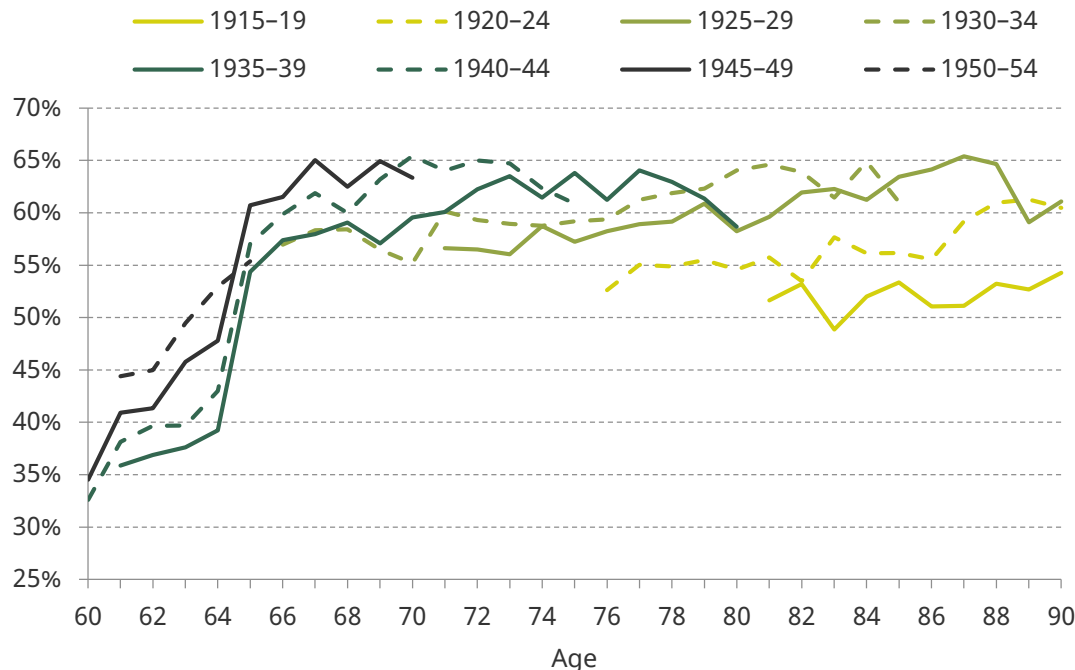
**Appendix Figure C.1. Change in average net income from private pensions (among pensioners with private pensions) by household income quartile**



Note: Pensioners are split into quartiles based on their AHC equivalised household incomes. Net (after-tax) private pension incomes are deflated using AHC deflators.

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

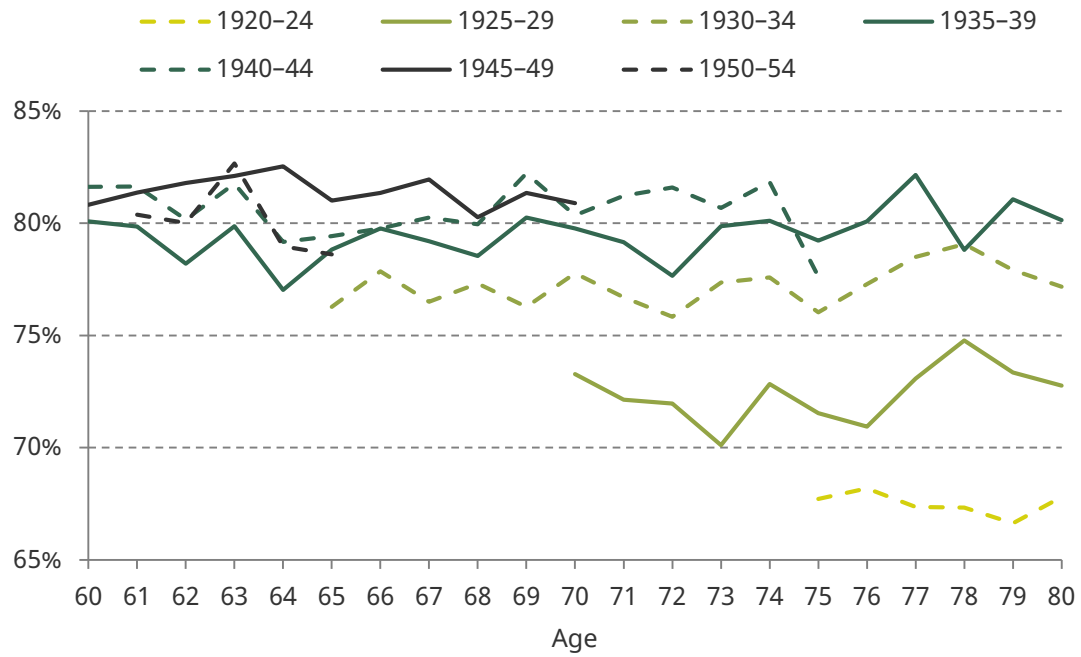
**Appendix Figure C.2. Share of pensioners with private pensions by age and five-year birth cohort**



Note: Pensioners with private pensions are defined as those receiving any income from private pensions. Cohorts with fewer than three years available are omitted. Excludes 1998-99 as data on personal pensions are unavailable for that year.

Source: Authors' calculations using the Family Resources Survey, 1997-98 to 2017-18.

**Appendix Figure C.3. Share of pensioners who own their home by age and five-year birth cohort**

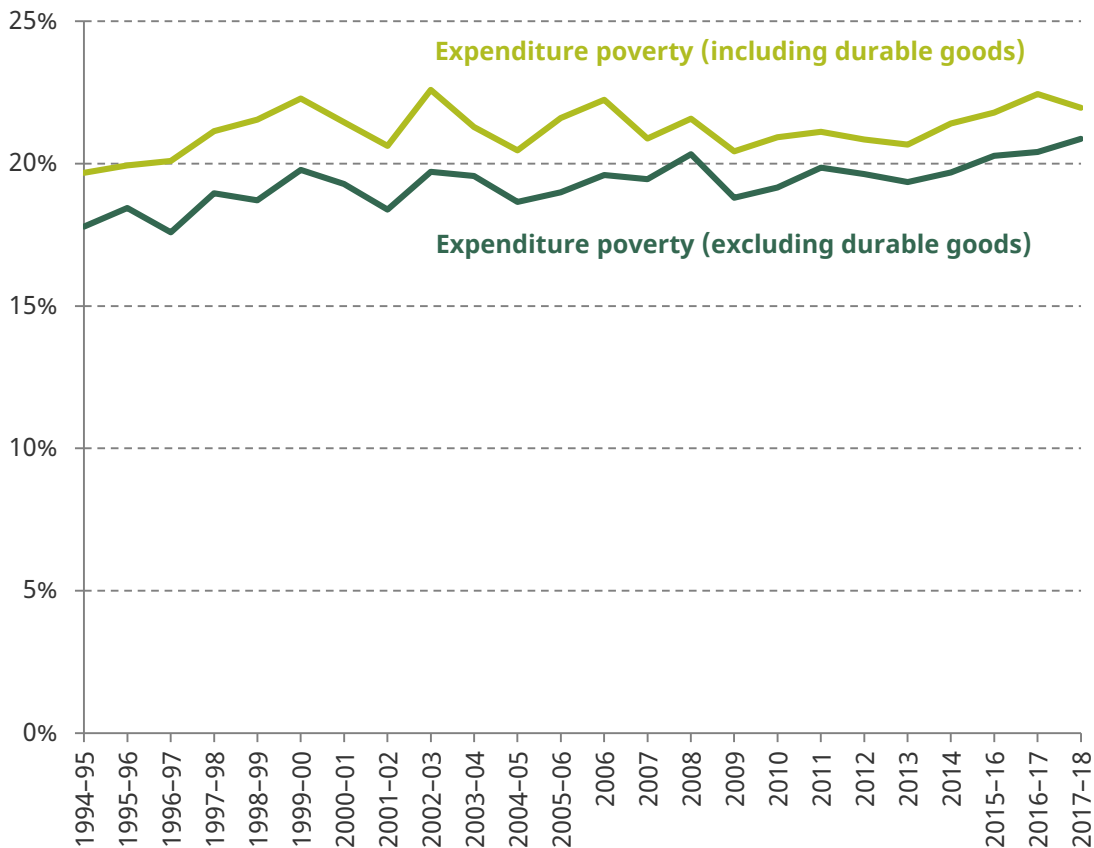


Note: Cohorts with fewer than three years available are omitted.

Source: Authors' calculations using the Family Resources Survey, 1997-98 to 2017-18.

# Appendix D. Additional figure for Chapter 4

Appendix Figure D.1. Expenditure poverty rates, with and without durable goods



Note: Expenditure poverty shows the fraction with a non-housing-cost expenditure below 60% of the median. Between 2006 and 2014, the Living Costs and Food Survey (and its predecessors) was collected on a calendar-year rather than financial-year basis.

Source: Authors' calculations using the Living Costs and Food Survey and its predecessors, 1994-95 to 2017-18.



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