Child Poverty in the UK since 1998-99: Lessons from the Past Decade

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Child poverty in the UK since 1998–99: lessons from the past decade

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Abstract

As a result of the Child Poverty Act (2010), current and future governments are committed to reducing the rate of relative income child poverty in the UK to 10% by 2020–21. This paper looks in detail at the progress made towards this goal under the previous Labour administrations. Direct tax and benefit reforms are very important in explaining at least three things: the large overall reduction in child poverty since 1998–99; the striking slowdown in progress towards the child poverty targets between 2004–05 and 2007–08; and some of the variation in child poverty trends between different groups of children. However, some of the child poverty-reducing impact of those reforms acted simply to stop child poverty rising as real earnings grew over the period, which increases median income and thus the relative poverty line. The performance of parents in the labour market is important too: between regions, parental employment and child poverty trends are closely related; the overall reduction in child poverty since 1998–99 has been helped by higher lone parent employment rates; and the overall rise in child poverty since 2004–05 has been most concentrated on children of one-earner couples, whose real earnings have fallen.

JEL classification: I32, I38

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1. Introduction

This paper provides a retrospective analysis of child poverty in the UK since 1998–99. It aims to inform policy debate in advance of Frank Field MP's Independent Review on Poverty and Life Chances[2], which is due to report at the end of 2010, and the Government's child poverty strategy, which it has to publish by the end of March 2011.

We do not consider the wider issues of how poverty should be measured and what (if any) poverty targets a government should have. As a result of the Child Poverty Act (2010), current and future governments are already committed to reducing the rate of relative income child poverty in the UK to 10% by 2020–21. This paper looks in detail at the progress made towards this goal under the previous Labour administrations.

We begin by briefly outlining the child poverty targets set by the Labour Government in 1999 (Section 2), and describing the progress made towards these targets since 1998–99 (Section 3). We then use decomposition analysis to identify the key groups who have been driving the changes in child poverty since 1998–99 (Section 4), before looking in detail at the impact of direct tax and benefit reforms on child poverty over this period (Section 5). Finally we look at labour market trends for parents over the period (Section 6). Section 7 concludes.

2. Policy background: child poverty targets

In March 1999 the Labour Government announced an unprecedented target to 'eradicate' child poverty by 2020–21, along with interim child poverty targets for 2004–05 and 2010–11.

The first interim target was for child poverty in Britain in 2004–05 to be one-quarter lower than its 1998–99 level, using a poverty line of 60% of median household income: this was narrowly missed (see Section 3). The second interim target was for child poverty in the UK in 2010–11 to be one-half its 1998–99 level. Progress towards the 2010–11 target was assessed using three definitions of poverty: a relative low income indicator, an absolute low income indicator and a combined relative low income and material deprivation indicator. The relative low income indicator used a poverty line of 60% of median household before housing costs[3] (BHC) income; the absolute low income indicator used a poverty line of 60% of the 1998–99 BHC median (in real terms); and the combined relative low income and material deprivation indicator classified a child as being in poverty if its household BHC income is below 70% of the median and it is

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[2] See http://povertyreview.independent.gov.uk.
[3] Incomes can be measured before or after housing costs have been deducted (BHC or AHC). Because the government's child poverty targets related to BHC income, we focus on that in this paper. Results of our simulations in Section 5 are, however, repeated for AHC incomes in Appendix 2.

materially deprived (as determined by answers to a series of questions about what its family can afford to do).

The Child Poverty Act (2010)[4] commits the government to the 'eradication' of child poverty by 2020. In addition to the three measures of child poverty used for the 2010 targets, an indicator of 'persistent' poverty will also be used for the 2020 targets[5]. This classifies a child as being in poverty if it is in relative income poverty for at least 3 out of 4 consecutive calendar years. Reducing income poverty amongst children to zero is infeasible for at least 3 reasons: incomes are volatile in the short run, so there will always be some people with very low incomes at any point in time, e.g. due to self-employment losses or transition between jobs (clearly this applies less to the persistent poverty target); survey data is always subject to misreporting and the Family Resources Survey under-records benefit and tax credit receipt (see Appendix C of Brewer et al, 2008); and the take-up rate for means-tested benefits and tax credits will never be 100%. Thus, the Act states that a rate of relative income poverty of 10% would be consistent with the eradication of child poverty, with the rationale that it would be a level comparable to the lowest in Europe (it would also be 3 percentage points lower than that achieved in the UK at any time since at least 1961); and the target rates for the absolute low income and combined relative low income and material deprivation indicator are 5%. The target rate of persistent poverty has yet to be set. In the meantime, the government is to publish a child poverty strategy by the end of March 2011 and set up a Child Poverty Commission.

3. How have children fared since 1998–99?

We first examine how the whole distribution of household incomes for children has evolved since 1998–99, and then look at the progress made towards the 2010–11 child poverty targets. All figures in this section draw on the Department for Work and Pensions' Households Below Average Income (HBAI) series[6], or the survey which underlies this series, the Family Resources Survey. The income measure we refer to is net, equivalised[7], and at the household level[8] (for more details and discussion see Appendix A of Joyce et al, 2010).

The distribution of household incomes for children in 1998–99 and 2008–09

Before looking specifically at child poverty, it is informative to track changes in the whole distribution of household income for children between 1998–99 (the baseline against which the child poverty targets are defined) and 2008–09 (the

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[4] See http://www.legislation.gov.uk/ukpga/2010/9/contents.
[5] It should be noted that for the purposes of the Child Poverty Act (2010), the indicator of absolute poverty uses 2010-11 as a base year rather than 1998-99, as was used for the 2010 child poverty target.
[6] See Department for Work and Pensions (2010) for the latest HBAI publication.
[7] The 'base' group for this equivalisation is couples with no children (i.e. the equivalisation procedure leaves the household incomes of couples with no children unchanged).
[8] Thus, children are assigned 'incomes' because of the incomes of other members of their household (typically their parents).

latest year of data available). This gives us a general overview of how the living standards of children have evolved over the period, rather than just an overview of movements in and out of a particular measure of poverty.

Figure 3.1 compares the distribution of household incomes for children in 1998–99 and 2008–09, in 2008–09 prices. We focus on children in Great Britain for this comparison, since Northern Ireland was not included in the official HBAI series until 2002–03. In the upper two panels, the height of the bars represents the number of children in each £10 band of equivalised household income in 1998–99 and 2008–09. In each case, the final bar of the graph groups together all children whose household income is £1,500 per week or more. The third panel shows more clearly how the shape of the distribution has changed over time, by comparing kernel density estimates for 1998–99 and 2008–09. The units for these estimates are such that the total area under each plotted line is 1, rather than the size of the child population in the year in question.

Looking at the lowest panel, we can see that the shape of the income distribution for children has changed in two striking ways. First, there has been a rightward shift as a result of general growth in the real incomes of families with children. Second, the peak of the distribution has become less distinct. Whereas in 1998–99 there was a pronounced spike at the modal income, by 2008–09 there was a broader peak in the distribution between about £200 and £300 per week. Both of these trends closely mirror what has happened to the income distribution for all individuals in Great Britain in recent years (see Joyce et al, 2010[9]). It is also striking that the pronounced spike in the 1998-99 distribution lay just below the relative income poverty line of £209. This made initial reductions in child poverty after 1998–99 easier to achieve than if the distribution of children below the chosen poverty line had been less dense. In the next subsection, we consider whether child poverty trends over the last decade would have looked dramatically different if a different relative poverty line had been chosen.

Figure 3.2 illustrates the real average annual growth in household incomes across the children's income distribution between 1998–99 and 2008-09, and compares this with the corresponding numbers from previous decades. Children are ordered from lowest to highest on the basis of household income and split into 100 equally sized groups, called 'percentile groups'. The Figure shows how average household income at the top of each percentile group has grown in real terms for each 10-year period between 1968 and 2008–09. In making these comparisons, it is important to realise that these periods cover different stages of various economic cycles, and income growth rates are very sensitive to this. Having noted this, the figure shows that, between 1998–99 and 2008–09, the strongest growth in household income was found in the lower half of the children's income distribution, approximately between the 10th and 40th percentile points. The pattern of household income growth amongst children was inequality-reducing (i.e. income growth was higher at lower points in the distribution) across a large majority of the distribution. This contrasts with

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[9] This IFS commentary presented the same analysis for all individuals in Great Britain, comparing 1996–97 with 2008–09.

previous decades (and most starkly with the decade between 1978 and 1988) when the pattern of household income growth amongst children tended to be inequality-increasing. Real household income growth amongst children over the last decade has been higher at virtually all points of the distribution relative to the decades after 1968 and 1988. Relative to the period between 1978 and 1988, growth has been stronger across most of the bottom half of the distribution, but less strong in the top half.

In the next subsection, we document in detail the trends in the government's measures of child poverty between 1998–99 and 2008–09.

Figure 3.1. The income distributions for children in 1998–99 and 2008–09 compared (Great Britain)
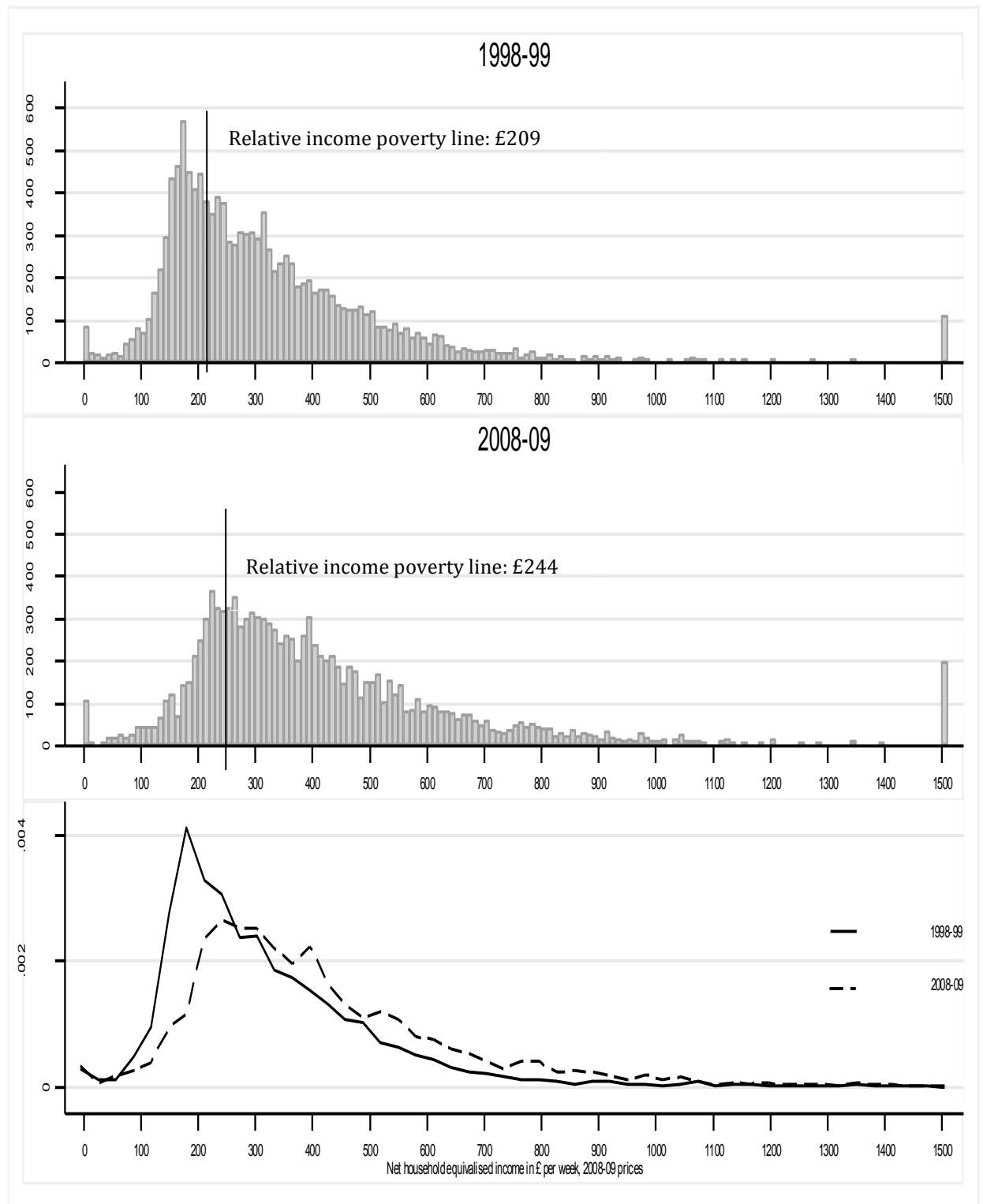
Notes: Incomes have been measured before housing costs have been deducted. The right-most bar in the top two panels represents incomes of over £1,500 per week. Incomes above £1,500 have been excluded from the kernel densities in the final panel. Negative incomes (due to self-employment losses, for example) are set to zero in the HBAI data.
Source: Authors' calculations using Family Resources Survey, 1998–99 and 2008–09.

Figure 3.2. The distribution of household income growth for children over 10-year periods between 1968 and 2008–09 (Great Britain)
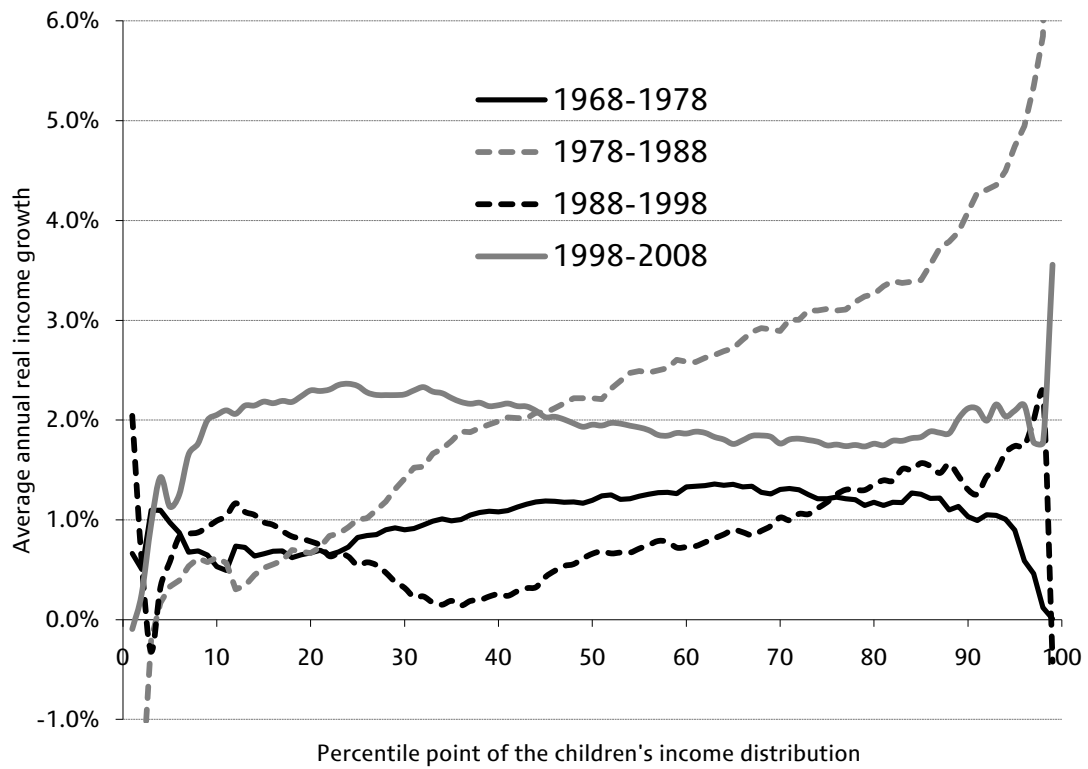
Notes: Incomes have been measured before housing costs have been deducted. 1968, 1978 and 1988 refer to calendar years; 1998 and 2008 refer to financial years.
Source: Authors' calculations using Family Expenditure Survey, 1968, 1978 and 1988; and Family Resources Survey, 1998–99 and 2008–09.

Child poverty: progress to date

Table 3.1 reviews progress up to 2008–09 on all three measures of child poverty used to define the 2010–11 targets (see Section 2). It shows consistent declines in child poverty across all three measures between 1998–99 and 2004–05, but a less straightforward story thereafter.

Table 3.1. Progress towards halving child poverty in the UK by 2010–11

	Relative poverty, UK, modified OECD (BHC)		*Absolute poverty, UK, modified OECD (BHC)*		*Material deprivation and relative low income*	
	%	Million	%	Million	%	Million
1998–99	26.1	3.4	26.1	3.4	20.8	2.6
1999–00	25.7	3.4	23.4	3.1		
2000–01	23.4	3.1	19.1	2.5		
2001–02	23.2	3.0	15.2	2.0		
2002–03	22.6	2.9	14.1	1.8		
2003–04	22.1	2.9	13.7	1.8		
2004–05	21.3	2.7	12.9	1.7	17.1	2.2
2005–06	22.0	2.8	12.7	1.6	16.3	2.1
2006–07	22.3	2.9	13.1	1.7	15.6	2.0
2007–08	22.5	2.9	13.4	1.7	17.2	2.2
2008–09	21.8	2.8	12.4	1.6	17.1	2.2
Change since 1998–99	–4.2	–0.6	–13.6	–1.8	–3.7	–0.4
Change since 2004–05	+0.5	+0.1	-0.5	-0.1	-0.0	-0.0
Target for 2010–11	n/a	1.7	n/a	1.7	n/a	1.3

Notes: Reported changes may not equal the differences between the corresponding numbers due to rounding. For the purposes of the child poverty target in 2010–11, the DWP has had to estimate the level of relative child poverty in the UK in 1998–99 (Northern Ireland was first included in the official HBAI series in 2002–03).

Sources: Authors' calculations based on Family Resources Survey, various years; Department for Work and Pensions (2010). UK poverty levels for the years 1998/99 through 2001/02 draw on the DWP's imputed estimates of poverty levels in Northern Ireland over this period.

The most watched of these measures is the pure relative poverty target, which is for child poverty in the UK in 2010–11 to be one-half lower than its level in 1998–99, using a poverty line of 60% of median BHC income and the modified OECD equivalence scale. From now on, we refer to this measure unless otherwise stated. As Table 3.1 shows, child poverty on this measure has fallen by 600,000 to the nearest hundred thousand (or just under one-fifth) in the ten years since

1998–99 and needs to fall by a further 1.1 million in the remaining two years until 2010–11 to meet this element of the target. Thus, child poverty needs to fall by an average of 550,000 a year for the next two years, having fallen by an average of 64,000 a year for the past ten years.

But Table 3.1 also highlights that simple comparisons of child poverty in 1998–99 and 2008–09 mask two very different trends, with 2004–05 as the 'turning point'. The reduction in child poverty between 1997–98[10] and 2004–05 is by far the largest and most sustained since our comparable series began in 1961, and stands in stark contrast to the large rise under the previous Conservative administrations between 1979 and 1996–97, as Figure 3.1 illustrates. The same is true of poverty in the whole population, but it was declining poverty amongst pensioners and families with children that drove the reduction in overall poverty between 1997–98 and 2004–05.

Figure 3.3. Child poverty in the UK since 1961
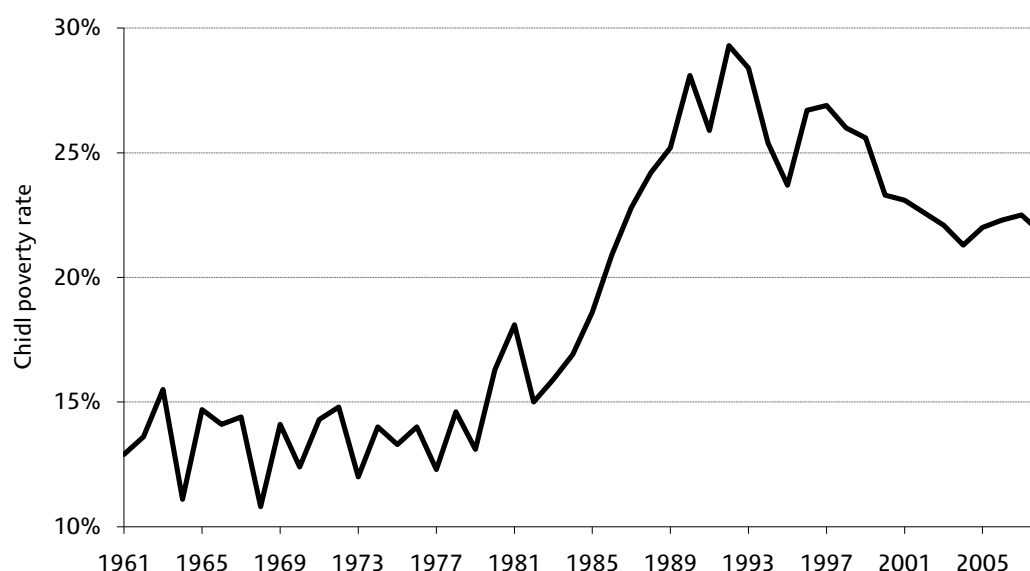
Notes: Years up to 1992 are calendar years; thereafter, years refer to financial years. Incomes are measured before housing costs have been deducted (BHC) and equivalised using the modified OECD equivalence scale. Figures before 2001 are for Great Britain, and figures from 2002 onwards are for the whole United Kingdom (Northern Ireland was first included in the official HBAI series in 2002–03).
Sources: Authors' calculations based on Family Expenditure Survey (up to 1993–94) and Family Resources Survey (1994–95 onwards).

The 2004–05 interim target was only narrowly missed (by 100,000 measuring incomes BHC and by 300,000 measuring incomes AHC[11]) and hence, had the rate

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[10] For consistency, we use 1998–99 as the starting point throughout this briefing note, as that is the baseline against which the child poverty targets are defined, but the downward trend in child poverty actually started between 1997–98 and 1998–99.
[11] See Brewer, Goodman, Shaw and Sibieta (2006). Note that this was assessed using the McClements equivalence scale, rather than the modified OECD equivalence scale now used, so

of reduction in child poverty between 1998–99 and 2004–05 continued, it would be close to target in 2010–11[12]. However, as Table 3.1 shows, child poverty rose in the three consecutive years after 2004–05. Despite a fall in 2008–09, child poverty remains higher than its recent low. In Sections 4, 5 and 6 we investigate the reasons for these contrasting trends before and after 2004–05.

Would trends in relative income child poverty since 1998–99 have been different if a different relative poverty line had been used?

A criticism that has been directed at a 'binary' or 'headcount' measure of poverty (i.e. a measure which simply classifies someone as 'in poverty' or 'not in poverty' with no account taken of the distance from the poverty line) is that it skews incentives for policy-makers towards raising the incomes of those just below the poverty line so that they rise just above it, with relatively little priority attached to the rest of the income distribution[13]. With this in mind, here we consider whether the overall fall in child poverty since 1998–99 is specific to the particular relative poverty line (60% of the median household income) chosen.

Figure 3.4 reveals how child poverty would have changed over the last decade if the poverty line were not 60% of median income, but some other fraction, by showing the cumulative distribution function of household BHC income for children in both 1998–99 and 2008–09. This gives the proportion of children (vertical axis) with incomes no greater than some fraction of the median income (horizontal axis); or, equivalently, the child poverty rate for all possible relative income poverty lines up to the median income. It shows that child poverty would have fallen over the period if the relative poverty line had been anything from 43% up to 100% of the median household income[14]; and the precise reduction in child poverty over the period would have been very similar for all poverty lines between 55% and 75% of the median (the poverty line that would have maximised the reduction in child poverty between 1998–99 and 2008–09 is in fact 65% of median income). Thus, there is not striking evidence that policy-makers have been focusing efforts on a narrow set of children just below their chosen poverty line[15].

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that the numbers presented in this paragraph differ from those in the rest of this chapter and are not directly comparable to future targets in 2010 and 2020.

[12] This is true because the 2010–11 target requires exactly twice as large a reduction in child poverty (compared to 1998–99 levels) as the 2004–05 target.

[13] For example, see Frank Field MP's newspaper article of 5th June 2010: http://www.telegraph.co.uk/news/newstopics/politics/conservative/7803983/Poverty-is-about-much-more-than-money.html.

[14] Thus, child poverty has not necessarily fallen over the period if very low poverty lines are used. But IFS researchers have previously argued that relative income poverty measures using such low poverty lines would not be informative measures of 'severe poverty', due to the volatility of incomes and measurement error at the bottom of the income distribution – see Brewer, Phillips and Sibieta (2010).

[15] Note that, of course, trends over time may not be (entirely) the deliberate result of policy in any case; and the HBAI series does not track the same people over time, so we do not know what has happened to the household incomes of children who were in poverty in 1998–99.

Figure 3.4. Cumulative distribution function of household incomes for children in 1998–99 and 2008–09 (Great Britain)

Net household equivalised BHC income, as a percentage of the median
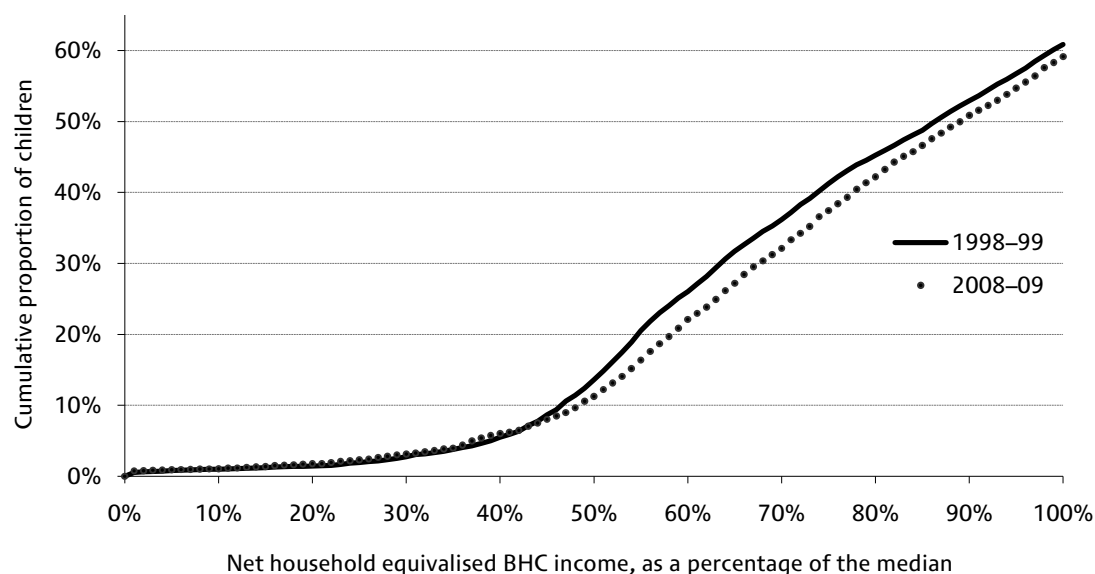
Notes: Incomes have been measured before housing costs have been deducted.
Sources: Authors' calculations using Family Resources Survey, 1998–99 and 2008–09.

4. Decomposing the changes in child poverty since 1998–99

Which groups of children have driven the overall trends in child poverty?

We can learn about what has driven changes in child poverty since 1998–99 with simple decomposition analyses. We define all children as belonging to one of a number of groups, and then separate all changes in child poverty into incidence effects – which represent changes in the risk of poverty for children in particular groups – and compositional effects – which reflect changes in the distribution of children between these groups.[16] We have defined these groups according to a number of different characteristics, such as family type and employment status, number of children in the family, and so on, to build up a picture of the statistical drivers of recent trends in child poverty. In this section we have selected a few of these decompositions to present. Others can be found in Appendix 1[17].

Given the contrasting trends in child poverty before and after 2004–05 (see Section 3), in Tables 4.1 to 4.4 we present separate decompositions of changes between 1998–99 and 2004–05 and between 2004–05 and 2008–09, as well as for the whole period between 1998–99 and 2008–09.

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[16] For more details, see appendix D of Brewer, Goodman, Shaw and Sibieta (2006*). The authors acknowledge that they were motivated to present these decompositions by the analysis in Sutherland, Sefton and Piachaud (2003).
[17] The decompositions in Appendix 1 involve grouping children according to the following family-level characteristics: disability; ethnicity; parental age; and housing tenure.

Table 4.1 presents a simple decomposition by family type, grouping children according to whether they are in a lone parent or couple family. Incidence effects - changes in the risk of poverty for children in lone parent and couple families – dominate the compositional effects, reflecting the unsurprising fact that the relative numbers of lone parent and couple parent families have not changed dramatically. Notably, the fall in child poverty between 1998–99 and 2004–05 was driven by falls in the risk of poverty for both lone parent and couple parent families, but the rise between 2004–05 and 2008–09 was driven by a rise in the poverty risk for children of couples. Had the risk of poverty for children of couples been the same in 2008–09 as in 2004–05, child poverty would have been 1.4 percentage points lower in 2008–09 than it actually was.

We investigate this further in Table 4.2, splitting children up by both family type and employment status. This reveals that children of couples of almost all employment statuses experienced lower poverty risks in 2004–05 than in 1998–99, but higher poverty risks in 2008–09 than 2004–05. Particularly important in accounting for the overall changes in child poverty in both periods are couples where one person works full time and the other does not work. For lone parents, the reductions in the risk of poverty both before and after 2004–05 are due to reduced poverty risks for lone parents who work part-time and those who do not work at all – the poverty risk for those who work full-time has actually risen very slightly. For the whole period between 1998–99 and 2008–09, there are important compositional effects (though the incidence effects still account for more of the changes in child poverty): reduced proportions of zero-earner families (both couples and lone parents) have acted to lower child poverty by 1.5 percentage points over this period.

Table 4.3 splits children up according to the number of children in their family. It shows that the overall fall in child poverty between 1998–99 and 2008–09 is very largely accounted for by compositional and incidence effects for families with 3 or more children: fewer children belong to such families in 2008–09 than in 1998–99, down from about one third to about one quarter (this acts to reduce child poverty because such families have the highest poverty risk); and the poverty risk amongst such families has fallen. The latter (incidence) effect is entirely due to the dramatic reduction in the poverty risk for those families between 1998–99 and 2004–05, when it fell from 40% to 30%. The poverty risk for 2-child families has changed relatively little, and the poverty risk for 1-child families has actually risen slightly.

In Table 4.4 we instead split children up according to the age of the youngest child in the family. Here, the dominant picture is one of reduced poverty risks for families with young children driving the reduction in child poverty over the last 10 years (again, this is entirely due to the trend before 2004–05). Families with a youngest child aged 11 or more have actually experienced an increase in poverty risk since 1998–99. This pattern has significantly narrowed the gap in poverty rates between families with younger and older children, though those with younger children are still at a higher risk of poverty. There is reason to believe that direct tax and benefit reforms since 1998–99 may be at least partly

responsible for this convergence of poverty risks between families with younger and older children, since benefit and tax credit entitlements for such families have tended to converge as well. We investigate this in Section 5, where we explicitly simulate the impact of tax and benefit reforms since 1998–99.

Finally, Table 4.5 splits children up by region. It shows that the reduction in child poverty between 1998–99 and 2004–05 was common to most regions, and most striking in the North West. Between 2004–05 and 2008–09, the West Midlands stands out as the largest driver of the increase in child poverty: had the child poverty rate in that region alone remained constant after 2004–05, child poverty in Great Britain in 2008–09 would have been 0.7 percentage points lower than it actually was. Reductions in child poverty within London since 2004–05 have however acted to reduce child poverty in Great Britain by 0.5 percentage points. Taking the period between 1998–99 and 2008–09 as a whole, the West Midlands is the only region that experienced a rise in child poverty[18]. Unsurprisingly, there are no notable compositional effects, as relative regional populations do not tend to change dramatically over short periods of time. Nevertheless, it is notable that the relative child populations in the southern regions have grown over the decade (this could be due to regional differences in the age profile of children in 1998–99, fertility rates, internal migration, or foreign migration).

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[18] The rise in child poverty in the West Midlands of 7 percentage points between 1998–99 and 2008–09 is sensitive to the particular base year chosen – 1998–99 was a low point for child poverty in that region and it had been 5 percentage points higher in the previous year. Nevertheless, the general story remains the same if we take three year moving averages: child poverty in the West Midlands rose between 1997–98 to 1999–2000 and 2006–07 to 2008–09, and this is entirely due to the trend after 2003–04 to 2005–06.

Table 4.1. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by family type

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004 –05	2008 –09	1998-99	2004 –05	2008 –09	Composit ional effect (ppts)	Incidenc e effect (ppts)	Total change (ppts)	Composit ional effect (ppts)	Incidenc e effect (ppts)	Total change (ppts)	Composit ional effect (ppts)	Incidenc e effect (ppts)	Total change (ppts)
Lone parents	45.7	37.3	35.0	22.8	24.5	24.1	+0.3	-2.0	-1.7	-0.1	-0.6	-0.6	+0.2	-2.5	-2.3
Couple parents	20.2	16.2	18.0	77.2	75.5	75.9	+0.1	-3.0	-3.0	+0.0	+1.4	+1.4	+0.1	-1.7	-1.6
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**+0.4**	**-5.0**	**-4.7**	**-0.1**	**+0.8**	**+0.8**	**+0.3**	**-4.2**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table 4.2. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by family type and work status

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
Lone parents															
Full-time	8.5	10.1	12.3	4.0	4.7	5.7	-0.1	+0.1	+0.0	-0.1	+0.1	+0.0	-0.2	+0.2	-0.1
Part-time	28.7	19.7	18.8	5.0	7.0	6.6	+0.0	-0.5	-0.5	+0.0	-0.1	-0.1	+0.0	-0.6	-0.6
Workless	62.5	56.9	55.1	13.8	12.8	11.8	-0.4	-0.7	-1.1	-0.3	-0.2	-0.6	-0.7	-0.9	-1.7
Couple parents															
Self-employed	25.5	23.8	21.7	11.5	11.8	11.1	+0.0	-0.2	-0.2	+0.0	-0.2	-0.3	+0.0	-0.4	-0.4
Two full-time	0.6	1.5	1.5	11.2	11.7	12.3	-0.1	+0.1	+0.0	-0.1	+0.0	-0.1	-0.3	+0.1	-0.2
One full-time, one part-time	4.6	3.6	4.4	25.0	23.8	22.8	+0.2	-0.2	+0.0	+0.2	+0.2	+0.3	+0.4	-0.1	+0.4
One full-time, one workless	21.6	15.4	19.0	18.0	17.8	18.4	+0.0	-1.1	-1.1	+0.0	+0.7	+0.6	+0.0	-0.5	-0.5
Someone in part-time work	52.0	42.0	53.0	4.3	4.4	5.8	+0.0	-0.4	-0.4	+0.4	+0.6	+0.9	+0.4	+0.0	+0.5
Workless	73.5	62.3	64.0	7.2	6.1	5.5	-0.5	-0.7	-1.2	-0.3	+0.1	-0.2	-0.8	-0.6	-1.4
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.8**	**-3.8**	**-4.7**	**-0.3**	**+1.1**	**+0.8**	**-1.2**	**-2.7**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table 4.3. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by number of children in family

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
1 child	17.2	17.2	19.0	23.2	25.5	28.5	-0.1	+0.0	-0.1	-0.1	+0.5	+0.4	-0.3	+0.5	+0.2
2 children	20.3	18.2	18.6	44.2	44.8	45.3	+0.0	-0.9	-0.9	+0.0	+0.1	+0.1	+0.0	-0.8	-0.8
3+ children	40.1	29.5	31.5	32.6	29.7	26.3	-0.3	-3.3	-3.6	-0.3	+0.6	+0.2	-0.7	-2.5	-3.3
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.5**	**-4.2**	**-4.7**	**-0.4**	**+1.2**	**+0.8**	**-1.1**	**-2.8**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table 4.4. Decomposition of changes in BHC child poverty in between 1998–99 and 2008–09 by age of youngest child in family

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
0-4 years	30.8	24.0	24.3	42.7	40.6	43.6	-0.1	-2.9	-2.9	+0.1	+0.1	+0.2	+0.0	-2.8	-2.8
5-10 years	26.1	19.9	21.0	33.8	34.0	29.6	+0.0	-2.1	-2.1	+0.1	+0.3	+0.4	+0.0	-1.6	-1.6
11+ years	17.1	19.0	19.7	23.6	25.4	26.8	-0.1	+0.5	+0.4	+0.0	+0.2	+0.2	-0.2	+0.7	+0.5
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.2**	**-4.5**	**-4.7**	**+0.1**	**+0.7**	**+0.8**	**-0.1**	**-3.8**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table 4.5. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by region

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
North East	37.2	30.6	28.5	4.5	4.3	4.2	-0.0	-0.3	-0.3	-0.0	-0.1	-0.1	-0.0	-0.4	-0.4
North West	35.2	23.3	24.7	12.3	12.0	11.7	-0.0	-1.4	-1.5	-0.0	+0.2	+0.2	-0.0	-1.3	-1.3
Yorkshire and Humberside	31.6	24.4	27.1	8.9	8.9	8.8	-0.0	-0.6	-0.6	-0.0	+0.2	+0.2	-0.0	-0.4	-0.4
East Midlands	25.1	21.4	21.3	7.3	7.4	7.4	-0.0	-0.3	-0.3	+0.0	-0.0	-0.0	-0.0	-0.3	-0.3
West Midlands	25.2	25.4	32.6	9.6	9.5	9.5	-0.0	+0.0	+0.0	-0.0	+0.7	+0.7	-0.0	+0.7	+0.7
Eastern	18.0	14.5	17.0	9.3	9.5	9.7	-0.0	-0.3	-0.3	-0.0	+0.2	+0.2	-0.0	-0.1	-0.1
London	26.4	27.0	23.5	12.6	12.8	13.0	+0.0	+0.1	+0.1	+0.0	-0.5	-0.4	+0.0	-0.4	-0.4
South East	15.7	13.7	14.3	13.7	14.0	14.3	-0.0	-0.3	-0.3	-0.0	+0.1	+0.1	-0.0	-0.2	-0.3
South West	23.5	16.2	17.3	8.1	8.3	8.3	-0.0	-0.6	-0.6	-0.0	+0.1	+0.1	-0.0	-0.5	-0.5
Wales	29.4	24.2	20.5	5.1	5.1	5.0	-0.0	-0.3	-0.3	+0.0	-0.2	-0.2	-0.0	-0.4	-0.5
Scotland	27.5	21.1	21.5	8.5	8.2	8.0	-0.0	-0.5	-0.5	-0.0	+0.0	+0.0	-0.0	-0.5	-0.5
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.1**	**-4.6**	**-4.7**	**-0.0**	**+0.8**	**+0.8**	**-0.2**	**-3.7**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

***Accounting for a number of characteristics simultaneously: Blinder-Oaxaca
decompositions***

In the previous subsection, we examined the mechanics of changes in child
poverty in recent years by splitting children into groups based on various
different characteristics. Here, we use a decomposition technique suggested by
Blinder (1973) and Oaxaca (1973) which is based on Ordinary Least Squares
(OLS) regressions in which all of these characteristics are controlled for
simultaneously[19]. This technique has two key advantages. First, by controlling
for characteristics simultaneously, we can disentangle the importance of
characteristics that are correlated with each other (for example, parental age and
the number of children in the family). Second, because the decomposition is
derived from the results of regressions which include an intercept term, we can
identify 'secular' trends in child poverty that are *not* explained by any of the
characteristics we control for.

In these decompositions, there are three types of 'effect' that a characteristic can
have on the child poverty rate. First and second, there are incidence and
compositional effects. The key differences between these effects and their
namesakes in the previous section are that we are now controlling for several
characteristics simultaneously and that we are now allowing for a 'secular trend'
that affects all groups. Take housing tenure as an example. If, *conditional on
everything else we are controlling for*, the risk of poverty for those in the largest
housing tenure group (homeowners) increases relative to other groups, then the
incidence effect of housing tenure acts to increase poverty. If the housing tenure
group with the highest risk of poverty, *conditional on everything else we control
for*, increases in relative size, then the compositional effect of housing tenure acts
to increase poverty. Note that, because this kind of decomposition allows us to
identify a secular trend - a change in child poverty that is not accounted for by
any of the characteristics we control for – the incidence effect of, say, housing
tenure, could act to increase child poverty even if parents of all housing tenure
types experience reductions in poverty risks (or vice versa). This is because a
uniform reduction in the poverty risk across groups would represent a secular
trend, not an incidence effect. Clearly, secular trends are of potential interest in
their own right.

The third effect is an 'interaction' effect, arising because groups can experience
changes in relative size and changes in poverty risk (conditional on everything
else we control for) *simultaneously* – as we saw in the previous subsection, this
has happened for families with 3 or more children over the last decade.

Since our outcome of interest – being in poverty - is binary, OLS estimation
implies a linear probability model. For the usual reasons, we would like to
estimate probabilities with a nonlinear model, since probabilities cannot be
linear in the regressors unless restrictions are imposed on the set of values that
regressors can take (which in this case would lack theoretical justification). The
extent to which this matters depends upon the size of the change in the

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[19] See Jann (2008) for an overview of this technique and its implementation.

distribution of characteristics in the population over the period in question. The bigger the change, the more likely it is that the regressor values in the start-year and end-year populations lack common support[20], and thus the more likely a linear probability model is to give misleading results (such as predicted probabilities that do not lie between zero and one). However, the results we obtain are consistent with those we obtain using non-linear techniques[21], so we are confident that the linear probability model is a reasonable approximation.

The characteristics that we control for simultaneously follow closely the set of characteristics that we controlled for in isolation in Tables 4.1 to 4.5 and in Appendix 1. The exceptions are ethnicity and disability status, which we exclude from the analysis here. This is because they both result in very imbalanced classifications (i.e. very large majorities of the population are white and non-disabled). This reduces the precision of the estimation and means that very small differences in poverty trends between (for example) disabled and non-disabled people will look very important simply because the vast majority of the population are non-disabled. We include two different regression specifications on which the decompositions are based. In the first, we control for family type and exclude work status; in the second, we control for family type and work status jointly (these correspond to the classifications shown in Tables 4.1 and 4.2 respectively). The rationale for excluding work status in the first variant is that it is likely to be a major determinant of poverty trends for any group, whether that group is defined by number of children, region, etc. Thus, if the aim is to examine poverty trends amongst different demographic groups, we want to capture (rather than 'control away') the effect on poverty of differences in employment probabilities between these groups. However, it is also interesting to include a variant where we do control for work status, in order to quantify the effect of changing employment patterns on child poverty.

Tables 4.6 and 4.7 present the results of the Blinder-Oaxaca decompositions, for the first and second variants respectively. The underlying regression results are available from the authors on request. Again, we decompose the changes in child poverty between 1998–99 and 2004–05, 2004–05 and 2008–09, and the whole period between 1998–99 and 2008–09.

Looking first at the 4.7 percentage point reduction in child poverty between 1998–99 and 2004–05, Tables 4.6 and 4.7 suggest that this was due to a strong secular trend, largely unrelated to changes that were specific to children with particular characteristics (of those characteristics that we control for, as always). In fact, the most significant incidence effect over this period – from parental age -

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[20] The common support assumption is less restrictive here than it might be, because all of our regressors are discrete.
[21] Specifically, the compositional effects of each variable are similar to those obtained using the Fairlie decomposition (Stata command 'fairlie'); and the total incidence, compositional and interactions effects across all variables are very similar to those obtained using a Bauer-Sinning non-linear decomposition (Stata command 'nldecompose' – see Bauer and Sinning, 2008). Details available from the authors on request.

acted to *increase* child poverty. This is driven by the fact that parents between 35 and 45 – the largest group – were *less* likely to be in poverty in 1998–99 than other parents, but *more* likely in 2004–05 (i.e. their poverty risk increased relative to other groups), *conditional* on the other characteristics that we control for.

When we control for family type and work status in Table 4.7, we see more evidence of the child-poverty reducing impact of increases in parental employment between 1998–99 and 2004–05: this lies behind the 'compositional effect' that acted to reduce child poverty by 0.7 percentage points over that period.

Turning to the 0.8 percentage point increase in child poverty between 2004–05 and 2008–09, the results are again dominated by a large secular trend, this time of rising child poverty. The fact that child poverty rose by a relatively small amount is accounted for by the fact that the poverty rate rose less for children with older parents and for children of homeowners (conditional on the other characteristics we control for), who are majority groups.

Looking finally at the period between 1998–99 and 2008–09 as a whole, Table 4.6 shows a significant downwards secular trend in child poverty, but an 'incidence effect' from family type that acts to partly offset this. This is because the poverty risk amongst couple parents, who are a majority, has fallen by less than the poverty risk amongst lone parents (note that the poverty risk has fallen for both types of parent, but this is attributed to the 'secular trend'), conditional on other characteristics. In Table 4.7, where we also control for work status, we see a secular trend of virtually zero and instead a significant 'compositional effect' from family type and work status acting to reduce child poverty: again, this reflects the increase in parental employment over the period, as employed parents are much less likely to be in poverty. As with the period between 2004–05 and 2008–09, 'housing tenure' has acted to reduce child poverty over the decade because home-owning parents (the majority) have seen relatively rapid falls in their poverty risk, conditional on other characteristics.

A key insight from these Blinder-Oaxaca decompositions is the sharply contrasting secular trends in child poverty before and after 2004–05, unrelated to trends that were specific to children with any particular characteristics (of those we control for). Trends in the generosity of benefit and tax credit reforms towards families with children are one potential explanation. In the next section we investigate whether direct tax and benefit policy can indeed account for the contrasting trends before and after 2004–05.

Table 4.6. Blinder-Oaxaca decomposition of changes in child poverty between 1998–99 and 2008–09 (Great Britain), controlling for family type, number of children, age of youngest child, parental age, housing tenure and region.

Characteristic	1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	Compositional effect	Incidence effect	Interaction effect	Compositional effect	Incidence effect	Interaction effect	Compositional effect	Incidence effect	Interaction effect
Family type	+0.2	+0.4	+0.0	-0.0	+1.2	-0.0	+0.1	+1.6	+0.1
Number of children	-0.3	+0.2	-0.2	-0.4	-0.2	+0.0	-0.8	+0.3	-0.5
Age of youngest child	-0.0	-0.4	-0.1	+0.1	-0.1	0.1	+0.1	-0.5	-0.1
Parental age	+0.1	+1.7	+0.1	+0.3	-2.0	-0.1	+0.4	-0.4	+0.0
Housing tenure	-0.5	-0.5	-0.0	-0.2	-1.0	-0.0	-0.8	-1.4	-0.0
Region	-0.1	+0.1	-0.0	-0.0	+0.2	+0.0	-0.1	+0.4	-0.1
Total	**-0.6**	**+1.6**	**-0.3**	**-0.4**	**-1.8**	**-0.1**	**-1.1**	**+0.1**	**-0.5**
'Secular' trend		-5.3			+3.0			-2.3	
Change in child poverty		-4.7			+0.8			-3.9	

Notes: Incomes measured before housing costs have been deducted. Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table 4.7. Blinder-Oaxaca decomposition of changes in child poverty between 1998–99 and 2008–09 (Great Britain), controlling for family type and work status, number of children, age of youngest child, parental age, housing tenure and region.

Characteristic	1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	Compositional effect	Incidence effect	Interaction effect	Compositional effect	Incidence effect	Interaction effect	Compositional effect	Incidence effect	Interaction effect
Family type and work status	-0.7	0.6	0.0	-0.2	-0.2	-0.2	-0.9	0.3	-0.1
Number of children	-0.2	0.0	-0.2	-0.2	0.0	0.0	-0.4	0.3	-0.6
Age of youngest child	0.0	-0.2	0.0	0.0	-0.1	0.0	0.1	-0.2	-0.1
Parental age	0.0	2.1	0.0	0.1	-1.5	-0.1	0.2	0.5	-0.1
Housing tenure	-0.2	-0.9	-0.1	-0.2	-2.0	0.0	-0.5	-2.7	-0.1
Region	0.0	0.1	0.0	0.0	0.1	0.0	-0.1	0.3	-0.1
Total	**-1.1**	**+1.8**	**-0.3**	**-0.5**	**-3.7**	**-0.4**	**-1.5**	**-1.6**	**-1.1**
'Secular' trend	**-5.1**			**+5.3**			**+0.3**		
Change in child poverty	**-4.7**			**+0.8**			**-3.9**		

Notes: Incomes measured before housing costs have been deducted. Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

5. Child poverty and direct taxes and benefits since 1998–99

We now turn our attention to the direct tax and benefit system, a key driver of trends in child poverty since 1998–99. We first provide an overview of changes to benefit entitlements for example families over this period, and then explicitly simulate the direct impact of reforms to the direct tax and benefit system since 1998–99 on the child poverty rate in 2010–11.

The evolution of benefit and tax credit entitlements since 1998–99

State benefits and tax credits comprise the majority of the net household incomes of individuals in the second and third decile groups of the income distribution (approximately those around the poverty line). Changes in entitlements to state benefits and tax credits are therefore likely to be a key determinant of what happens to relative poverty. Here we track changes to these entitlements since 1998–99 for some key family types likely to be in or close to poverty (we include families without children, to put changes into a broader perspective).

Table 5.1 shows year-on-year growth rates in nominal entitlements to social security benefits and tax credits and compares these with year-on-year nominal changes in the poverty line and in prices. Numbers in bold mark instances where entitlements to benefits grew faster than prices (as measured by RPI and ROSSI). Shaded cells mark instances where entitlements grew faster than the BHC poverty line; considered in isolation, this would suggest a declining relative poverty rate for that family type in that year.[22]

Table 5.1 shows the following:

- Families with children and pensioners have experienced by far the most generous increases in benefit and tax credit entitlements since 1998–99 (note that these are also the groups who have driven the reductions in overall poverty over the same period).
- The generosity of growth in entitlements for families with children tailed off between 2004–5 and 2007–08.
- Since 1998–99, the years in which benefit and tax credit entitlements for families with children rose in real terms and relative to the BHC poverty line coincide almost perfectly with the years in which child poverty fell.[23]

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[22] Some of these benefits are designed only to cover non-housing costs, and so it might be more appropriate to compare them with changes in the ROSSI index or growth in the AHC poverty line. For example, growth in the rate of JSA for a single adult has exceeded the change in RPI in only two years, but it has exceeded the change in ROSSI in seven years.

[23] 1998–99 is the unsurprising exception: the reduction in entitlements for lone parents in that year is entirely due to the abolition of one parent benefit, which only affected *new* claimants of child benefit and income support and therefore had a very small impact on child poverty.

These observations provide motivation for the next subsection, where we explicitly analyse the link between the tax and benefit system and child poverty using micro-simulation techniques.

Table 5.1. Growth in nominal entitlements to state support for certain family types (%)

	Couple, 3 children, not work	Lone parent, 1 child, no work	Lone parent, 1 child, part time work	Single person, on JSA	Single person, on IB	Basic state pension (single)	Single pensioner entitled to means-tested benefits	Couple pensioner entitled to means-tested benefits	Poverty line (BHC)	Poverty line (AHC)	RPI	Rossi	Change in BHC child poverty rate (ppts)
1998–99	2.4	−3.8	−5.5	2.4	**3.6**	**3.6**	2.4	2.4	3.8	4.3	3.1	2.2	-0.9
1999–00	**9.3**	**8.6**	**9.3**	**2.1**	**3.2**	**3.2**	**6.5**	**6.5**	5.0	5.5	1.6	1.7	-0.4
2000–01	**13.4**	**8.8**	**18.1**	1.6	1.1	1.1	**4.6**	**4.6**	5.9	5.8	3.0	1.4	-2.3
2001–02	**9.1**	**6.4**	**7.2**	**1.6**	**3.3**	**7.4**	**17.5**	**15.3**	6.3	7.5	1.5	1.7	-0.2
2002–03	**4.1**	**3.2**	**4.2**	1.7	1.7	**4.1**	**6.5**	**6.6**	3.7	4.8	2.1	1.5	-0.5
2003–04	**8.6**	**6.6**	**7.4**	1.3	1.7	2.6	**4.3**	**4.0**	2.4	2.4	2.8	1.7	-0.5
2004–05	**6.0**	**4.6**	**5.0**	1.8	2.8	2.8	3.0	**3.3**	4.0	2.6	3.1	1.3	-0.8
2005–06	2.5	2.0	**3.1**	1.0	**3.1**	**3.1**	**3.8**	**3.8**	3.5	3.2	2.6	1.9	+0.7
2006–07	3.1	2.7	3.0	2.2	2.7	2.7	**4.2**	**4.2**	4.1	3.7	3.7	3.1	+0.4
2007–08	3.7	3.3	3.7	3.0	3.6	3.6	**4.4**	**4.4**	4.3	3.4	4.1	2.8	+0.2
2008–09	**6.9**	**5.4**	**6.2**	2.3	**3.9**	**3.9**	4.2	4.2	3.6	3.4	3.0	4.5	-0.7
2009–10	6.3	6.1	5.5	6.3	6.4	5.0	4.8	4.8	-	-	0.5	2.7	-
2010–11	2.2	2.0	1.9	1.8	1.7	2.5	2.0	2.0	-	-	-	-	-

Notes: The table shows annual changes in maximum entitlements to benefits for various family types with no private income (except the working lone parent, who is assumed to earn an amount that is below the personal income tax allowance and the primary threshold for National Insurance contributions) ignoring housing benefit and council tax benefit and the value of free school meals for families with children. 'RPI' measures the change in the annual average of the RPI all items index since the previous year; 'Rossi' measures the change in the annual average of the Rossi since the previous year. Values in bold are greater than the change in the RPI over the same period; shaded cells are greater than the change in both the BHC and AHC poverty lines.

Source: Authors' calculations.

***The direct impact of tax and benefit reforms since 1998–99 on child poverty
in 2010–11***

In this section we present projections of the number of children in poverty in
2010–11. Each projection assumes a different direct tax and benefit system in
2010–11. The first is the actual 2010–11 system, as it currently exists. The others
are the 2010–11 system as it would be if the government had made no direct tax
and benefit reforms since 1998–99, 2004–05 and 2007–08 respectively, using
different definitions of what counts as a "reform"[24].

The projections make use of the IFS tax and benefit static micro-simulation
model, TAXBEN. The methods used are identical to those in Brewer, Browne,
Joyce and Sutherland (2009). The projection under the 'actual 2010–11 system'
thus represents an update of the 'current policies' projection in that previous
work. It is an update in the following respects: we take account of reforms to the
direct tax and benefit system in 2010–11 that have since been announced; we
use updated assumptions about the take-up rates for means-tested benefits and
tax credits, employment, earnings and other financial variables that affect
household incomes; we update demographic projections such as the number of
lone parents; and we use more recent 'base' data on household incomes from
which to project forward to 2010–11 (we use data from 2007–08 and 2008–09,
the latest available, rather than 2005–06 and 2006–07 as last time).

Note that this technique does not account for any behavioural responses to tax
and benefit reforms, such as labour supply or fertility changes. Thus, we are
quantifying the *direct* impact of those reforms on child poverty. At the end of
Section 5 we investigate the impact of tax and benefit reforms since 1998–99 on
financial work incentives for parents, and in Section 6 we track labour market
trends for parents since 1998–99.

First, Figure 5.1 presents actual child poverty as measured by the HBAI series
between 1998–99 and 2008–09, the target level in 2010–11, and our projection
of child poverty in 2010–11 under the actual tax and benefit system in that year
(i.e. the current system). It shows that, under our projection, there will be 1
million fewer children in poverty in 2010–11 than in 1998–99. This corresponds
to a projected child poverty rate in 2010–11 of 18.4%, which would be the
lowest such rate since 1984. However, the 2010–11 target is still highly likely to
be missed by a substantial margin – about 700,000 children under our
projection. This is similar to the projection of relative child poverty in 2010–11
produced by the previous Government earlier this year using similar methods[25].

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[24] In Appendix 2 we present projections of both BHC and AHC child poverty under the scenario
of no reform since a particular year for every year between 1998–99 and 2009–10. Here we just
focus on BHC incomes and the three 'no reform' scenarios indicated in the text.
[25] See HM Treasury, Department for Children, Schools and Families and Department for Work
and Pensions (2010).

Figure 5.1. Actual and projected relative (BHC) income child poverty in the UK between 1998–99 and 2010–11
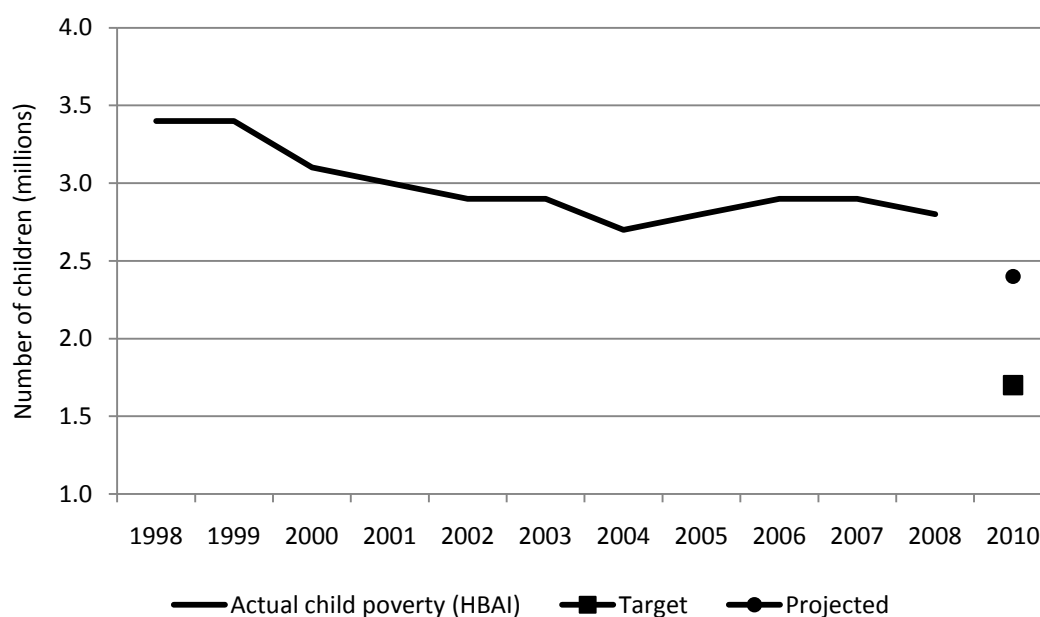
Notes: Years refer to financial years. For the purposes of the child poverty target in 2010–11, the DWP has had to estimate the level of relative child poverty in the UK in 1998–99 (Northern Ireland was first included in the official HBAI series in 2002–03).
Sources: Family Resources Survey, various years; authors' calculations using TAXBEN and assumptions specified in the text.

We can also simulate what child poverty would be if the 2010–11 tax and benefit system were different. Specifically, we can attempt to isolate the direct impact on child poverty in 2010–11 of tax and benefit reforms since a particular year, by simulating what child poverty would be if the direct tax and benefit system of that year had been left unreformed. We define 'no direct tax and benefit reforms' in two alternative ways[26]:

1. **1998–99 default uprating**: the parameters of the direct tax and benefit system are uprated in the way that was default in 1998–99. This involves uprating most means-tested benefits in line with the Rossi[27], and other benefits and tax thresholds in line with the RPI.
2. **GDP uprating**: the parameters of the direct tax and benefit system are uprated in line with nominal GDP.

Table 5.2 presents the results of these simulations. The first three rows show our estimate of what child poverty would be in 2010–11 if the government had implemented no direct tax and benefit reforms since 1998–99, 2004–05 and

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[26] There are a number of counterfactual 'no-reform' scenarios that one could reasonably use. For a discussion of various alternatives see Adam and Browne (forthcoming).
[27] Tax credits, which did not exist in 1998–99, are uprated in line with the Rossi index for this counterfactual, on the basis that their forebears – family credit and child additions in income support – were uprated in line with the Rossi.

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2007–08 respectively (for each of the two definitions of 'no reform' given above). The bottom row simply restates our projection of 2010–11 child poverty under the actual 2010–11 tax and benefit system, as presented in Figure 5.1. Thus, comparing the top and bottom rows reveals the estimated direct impact on child poverty in 2010–11 of direct tax and benefit reforms since 1998–99. Specifically, child poverty in 2010–11 is estimated to be between 1.3 million and 1.9 million lower than it would be if the tax and benefit system had not been reformed since 1998–99, depending on the definition of 'no reform' that we use. However, the second row reveals that the majority of this child-poverty reducing impact is due to those reforms implemented between 1998–99 and 2004–05. The similarity between the numbers in the second and third rows shows that reforms implemented between 2004–05 and 2007–08 did little or nothing to reduce child poverty: in fact, compared to a GDP-uprating baseline, reforms over this period *increased* child poverty in 2010–11 by more than 1 percentage point.

However we define a 'reform', there is thus a striking correlation between trends in child poverty since 1998–99 and the direct impact of tax and benefit reforms on child poverty over that period. The years in which child poverty rose (2005–06, 2006–07 and 2007–08) stand out as years in which tax and benefit reforms were much less child poverty-reducing, or even child poverty-increasing when compared to the GDP-uprating baseline. This is very suggestive evidence that the tax and benefit system has been a key driver of both: i) the substantial overall reduction in child poverty since 1998–99 and ii) the slowdown in progress towards the child poverty targets between 2004–05 and 2007–08.

See Appendix 2 for estimates of the impact of reforms since every year between 1998–99 and 2009–10, and for the corresponding numbers for AHC incomes.

Table 5.2. Simulations of relative (BHC) income child poverty in the UK in 2010–11 under various direct tax and benefit systems

Direct tax and benefit system in 2010–11	Simulated child poverty in 2010–11			
	1998–99 default uprating		GDP uprating	
	%	Million	%	Million
1998–99 uprated	32.1	4.3	27.7	3.7
2004–05 uprated	22.0	2.9	18.3	2.4
2007–08 uprated	21.4	2.8	19.6	2.6
Actual 2010–11 system	18.4	2.4	18.4	2.4

Sources: Authors' calculations based on Family Resources Survey 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Table 5.2 also suggests that factors *other than* the direct impact of tax and benefit reforms have acted to increase child poverty since 1998–99. For example, using the '1998–99 default uprating' definition of 'no reform', our results suggest that in the absence of tax and benefit reforms child poverty would have risen from its

1998–99 level of 3.4 million to a 2010–11 level of 4.3 million. Thus, other changes have acted to increase child poverty by 900,000 over that period (or 300,000 against the 'GDP-uprating' definition of 'no reform'). This is confirmed by repeating the simulations shown in Table 5.2, but for a 1998–99 population with 2010–11 levels of earnings (and other financial variables). Table 5.3 shows the results of these simulations, and compares them with the corresponding results for a 2010–11 population that were shown in Table 5.2. We show only child poverty rates, because the size of the child population has changed over time, and we restrict our analysis to Great Britain because Northern Ireland was not included in the Family Resources Survey in 1998–99.

Table 5.3. Simulations of relative (BHC) income child poverty in Great Britain in 2010–11 under the actual 2010–11 tax and benefit system and an unreformed 1998–99 system, for the 1998–99 population and the 2010–11 population.

Direct tax and benefit system in 2010–11	Simulated child poverty rate (%) in Great Britain in 2010–11	
	1998–99 population	2010–11 population
1998–99 default-uprated	29.9	32.1
1998–99 GDP-uprated	22.3	27.7
Actual 2010–11 system	14.6	18.4
Memo: Actual 1998–99 rate	*26.0*	*26.0*

Sources: Authors' calculations based on Family Resources Survey 1998–99, 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Table 5.3 highlights three important points:

- Under each direct tax and benefit system, simulated child poverty in 2010–11 is lower amongst a 1998–99 population (with 2010–11 earnings levels) than amongst the 2010–11 population. Thus, population changes have acted to increase child poverty between 1998–99 and 2010–11.

- The direct impact of tax and benefit reforms over the period differs slightly when we simulate using the 'base-year' (1998–99) population rather than the 'end-year' (2010–11) population. For example, under the 'GDP-uprating' definition of 'no reform', the impact of reforms since 1998–99 seems to be to reduce child poverty by 8 percentage points and 9 percentage points for the 1998–99 and 2010–11 populations respectively. It is not surprising that there is a difference. Since tax liabilities and benefit or tax credit entitlements depend on individual or family characteristics, changes in the distribution of those characteristics in the population will change the impact of given tax or benefit reforms.

- Growth in financial variables (most importantly earnings) has been important over the period. For example, child poverty would have risen from its 1998–99 level of 26.1% to a 2010–11 level of 30.0% if 1998–99

default tax and benefit uprating procedures had been maintained and the population had remained the same. Earnings growth tends to drive income growth at the median, and thus (other things being equal) tends to increase a relative income measure of poverty against a baseline where benefit rates are uprated more slowly than earnings.

These observations motivate a manipulation of the numbers in Table 5.3 in order to separate the impact on child poverty in 2010–11 of three factors: the direct effects of tax and benefit reforms since 1998–99; population change since 1998–99; and growth in financial variables (notably earnings) since 1998–99. We do this with a Shapley-Shorrocks[28] decomposition. Appendix 3 gives technical details of this technique, and Table 5.4 shows the results of the decomposition.

Table 5.4. Shapley-Shorrocks decomposition of the change in relative (BHC) income child poverty between 1998–99 and 2010–11 (Great Britain).

Factor affecting child poverty since 1998–99	Impact on child poverty in 2010–11 (ppts)	
	'No reform' = '1998–99 default uprating'	'No reform' = 'GDP-uprating'
Direct tax and benefit reforms	-14.5	-8.6
Population change	+3.0	+4.5
Growth in financial variables	+3.9	-3.7
Total change in child poverty	**-7.6**	**-7.6**

Notes: Figures may not sum due to rounding. The effect of 'direct tax and benefit reforms' is the direct effect assuming no behavioural responses to those reforms. Any indirect effects through labour supply or fertility responses would be picked up by the effect of 'population change'. 'Growth in financial variables' includes growth in earnings and other sources of private income as well as rents (which affect housing benefit entitlements). The effect of earnings growth is likely to be very important, as earnings is the dominant source of income for the median household and it therefore affects the relative poverty line.
Sources: Authors' calculations based on Family Resources Survey 1998–99, 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Table 5.4 shows the following:

- As we saw in Tables 5.2 and 5.3, the direct impact of tax and benefit reforms between 1998–99 and 2010–11 has been to reduce child poverty substantially.

- Population change over the period has acted to increase child poverty.

- Earnings growth has acted to increase child poverty when we define 'no tax and benefit reforms' as '1998–99 default uprating'. This is because the default uprating procedure in 1998–99 was to index benefits to the Retail

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[28] See Shorrocks (1999).

Price Index or the Rossi index, both of which grew less quickly than earnings between 1998–99 and 2010–11. Hence, median income (and hence the poverty line) grew faster than benefit rates under this scenario, increasing relative poverty.

- Conversely, using analagous reasoning, earnings growth has acted to reduce child poverty when we define 'no tax and benefit reforms' as 'GDP uprating', because GDP grew more quickly than earnings over the period.

The child-poverty increasing effect of population change implies that the composition of the population has shifted in one of two ways (or some combination of the two). First, changes in the characteristics of the population may have increased the median income (for example, increases in employment over the decade), thereby increasing the relative poverty line and increasing child poverty. Second, groups of children at higher risk of poverty could have become relatively more common (for example, increase in the relative number of lone parents). Note that such changes could include indirect effects of tax and benefit reforms. For example, those reforms could have induced behavioural responses which have changed the average characteristics of people who have children or the labour supply of parents. With the latter possibility in mind, at the end of Section 5 we investigate the impact of tax and benefit reforms since 1998–99 on financial work incentives for parents, and in Section 6 we track labour market trends for parents since 1998–99.

Our results in Table 5.4 are consistent with work by Dickens (forthcoming). Looking at the period between 1997–98 and 2007–08, he also finds that tax and benefit reforms were by far the largest driver of the reduction in child poverty over the period (this was mostly due to benefit reforms); but that demographic changes (including increases in the number of lone parents) and earnings growth acted to increase child poverty.

Subgroup analysis of the direct impact of tax and benefit reforms since 1998–99 on child poverty in 2010–11

It is interesting to consider whether the differential impact of tax and benefit reforms since 1998–99 on different groups of children can explain differential trends in poverty rates between those groups. In Section 4 we noted the following points:

1. Families with younger children have seen much larger reductions in their risk of poverty between 1998–99 and 2008–09 than those with older children.[29]

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[29] Precisely, children living in families where the youngest child is younger have experienced the faster reductions in poverty rates. It makes sense to group children in this way (rather than by their individual ages) because we are dealing with a household-level measure of income.

2. Children in large families have seen the largest reductions in poverty rates between 1998–99 and 2008–09; children in 1-child families have experienced a small increase in the risk of poverty over this period.
3. Children of lone parents experienced the largest reduction in the risk of poverty between 1998–99 and 2008–09; and the increase in child poverty between 2004–05 and 2008–09 was driven by an increase in the poverty risk for children of couples.

Here, we examine more closely the results of the simulations shown in Table 5.2 to see whether tax and benefit policy can explain any of these subgroup differences. Because the decompositions in Section 4 were based on changes in child poverty between 1998–99 and 2008–09 (the latest year of household income data), here we include simulations of child poverty in 2010–11 under an unreformed 2008–09 tax and benefit system, in order to isolate the direct impact of reforms up to that year.

There are reasons to expect that the faster reduction in poverty risk for families with younger children since 1998–99 might be (at least partly) driven by tax and benefit reforms. This is because:

- Tax credit entitlements were gradually equalised for parents of children of all ages over 12 months (previously the Family Credit, which was replaced by the Working Families Tax Credit in 1999–00, had been tiered so that parents of older children received significantly more).
- Families with a child under 12 months have (subject to income) been entitled to an additional £545 per year in tax credits since 2003–04.

This motivates the analysis presented in Table 5.5, where we repeat the simulations shown in Table 5.2 for different groups of children (also including simulations under an unreformed 2008–09 tax and benefit system), separated by the age of the youngest child in their family. It shows the following:

- Between 1998–99 and 2008–09, tax and benefit reforms did indeed do more to reduce the poverty risk in families with younger children. For example, taking '1998–99 default uprating' to mean 'no reforms', we estimate that reforms over this period reduced the poverty risk by 47%, 38% and 27% for children in families where the youngest child is under 5, between 5 and 10, and over 10 respectively[30]. Thus, there is evidence that reforms have contributed to the convergence of poverty risks amongst families with children of different ages.

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[30] These percentage reductions in poverty risk correspond to the percentage point reductions of 17.9, 11.5 and 6.8 that are implied by Table 5.5. It is more informative, for these purposes, to convert percentage point reductions into percentage reductions. For example, say that one group starts with a poverty risk of 50%, and another starts with a poverty risk of 10%. If reforms over a particular period halve the risk of poverty for all groups, the percentage point reduction in poverty would be far larger for the first group (25 rather than 5), but the percentage reduction - 50% - would be the same for both.

- However, the results in Table 5.5 do not explain why the risk of poverty in families whose youngest child is over 10 has increased between 1998–99 and 2008–09 (see Table 4.4): under either definition of 'no reform', tax and benefit reforms have acted to reduce child poverty amongst this group.

Tax and benefit reforms could also help to explain why families with more children have been such large statistical drivers of the overall reduction in child poverty since 1998–99. Increases in the generosity of per-child payments, which have been implemented over the last decade largely through the child elements of the Working Families Tax Credit (between 1999–00 and 2003–04) and the Child Tax Credit (from 2003–04 onwards), are a potential explanation. To investigate this, Table 5.6 splits children up by the number of children in their family. The Table shows:

- Between 1998–99 and 2008–09, taking '1998–99 default uprating' to mean 'no reforms', tax and benefit reforms reduced the risk of poverty by 29%, 43% and 43% for children in 1-child families, 2-child families and families with 3 or more children respectively.
- Hence, those reforms seem to have contributed to the fact that the relative performance (in terms of child poverty trends) of 1-child families over the period has been worse than that of other families with children.
- However, the explanatory power of tax and benefit reforms is limited here in at least two respects: they do not explain why the poverty risk amongst children in 1-child families increased between 1998–99 and 2008–09 (reforms were in fact poverty-reducing amongst these children); and they do not explain why families with 3 or more children have seen such a large reduction in poverty risk relative to those with 2 children.

Family tax credit entitlements are not dependent upon the number of adults in the family, so with an equivalised income measure we might also expect lone parents to have benefited more from tax and benefit reforms since 1998–99 than parents in couples. Table 5.7 splits children up according to whether they live with a lone parent or couple parents. It shows:

- Taking '1998–99 default uprating' to mean 'no reforms', we estimate that the direct impact of tax and benefit reforms between 1998–99 and 2008–09 has been to reduce child poverty in lone parent families by 48% and in couple families by 33%. Thus, the fact that child poverty has fallen much more in lone parent families than couple families may be partly due to the direct impact of tax and benefit reforms[31].

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[31] Other likely explanations include the large rise in lone parent employment over the period, as shown in Table 4.2, and the relatively weak performance of the earnings of one-earner couples in recent years (see Section 6). The rise in lone parent employment could be (at least partly) a consequence of tax and benefit reforms since 1998–99, which have tended to increase the incentive for lone parents to be in work (see next subsection).

- Tax and benefit reforms do not help to explain why the rise in child poverty between 2004–05 and 2008–09 was due to a rise in poverty amongst the children of couples. Under either definition of 'no reforms', the direct impact of tax and benefit reforms on the children of couples between 2004–05 and 2008–09 was slightly poverty-reducing. In Section 6, where we look at labour market trends amongst parents, we suggest a different explanation.

Table 5.5. Simulations of relative child poverty in the UK in 2010–11 under various direct tax and benefit systems, by age of youngest child in the family

Direct tax and benefit system in 2010–11	Simulated child poverty in 2010–11 (BHC)			
	1998–99 default uprating		GDP uprating	
	%	Million	%	Million
	Youngest child in family under 5			
1998–99 uprated	37.8	2.2	34.2	2.0
2004–05 uprated	23.0	1.3	18.4	1.1
2007–08 uprated	22.1	1.3	20.1	1.2
2008–09 uprated	19.9	1.2	18.4	1.2
Actual 2010–11 system	18.0	1.1	18.0	1.1
	Youngest child in family 5 to 10			
1998–99 uprated	30.6	1.2	26.1	1.0
2004–05 uprated	21.4	0.9	18.0	0.7
2007–08 uprated	21.0	0.8	19.6	0.8
2008–09 uprated	19.1	0.8	17.8	0.7
Actual 2010–11 system	17.8	0.7	17.8	0.7
	Youngest child in family 11+			
1998–99 uprated	25.3	0.9	19.7	0.7
2004–05 uprated	19.9	0.7	18.1	0.6
2007–08 uprated	19.5	0.7	19.0	0.7
2008–09 uprated	18.5	0.7	18.3	0.6
Actual 2010–11 system	17.7	0.6	17.7	0.6

Sources: Authors' calculations based on Family Resources Survey 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Table 5.6. Simulations of relative child poverty in the UK in 2010–11 under various direct tax and benefit systems, by number of children in the family

Direct tax and benefit system in 2010–11	Simulated child poverty in 2010–11 (BHC)			
	1998–99 default uprating		GDP uprating	
	%	Million	%	Million
1 child in the family				
1998–99 uprated	22.2	0.8	17.5	0.6
2004–05 uprated	16.7	0.6	14.4	0.5
2007–08 uprated	16.5	0.6	15.5	0.5
2008–09 uprated	15.8	0.5	15.2	0.5
Actual 2010–11 system	15.1	0.5	15.1	0.5
2 children in the family				
1998–99 uprated	26.5	1.6	23.0	1.3
2004–05 uprated	17.1	1.0	14.6	0.9
2007–08 uprated	16.4	1.0	15.8	0.9
2008–09 uprated	15.2	0.9	14.5	0.9
Actual 2010–11 system	14.3	0.8	14.3	0.8
3 or more children in the family				
1998–99 uprated	49.4	2.0	44.1	1.8
2004–05 uprated	32.6	1.3	26.7	1.1
2007–08 uprated	31.9	1.3	28.8	1.2
2008–09 uprated	28.2	1.1	26.0	1.0
Actual 2010–11 system	25.5	1.0	25.5	1.0

Sources: Authors' calculations based on Family Resources Survey 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Table 5.7. Simulations of relative child poverty in the UK in 2010–11 under various direct tax and benefit systems, by family type

Direct tax and benefit system in 2010–11	Simulated child poverty in 2010–11 (BHC)			
	1998–99 default uprating		GDP uprating	
	%	Million	%	Million
Lone parent families				
1998–99 uprated	53.8	1.8	39.2	1.3
2004–05 uprated	32.7	1.1	24.7	0.8
2007–08 uprated	31.0	1.0	26.8	0.9
2008–09 uprated	28.1	0.9	25.3	0.8
Actual 2010–11 system	26.1	0.9	26.1	0.9
Couple families				
1998–99 uprated	25.1	2.5	24.2	2.4
2004–05 uprated	18.0	1.8	16.0	1.6
2007–08 uprated	17.8	1.8	17.2	1.7
2008–09 uprated	16.3	1.6	15.8	1.6
Actual 2010–11 system	15.1	1.5	15.1	1.5

Sources: Authors' calculations based on Family Resources Survey 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

The effect of direct tax and benefit reforms since 1998–99 on financial work incentives for parents

Here we draw on work by IFS researchers (Adam and Browne, forthcoming) to document how reforms since 1998–99 have affected financial work incentives for parents. There are two ways that taxes and benefits can affect financial work incentives: they can affect the incentive to be in work; and they can affect the incentive for existing workers to earn a little more. We consider each in turn here.

First, we consider the financial incentive to be in work. A measure of the impact of taxes and benefits on this incentive is the participation tax rate (PTR): this measures the proportion of (gross) earnings lost in direct taxes or forgone state benefit and tax credit entitlements when someone moves into work. Hence, lower PTRs signal stronger financial incentives to be in work. Figures 5.2 and 5.3 show what the mean PTRs for parents would be if the direct tax and benefit

system had not been reformed since particular years, for each year since 1998–99, and for each definition of 'no reform' that we have used throughout this section. Figures 5.2 and 5.3 show that tax and benefit reforms since 1998–99 have tended to:

- strengthen the incentive for lone parents to be in work (this is primarily due to the introduction of the Working Families Tax Credit (WFTC), which was subsequently integrated into the Working Tax Credit and Child Tax Credit, in October 1999);
- weaken the incentive for parents with a working partner to be in work (again, this is primarily due to the introduction of WFTC and the subsequent expansion of means-testing at the family level, which reduces the incentive for potential second earners to work because doing so would result in lost tax credit entitlement as family income rises);
- and slightly weaken financial incentives to be in work for parents in couples where the partner does not work.

Second, we consider the financial incentive for parents already in work to increase their earnings. A measure of this incentive is the marginal effective tax rate (METR). The METR measures the proportion of a small increase in gross earnings lost to additional tax payments and forgone state benefit and tax credit entitlements. A lower METR therefore signals a stronger financial incentive to increase earnings slightly (this could be through working more hours, promotion, qualifying for bonus payments or getting a better-paid job). Figures 5.4 and 5.5 show what the mean METRs for working parents would be if the tax and benefit system had not been reformed since particular years, for each year since 1998–99, and for each definition of 'no reform' that we have used throughout this section. Figures 5.4 and 5.5 show that:

- tax and benefit reforms since 1998–99 have tended to weaken the incentive for working parents to slightly increase their earnings;
- and this is more the case for parents in couples than for lone parents.

The impact of tax and benefit reforms on the labour supply of parents depends not only on the impact on financial work incentives, but also on the degree to which the labour supply decisions of the affected parents are responsive to those incentives. These levels of responsiveness differ for different groups. For example, empirical evidence suggests that the decision of whether or not to work is particularly responsive to financial incentives for lone parents; on the other hand, married men (typically the first potential earners in couples) are very unresponsive to changes in the financial incentive to earn a little more[32]. Although lone parents are the only group of parents (of those we look at) for whom tax and benefit reforms since 1998–99 have strengthened work incentives (as measured by PTRs), this group is particularly responsive to those incentives and particularly like to be in poverty. Hence, the net effect on child poverty of

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[32] Meghir and Phillips (2010).

parents' labour supply responses to tax and benefit reforms since 1998–99 is not clear.

Note also that the impacts on financial work incentives for parents of tax and benefit reforms since 2004–05 have been negligible. Hence, labour supply responses to tax and benefit reforms do not seem to have a role in explaining what has happened since the 'turning point' for child poverty in that year.

Figure 5.2. The effect of tax and benefit reforms since 1998–99 on financial incentives for parents to be in work ('no reform' = '1998–99 default uprating').

Tax and benefit system uprated according to 1998-99 default rules since particular year
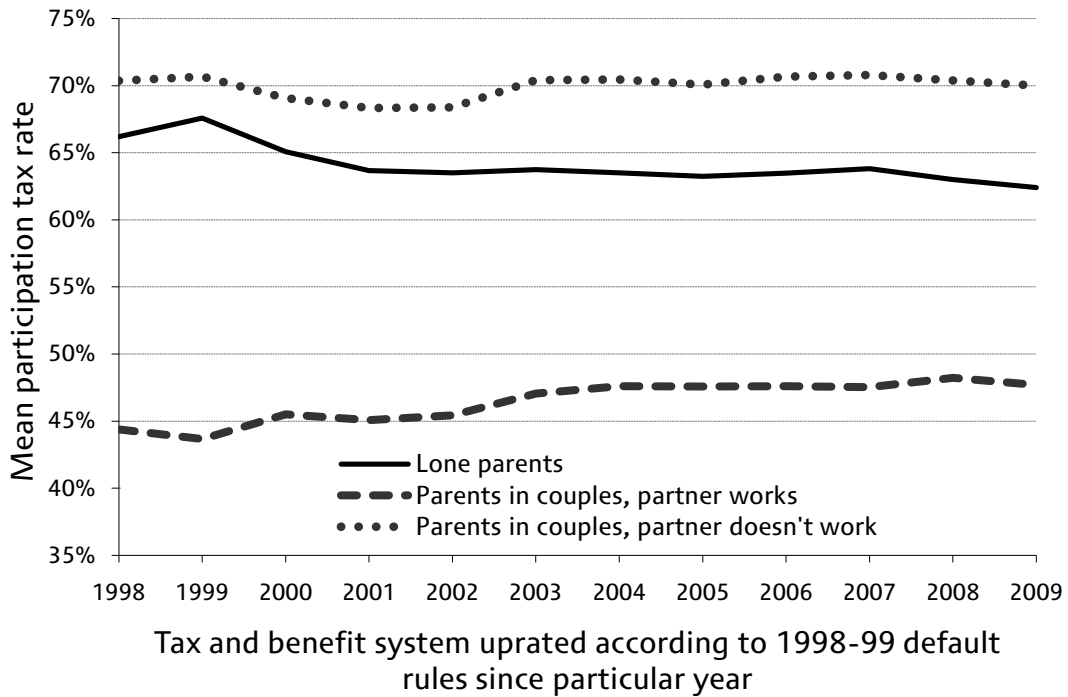
Source: Adam and Browne (forthcoming).

Figure 5.3. The effect of tax and benefit reforms since 1998–99 on financial incentives for parents to be in work ('no reform' = 'GDP-uprating').

Tax and benefit system uprated in line with nominal GDP since particular year

Source: Adam and Browne (forthcoming).

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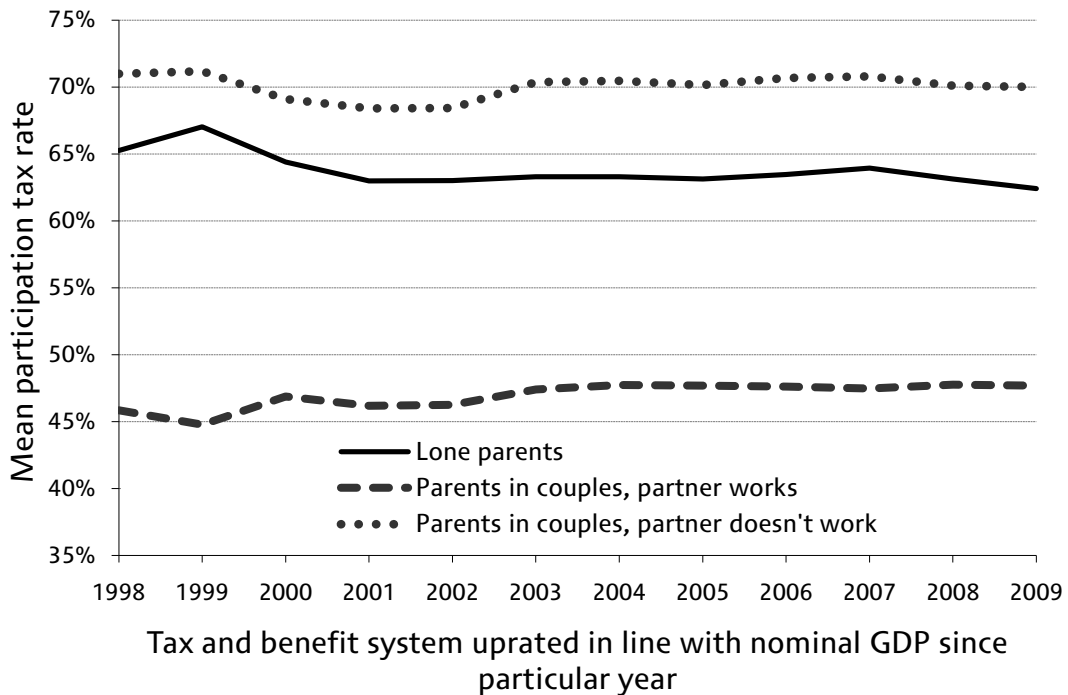
Figure 5.4. The effect of tax and benefit reforms since 1998–99 on financial incentives for working parents to increase their earnings ('no reform' = '1998–99 default uprating').

Tax and benefit system uprated according to 1998-99 default rules since particular year
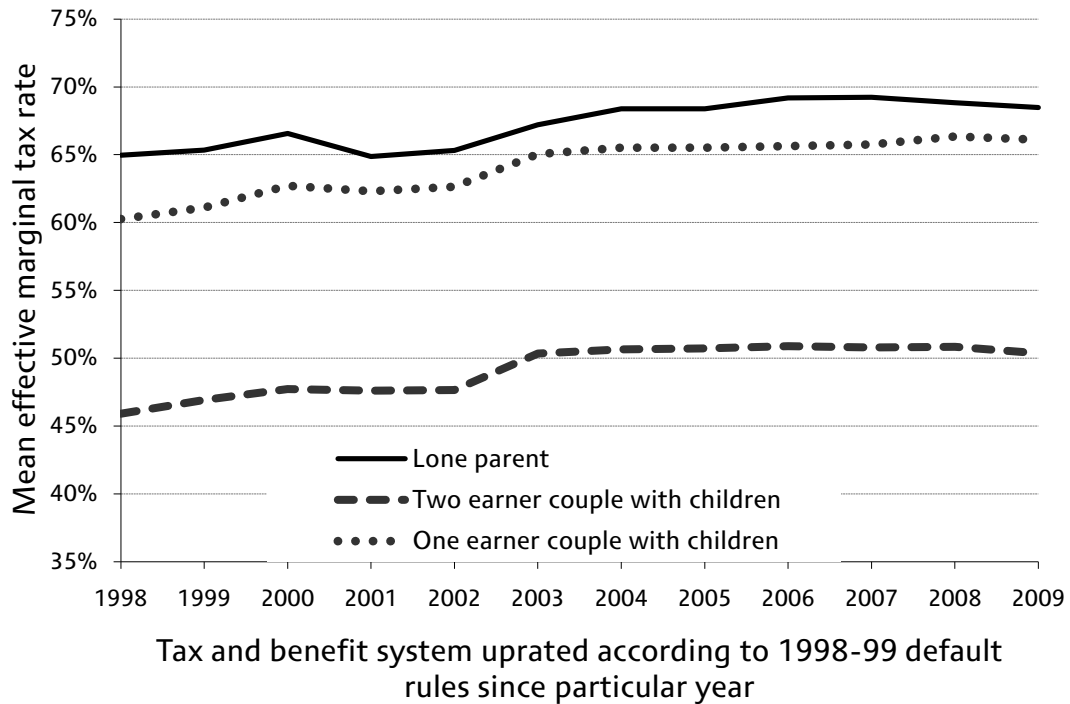
Source: Adam and Browne (forthcoming).

Figure 5.5. The effect of tax and benefit reforms since 1998–99 on financial incentives for working parents to increase their earnings ('no reform' = 'GDP-uprating').

Tax and benefit system uprated in line with nominal GDP since particular year

Source: Adam and Browne (forthcoming).

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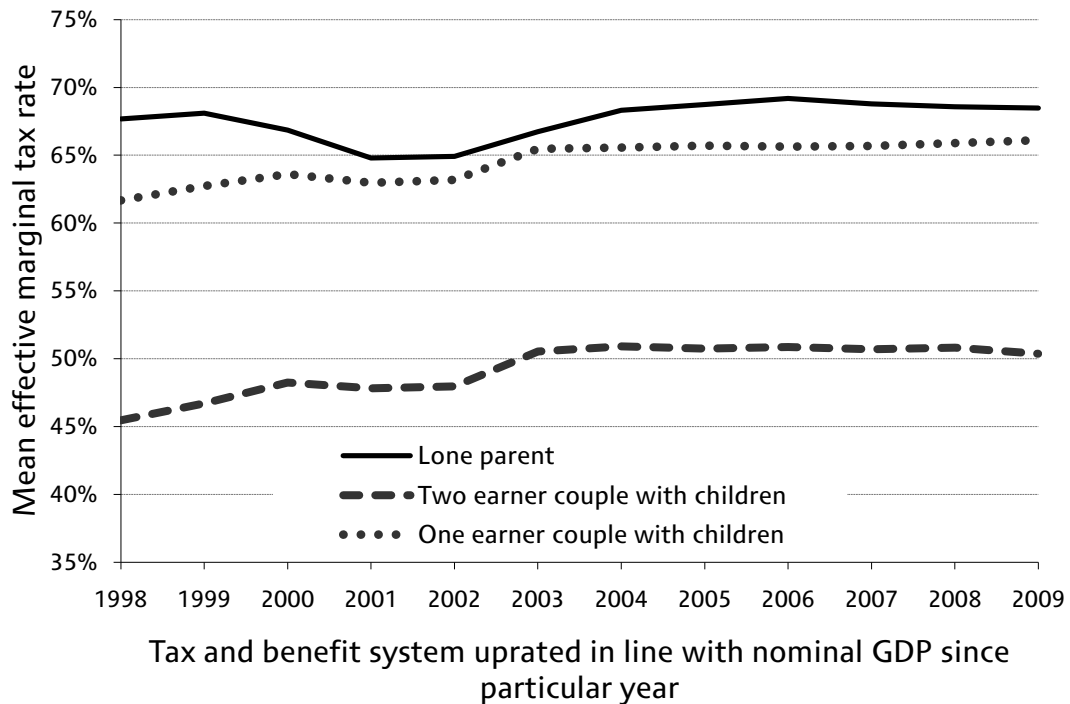
6. Parents and the labour market

Earnings from employment are the single largest source of income for households in the UK. Labour market trends are thus likely to be a significant determinant of the evolution of poverty amongst families with children. In this section, we examine labour market trends amongst parents. We seek to document such trends and ask whether they can be used to explain the fall in poverty between 1998–99 and 2004–05, as well as the subsequent rise since 2004–05. We look at parents in general (comparing them with other working-age adults) and then focus on different sub-groups, relating this back to the previous decomposition analysis in order to see whether labour market trends can be used to explain differential trends in poverty amongst specific groups.

It should be noted that this analysis uses a different survey to that used in the rest of this briefing note. We use the quarterly Labour Force Survey (LFS) from April-June 1998 onwards, creating financial year data by combining datasets across quarters within financial years. This is because the LFS contains more detailed and reliable information on individual adult earnings, employment and wage rates.

Analysis is conducted at an individual level (as opposed to a household level in previous sections). We focus solely on working-age adults, separating them out into parents (those with dependent children aged under 19) and all other working-age adults. All data is weighed using the appropriate LFS weights (either the general or income weight depending on the focus of analysis). All earnings data related to individuals gross adult earnings and is unequivalised, and all monetary values are presented in 2008–09 prices.

General labour market trends

This section looks at general labour market trends for parents as a whole, comparing these with those seen for other working-age adults.

Figure 6.1 shows the employment rates of parents and other working-age adults between 1998–99 and 2009–10. It shows that in parents and other working-age adults had very similar employment rates in 1998–99, just under 75%, with both seeing similar rises of around 1 percentage point up to 2003–04. After 2003–04, employment rates continued to increase for parents for two further years, reaching 77% in 2005–06. Employment rates then stagnated up to 2008–09. For all other working age-adults the stagnation started in 2003–04.

As is well known, employment was then lower across the board in 2009–10 as a result of sustained falls in employment during the recent recession. Parents saw a fall of 1.2 percentage points compared with 2008–09, whilst other working-age adults saw a fall of over 2 percentage points. The employment prospects of other working-age adults deteriorated far worse than those of parents during the recent recession.

Figure 6.1 Employment rates for parents and other working-age adults
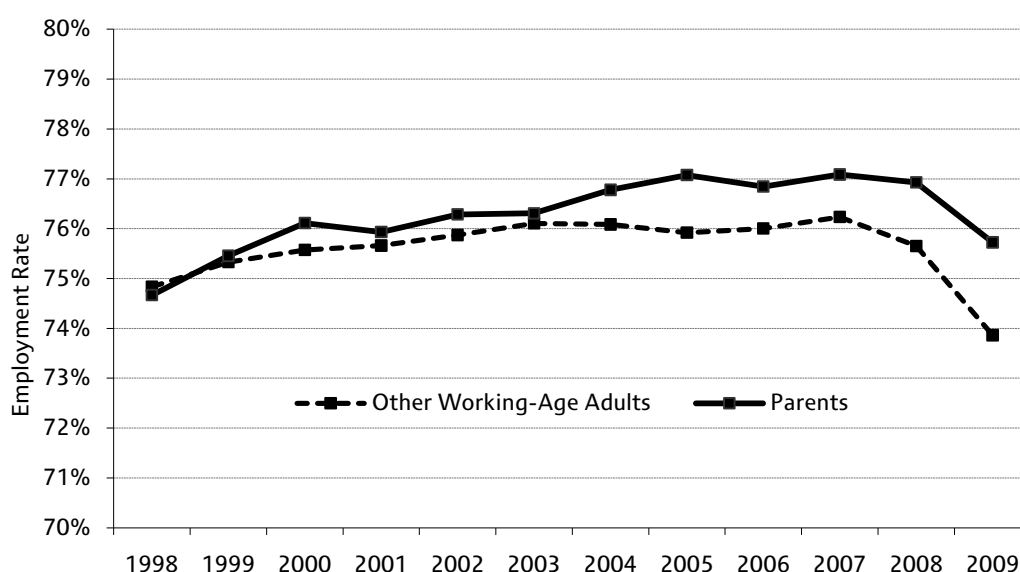
Notes: Years refer to financial years and are for the UK as a whole.
Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table 6.1 summarises labour market trends over time across a wider set of dimensions amongst parents and other working-age adults. Specifically, it shows the proportion in employment, proportion of those in employment working part-time, mean average hours for those in work, median earnings for those in work, and median hourly pay for those in work. These are shown for 1998–99 and 2008–9, together with the change broken down into that which occurred from 1998–99 to 2004–05 (the period when child poverty fell) and 2004–05 to 2008–09 (the period when child poverty rose). We also show the levels in 2009–10 in order to indicate the changes that occurred during the recent recession.

In 1998–99 about 28% of parents in work chose to work part-time (defined as less than 30 hours a week). In doing so, they were more likely to work part-time than other working-age adults in employment, which is unsurprising given the need for parents to find childcare. The proportion of employed parents working part-time changed little between 1998–99 and 2008–09, and has only risen slightly in 2009–10. However, the proportion of working-age adults who worked part-time rose between 1998–99 and 2004–05, fell slightly between 2004–05 and 2008–09, before rising by over 1 percentage point in 2009–10.

In 1998–99, parents worked over 2 hours less, on average, than did other working-age adults, which is unsurprising given the different propensities to work on a part-time basis. Both groups experienced a fall in their hours worked over the entire period, with the fall being greatest between 1998–99 and 2004–05. Both saw slight falls in their hours from 2004–05 onwards.

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Table 6.1. Labour Market Trends for Parents and Other Working–Age Adults

	Parents	Other Working-Age Adults
Employment		
1998–99 (%)	74.7	74.8
98–99 to 04–05 (ppt change)	+2.1	+1.3
04–05 to 08–09 (ppt change)	+0.1	-0.4
2008–09 (%)	76.9	75.7
2009–10 (%)	75.7	73.9
Proportion Working Part-time		
1998–99 (%)	28.0	16.7
98–99 to 04–05 (ppt change)	+0.3	+0.8
04–05 to 08–09 (ppt change)	-0.2	-0.2
2008–09 (%)	28.1	17.3
2009–10 (%)	28.7	18.6
Hours		
1998–99 (mean hours)	35.1	37.5
98–99 to 04–05 (change in hours)	-1.3	-1.2
04–05 to 08–09 (change in hours)	-0.4	-0.1
2008–09 (mean hours)	33.4	36.2
2009–10 (mean hours)	33.2	35.7
Earnings		
1998–99 (median, 2008-09 prices)	£344	£325
98–99 to 04–05 (avg annual % change)	1.7%	2.1%
04–05 to 08–09 (avg annual % change)	-0.5%	0.0%
2008–09 (median, 2008-09 prices)	£375	£368
2009–10 (median, 2008-09 prices)	£383	£368
Hourly Pay		
1998–99 (median, 2008-09 prices)	£9.03	£8.12
98–99 to 04–05 (avg annual % change)	2.6%	2.4%
04–05 to 08–09 (avg annual % change)	-0.1%	0.1%
2008–09 (median, 2008-09 prices)	£10.47	£9.40
2009–10 (median, 2008-09 prices)	£10.86	£9.59

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Individual median earnings were greater, on average, for parents than for other working-age adults in 1998–99. Parents then saw robust real-terms growth of 1.7% on an average annualised basis between 1998-99 and 2004–05, below that of other working-age adults who saw average growth of 2.1% per year. All working-age adults then saw a slowdown from 2004–05 onwards, with real-terms earnings growth for parents turning negative and stagnating for other working-age adults. Following on from the recent recession, parents in work

saw their earnings grow slightly in real-terms, whilst other working-age adults saw continued stagnation.

Median hourly pay was slightly greater for parents than for other working-age adults in 1998–99. Both groups experienced a rise from 1998–99 to 2004–05, with that of parents being slightly greater than that seen for other working age adults. Growth in hourly pay then slowed down for both groups from 2004–05 onwards, with parents seeing a small decline in hourly pay, whilst other working age adults saw their hourly wage rise by a small amount. It thus seems that slower wage growth drove the slowdown in earnings from 2004–05 onwards. Real-terms wages grew for both groups in 2009–10.

Analysis by sub-group

In this section, we examine labour market trends amongst parents by various subgroups. The main purpose of this analysis is to examine whether labour market can be used to explain changes in poverty amongst specific groups between 1998–99 and 2008–09, as well as the differential trends before and after 2004–05. Secondly, we are also able to examine labour market trends amongst specific groups with a high risk of poverty.

Table 6.2 shows the same as Table 6.1 except that we now focus solely on parents and we now separate parents into lone parents, men in couples and women in couples (due to the low number of male lone parents, we do not split lone parents by sex).

As can be seen, lone parents had the lowest employment rates amongst these groups in 1998–99, with a majority out of work. However, over the next ten years, their employment rate grew by about 10 percentage points, such that the majority were in employment in 2008–09. The fastest rise in employment took place prior to 2004–05, with smaller growth in the latter period. This concurs with analysis presented earlier in Table 4.2, which showed reduced worklessness amongst lone parents playing an important role in reducing child poverty (particularly prior to 2004–05). Men and women in couples also saw increases in employment between 1998–99 and 2004–05, but this was much more modest, though from much higher bases. Again we showed earlier that reduced worklessness amongst couples helped to reduce child poverty between 1998–99 and 2004–05. Men and women in couples then saw relative stagnation in employment rates up to 2008–09. All three groups then saw falls in employment during 2009–10 following on from the recession, with men in couples seeing the largest fall.

Women and lone parents were much more likely to work part-time than men in couples throughout the period. Over the period, men in couples became slightly more likely to work part-time and women in couples slightly less likely to work part-time over the period. Earlier analysis suggests such shifts only had a minor impact on child poverty, if any.

Table 6.2. Labour Market Trends for Parents by Sex and Family Type

	Lone Parents	Men in Couples	Women in Couples
Employment			
1998–99 (%)	45.8	89.7	68.8
98–99 to 04–05 (ppt change)	+8.3	+1.3	+1.7
04–05 to 08–09 (ppt change)	+1.7	-0.4	+0.4
2008–09 (%)	55.8	90.6	70.9
2009–10 (%)	54.7	88.9	70.3
Proportion Working Part-time			
1998–99 (%)	49.5	5.1	55.2
98–99 to 04–05 (ppt change)	-2.2	+1.2	-1.1
04–05 to 08–09 (ppt change)	+0.9	+1.3	-3.0
2008–09 (%)	48.2	7.6	51.1
2009–10 (%)	48.5	8.2	51.2
Hours			
1998–99 (mean hours)	26.8	44.2	25.0
98–99 to 04–05 (change in hours)	+0.4	-2.0	-0.3
04–05 to 08–09 (change in hours)	-0.4	-0.8	+0.4
2008–09 (mean hours)	26.9	41.4	25.1
2009–10 (mean hours)	26.8	41.0	25.0
Earnings			
1998–99 (median, 2008-09 prices)	£182	£498	£195
98–99 to 04–05 (avg annual % change)	4.8%	1.3%	3.7%
04–05 to 08–09 (avg annual % change)	-1.0%	0.1%	0.9%
2008–09 (median, 2008-09 prices)	£231	£538	£250
2009–10 (median, 2008-09 prices)	£225	£539	£261
Hourly Pay			
1998–99 (median, 2008-09 prices)	£6.58	£10.96	£7.30
98–99 to 04–05 (avg annual % change)	4.3%	1.9%	3.4%
04–05 to 08–09 (avg annual % change)	-1.5%	0.4%	0.7%
2008–09 (median, 2008-09 prices)	£8.00	£12.49	£9.20
2009–10 (median, 2008-09 prices)	£7.96	£12.76	£9.56

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

As would be expected given the trends in propensities to work part-time, men in couples saw a slight fall in their mean average hours worked between 1998–99 and 2008–09. Women and lone parents saw relatively little change. There was a small reduction in hours worked and a slight increase in propensities to work part-time in 2009–10 across the board, following on from the recession.

In terms of earnings, lone parents had the lowest individual weekly earnings throughout the period, which is unsurprising given that they tend to work lower hours, on average, than men in couples. In term of growth, all groups saw robust real-terms growth up to 2004–05, as well as a slowdown between 2004–05 and 2008–09. However, growth was clearly fastest for lone parents in the early period and slowest for men in couples. Lone parents then saw the biggest slowdown after 2004–05. The trends in wage rates largely match the trends in weekly earnings, with strong wage growth in the early period (particularly for lone parents in work) and a generalised slowdown after 2004–05. In 2009–10, lone parents then saw reductions in earnings and hourly pay, with continued slow growth for men and women in couples.

Number of workers

Figure 6.3 shows the median earnings, mean hours and median hourly wage rates of lone parents, single earner men and women (i.e. men and women in couples who are the only earner in their family), and men and women in dual-earner couples for the period from 1998–99 through to 2008–09. All values are indexed to 1.00 in 1998–99 and are presented as three year moving-averages in order to smooth out year-to-year variation from sampling error (1998-99 thus represents the average for 1997-98, 1998-99 and 1999-00). The levels for 1998–99 and 2008–09 are shown in Table 6.3, with changes over this period broken down into the period prior to and after 2004–05.

Figure 6.3 Earnings, hours and wage rates by family type, sex and number of earners in family

(a) Median Earnings
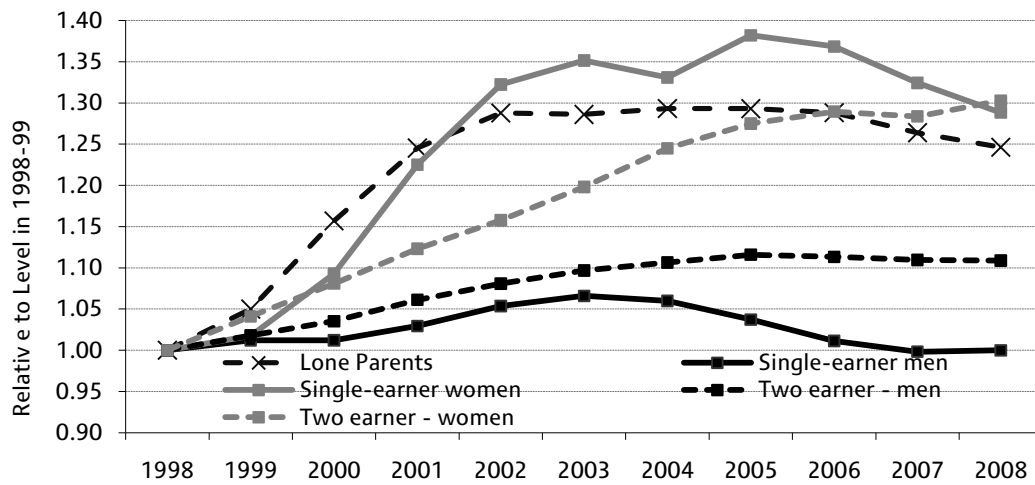
(b) Mean Hours
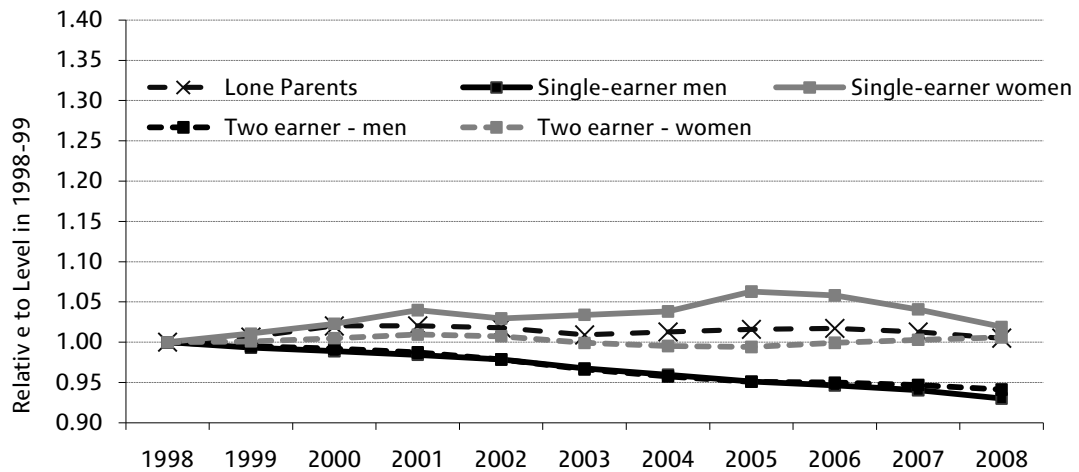
(c) Median Hourly Wage Rates
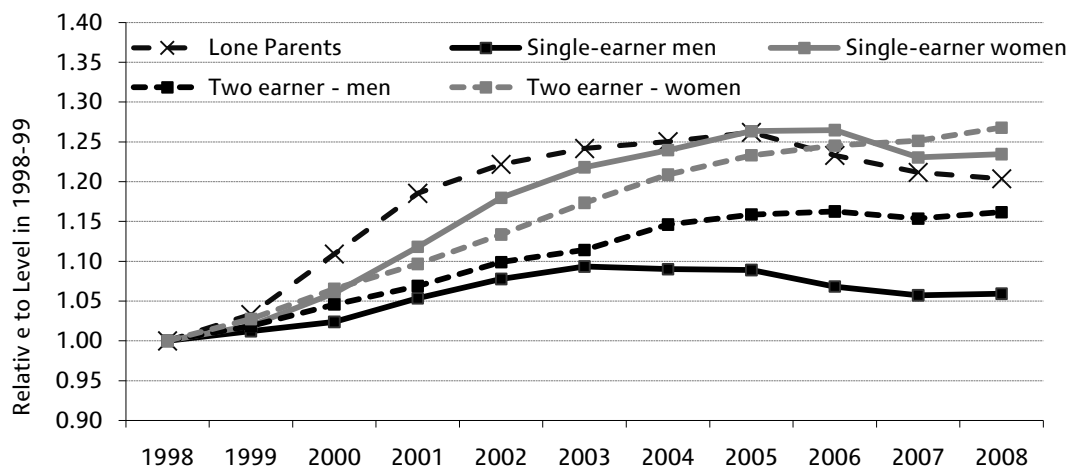
Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

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The figure shows that lone parents and single-earner women experienced strong real-terms growth in earnings up to 2002–03. Coming from a low base (as shown in Table 6.3) this may partly be able to explain the reduced incidence of child poverty among lone parents working part-time, as nearly 1 in 2 do, and amongst couples with a single earner up to 2004–05.

Men experienced relatively slow growth up to 2004–05, with women in dual-earner families experiencing growth somewhere in the middle. Although male earnings growth is slightly depressed by reductions in hours and single-earner women slightly inflated by increases in hours, it is clear that patterns in earnings growth were largely driven by trends in hourly wages rather than hours up to 2002–03.

From 2002–03 onwards, almost all groups experienced stagnation or real-terms falls in earnings, largely driven by patterns in hourly wages. The only exceptions are women in dual-earner couples, who continued to see earnings growth, albeit relatively weak. The group that experienced the largest drops in earnings was single earner men. Falls in their real-terms earnings and hourly wages mean that their median earnings were unchanged compared with 1998–99 and their hourly wages only 5% greater. It thus seems likely that the increase in poverty experienced by single-earner couples since 2004–05 is at least partly being driven by real-terms falls in the hourly wages received by male single-earners.

However, we are not observing the earnings, hours and wage of the same individuals over time. Over the ten year period, the composition and characteristics of each group are likely to have changed. It is important to note that such shifts could well explain some of the trends observed above.

Table 6.3 Labour Market Trends for lone parents and parents in couples by sex and number of workers

		Lone Parents	Men in couples			Women in couples		
			Single Earners	Two workers	All	Single Earners	Two workers	All
Proportion working part time	1998–99 (% of parents)	49.5	7.3	4.2	5.1	49.4	55.9	55.2
	1998–99 to 2004–05 (%pt change)	-2.2	1.3	1.1	1.2	-4.5	-1.3	-1.1
	2004–05 to 2008–09 (%pt change)	0.9	2.1	1.1	1.3	-0.5	-2.8	-3
	2008–09 (% of parents)	48.2	10.7	6.5	7.6	44.3	51.7	51.1
Earnings (2008–09 prices)	1998–99 (£)	181.89	495.00	498.89	497.59	177.99	194.88	194.88
	1998–99 to 2004–05 (%change)	4.8	0.6	1.6	1.3	4.6	3.7	3.7
	2004–05 to 2008–09 (% change)	-1.0	-1.6	0.1	0.1	-2.4	0.9	0.9
	2008–09 (£)	231.00	481.00	550.00	538.00	212.00	250.00	250.00
Hours	1998–99 (hours)	26.8	43.6	44.4	44.2	26.2	24.8	25.0
	1998–99 to 2004–05 (change in hours)	0.4	-2.0	-2.0	-2.0	1.3	-0.3	-0.3
	2004–05 to 2008–09 (change in hours)	-0.4	-1.0	-0.7	-0.8	-1.0	0.5	0.4
	2008–09 (hours)	26.9	40.6	41.7	41.4	26.5	25.0	25.1
Hourly Pay	1998–99 (£)	6.58	10.64	11.04	10.96	6.63	7.34	7.30
	1998–99 to 2004–05 (% change)	4.3	1.3	2.0	1.9	3.6	3.6	3.4
	2004–05 to 2008–09 (% change)	-1.5	-0.9	0.7	0.4	-1.6	0.7	0.7
	2008–09 (£)	8.00	11.11	12.78	12.49	7.70	9.34	9.20

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

We have also broken down labour market trends experienced by lone parents, and men and women in couples by other individual and family characteristics: age of youngest child; number of children; education level; age of parents; ethnicity; and, region. In what follows we summarise and illustrate the key points.

Age of Youngest Child

Table A4.1 shows labour market trends amongst lone parents, men in couples and women in couples (as per Tables 6.2) broken down by age of the youngest child in the family. It shows that the large increase in employment amongst lone parents over this period was seen for all lone parents, no matter the age of the youngest child, (though there was a slightly larger increase for lone parents whose youngest child was over 10). This could have helped drive some the reduced incidence of child poverty amongst lone parents with children under 10, alongside tax and benefit changes. Furthermore, these groups experienced robust earning growth up to 2004–05. There was a generalised slowdown in earnings for lone parents and couples by age of youngest child after 2004–05, which we have already pointed to as a potential driver of increased child poverty between 2004–05 and 2008–09.

Number of Children

Table A4.2 shows labour market trends amongst lone parents, men in couples and women in couples broken down by the number of children in the family. Again, there were large increases in employment amongst lone parents, but no particularly large differences according to the number of children in the family. The small increase in employment amongst couples appears largely unrelated to the number of children in the family, the only exception being women with three or more children who saw a small decrease in employment across this period. The post 2004–05 slowdown in earnings and wage was not concentrated amongst families with different numbers of children either.

Education Level

Table A4.3 shows labour market trends amongst lone parents, men in couples and women in couples broken down by parent's highest education level (Graduate or equivalent, non-graduate qualifications, none or less than the equivalent of 5 GCSEs A*-C). Unfortunately, we were not able to do an equivalent decomposition of the change in child poverty by qualification due to the unavailability of such data in the Family Resources Survey.

The first thing to note is that employment, earnings, hours and hourly pay are all higher for those with higher levels of qualifications. In terms of changes over time, all lone parents saw higher levels of employment over time (particularly those with qualifications below degree level). Furthermore, the increase in employment amongst all lone parents was greater than amongst any individual groups; this reflects the fact that lone parents have become much more likely to possess degrees or other qualifications over time (and such groups are more likely to find employment). For example, in 2008-09, 19% of lone parents had

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degree-level qualifications compared with 12% in 1998-99. Therefore, some of the increase in employment amongst lone parents, and its effect on poverty, could well be driven by the fact that this group has become more highly qualified over time. Also noteworthy in terms of employment prospects is the fact that the employment prospects of low-skilled women in couples have declined continuously across time. Low skilled lone parents and women in couples have also become much more likely to be in part-time work.

Low skilled lone parents saw the largest increase in earnings up to 2004–05. Coming from a low base, this is likely to have contributed to the reduced incidence of poverty amongst working lone parents. After 2004–05, there was a generalised slowdown in earnings and wages across education levels.

Over the period as a whole, low skilled men in couples were the only group to see a real-terms fall in their earnings over the ten years. This partly reflects a reduction in their average hours worked. However, their wages only grew by 0.6% per year on average in real-terms, the slowest across all education groups.

Age of Parents

Table A4.4 shows labour market trends amongst lone parents, men in couples and women in couples broken down by age of parents. Lone parents aged between 25 and 34 experienced the biggest rise in employment up to 2004–05, followed by lone parents aged 35-44. Young (under 25) men and women in couples also saw large rises in employment up to 2004–05. However, after 2004–05 young men have seen a very large fall in employment, mostly during the current recession. Young men in couples have also become more likely to work part-time, particularly in the period after 2004–05. Lone parents and women are still much more likely to work part-time than men in couples, though they have become slightly less likely to over time. Earnings generally grew faster for younger parents in the period up to 2004–05, the gradients being clearest for lone parents and women. After 2004–05, there was a slowdown in earnings and hourly pay growth across the board.

Region

Table A4.5 shows labour market trends amongst parents broken down by region or country in the UK. We do not separate out lone parents and couples due to the relatively small sample sizes in individual years. We saw earlier that between 1998–99 and 2004–05, the fall in child poverty was driven largely by the northern regions of England and by Scotland. These were the regions of the UK where parental employment rose by the most. More recently, child poverty has risen particularly sharply in the West Midlands, where the impact of the recession on parental employment has been the most marked. In fact, the West Midlands is the only region where child poverty is higher than it was in 1998–99 and the only region where employment is lower. The two facts are almost certainly related.

After 2004–05, there was a generalised slowdown in earnings and a generalised slowdown in hourly pay, particularly in the West and East Midlands where earnings fell by more than 1% per year on average in real-terms up to 2008–09.

Ethnicity

Table A4.6 shows labour market trends amongst parents broken down by ethnicity. Similarly to the analysis by region, we do not separate out lone parents and couples due to the relatively small sample sizes in individual years.

In both 1998–99 and 2008–09, the employment rate was highest amongst White parents, and lowest amongst Pakistani and Bangladeshi parents. However, Pakistani and Bangladeshi parents both saw the largest increases in employment over this period, even after 2004–05; Chinese parents also saw large increases in employment over the ten years. The proportions of Pakistani, Bangaladeshi and Chinese parents who chose to work part-time also increased substantially between 1998–99 and 2008–09 (the latter increase confined to the period after 2004–05).

Between 1998–99 and 2004–05, earnings growth was relatively robust across all ethnic groups, with Black African, Indian and Chinese and parents seeing the fastest growth in earnings. The only exceptions were Pakistani and Bangladeshi parents, who saw a fall in their earnings, but this is likely to be driven by their increased propensity to work part-time and a related fall in their average hours worked. After 2004–05, there was a generalised slowdown in earnings and wage growth (Pakistani and Bangaldeshi parents being the only exceptions).

7. Conclusions

The Child Poverty Act, which passed into law earlier this year, commits current and future governments to reducing the rate of relative income child poverty in the UK to 10% by 2020. The previous government had a high-profile target to halve the number of children in poverty between 1998 and 2010. It is now accepted that this target has not been met. In this paper, we have looked at the progress made towards this goal under the previous Labour administrations, pinpointing the reasons why child poverty fell and why it did not fall further.

Our work shows that direct tax and benefit policy has a very strong influence on this measure of child poverty. It plays an important role in explaining at least three things: the large overall reduction in child poverty since 1998–99; the striking slowdown in progress towards the child poverty targets between 2004–05 and 2007–08; and some of the variation in child poverty trends between different groups of children. Given that the poverty measure in question is exclusively income-based, this may not come as a great surprise.

We have also shown that, in trying to reduce relative poverty amongst children, the previous government was trying to swim against the tide. In most years, earnings grow in real terms, generally pushing up median household income and thus the relative poverty line. Had the previous government just indexed benefit

rates and tax thresholds to prices since 1998–99, earnings growth would have acted to increase child poverty by about 4 percentage points by 2010–11.

Changes in the employment and earnings of parents also played an important role. For example, between 1998–99 and 2004–05, the fall in child poverty was driven largely by the northern regions of England and by Scotland, the regions of Great Britain where parental employment rose the most. More recently, child poverty has risen particularly sharply in the West Midlands, where the impact of the recession on parental employment has been the most marked. And the rise in child poverty since 2004–05 has been felt most by the children of one-earner couples, whose earnings have been falling in real-terms.

If the UK hit its target for relative child poverty in 2020–21, it would be the lowest level since our comparable series began in 1961, but this would require the rate of child poverty to fall by 8.4 percentage points from its projected 2010–11 level. It seems inconceivable that a change of that scale could be achieved without any changes to direct taxes or benefits. Modelling by the Child Poverty Unit[33] under the previous government suggested that the 2020–21 target would be missed by 850,000 even under an extremely optimistic scenario for parental work patterns, a fall in the amount of benefits which go unclaimed, and a fall in teenage pregnancies (850,000 is the total of the rows in Table 1.A marked "Other" and "Improved skills…"; both figures reflect assumptions made by the civil servants, and neither is associated with a specific policy change).

But it seems equally inconceivable that a change of that scale could be achieved through fiscal redistribution alone. 18 months ago, IFS researchers estimated that reducing child poverty to 10% would cost at least £19 billion per year (in current prices) by 2020–21. As well as looking infeasible in the current fiscal climate, that estimate assumed no behavioural change, an unrealistic assumption when considering tax and benefit reforms of this scale.

So if the poverty target won't be met with no extra spending on welfare benefits, and probably won't be met even with lots of extra spending on welfare benefits, what is the prognosis for child poverty? One response might be for the Government to change the definition of child poverty. Upon taking office, the Prime Minister asked Frank Field MP to conduct an Independent Review on Poverty and Life Chances, and Mr Field has spoken about a need for "a new measurement that centres on future life chances and opportunities – a new index of life opportunities[34]"; on the other hand, he imagines that this would "supplement the existing financial measures [of child poverty]", not replace them.

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[33] http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/budget2010_childpoverty.htm

[34] http://povertyreview.independent.gov.uk/news/100916-lecture-at-haileybury-school.aspx

So if the current and future governments are serious about the target, then the evidence suggests that they will need not only to find fiscal resources to increase state support for families with children, but also to improve labour market outcomes for low-income parents, and to reduce inequalities in earnings, whether through changes in the labour market or a more progressive tax regime. Readers will have their own views on how likely any of these will be.

References

Adam, S. and Browne, J. (forthcoming), *Redistribution, work incentives and thirty years of UK tax and benefit reform*. IFS Working Paper. London: Institute for Fiscal Studies.

Bauer, T. and Sinning. M. (2008), *An extension of the Blinder-Oaxaca decomposition to nonlinear models*, Advances in Statistical Analysis 92: pp 197-206.

Brewer, M., Browne, J., Joyce, R. And Sutherland, H. (2009), *Micro-simulating child poverty in 2010 and 2020*. IFS Commentary 108. London: Institute for Fiscal Studies.

Brewer, M., Goodman, A., Shaw, J. And Sibieta, L. (2006), *Poverty and Inequality in Britain: 2006*. IFS Commentary 101. London: Institute for Fiscal Studies.

Brewer, M., Muriel, A., Phillips, D. And Sibieta, L. (2008), *Poverty and Inequality in the UK: 2008*. IFS Commentary 105. London: Institute for Fiscal Studies.

Brewer, M., Phillips, D. And Sibieta, L. (2010), *What happened to 'severe poverty' under Labour?* IFS Briefing Note 90. London: Institute for Fiscal Studies.

Department for Work and Pensions (2010), *Households Below Average Income: An Analysis of the Income Distribution 1994/95–2008/09*. London: DWP (http://research.dwp.gov.uk/asd/index.php?page=hbai).

Dickens, R. (forthcoming), chapter in 'The Labour Market in Winter: The State of Working Britain 2010', Gregg, P. and Wadsworth, J. (eds).

HM Treasury, Department for Children, Schools and Families and Department for Work and Pensions (2010), *Ending Child Poverty: mapping the route to 2020*. London: HMT (http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/d/budget2010_childpoverty.pdf).

Joyce, R., Muriel, A., Phillips, D. and Sibieta, L. (2010), *Poverty and Inequality in the UK: 2010*. IFS Commentary 116. London: Institute for Fiscal Studies.

Meghir, C. And Phillips, D. (2010), 'Labour supply and taxes', Chapter 3 in Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G. and Poterba, J. (eds), *Dimensions of Tax Design: The Mirrlees*

Review, Oxford: Oxford University Press for the Institute for Fiscal Studies, www.ifs.org.uk/mirrleesreview.

Shorrocks, A. (1999), *Decomposition Procedures for Distributional Analysis: A Unified Framework Based on the Shapley Value*. Mimeo. University of Essex.

Sutherland, H., Sefton, T. And Piachaud, D. (2003), *Poverty in Britain*. York: Joseph Rowntree Foundation.

Appendix 1. Further decomposition results (supplementary to Section 4)

Table A1.1. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by parental disability status

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
Parent disabled	30.2	17.1	27.3	2.4	2.1	2.1	+0.0	-0.3	-0.3	+0.0	+0.2	+0.2	+0.0	-0.1	-0.1
No parent disabled	25.9	21.4	22.0	97.6	97.9	97.9	+0.0	-4.4	-4.4	+0.0	+0.5	+0.5	+0.0	-3.8	-3.8
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**+0.0**	**-4.7**	**-4.7**	**+0.0**	**+0.8**	**+0.8**	**+0.0**	**-3.9**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table A1.2. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by ethnicity[35]

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
White	23.8	19.4	18.9	90.4	88.0	85.9	+0.0	-3.9	-3.9	+0.1	-0.5	-0.4	+0.1	-4.3	-4.2
Black	43.5	30.0	45.2	2.5	3.1	4.2	+0.1	-0.4	-0.3	+0.2	+0.6	+0.7	+0.3	+0.1	+0.4
Asian	51.0	39.7	45.3	5.6	5.8	6.5	+0.0	-0.6	-0.6	+0.2	0.3	+0.5	+0.2	-0.3	-0.1
Other	34.4	32.3	29.3	1.5	3.1	3.3	+0.2	+0.0	+0.1	+0.0	-0.1	-0.1	+0.1	-0.1	+0.0
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**+0.3**	**-0.5**	**-4.7**	**+0.4**	**+0.4**	**+0.8**	**+0.8**	**-4.7**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding. For children of couple parents who have different ethnicities, we randomly select the ethnicity of one parent.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

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[35] Since 2001–02, the Family Resources Survey has included more finely disaggregated ethnicity categories. Hence, for the period between 2004–05 and 2008–09, it is possible to do a more detailed decomposition by ethnicity. We do this in Table A1.3.

Table A1.3. Detailed decomposition of changes in BHC child poverty between 2004–05 and 2008–09 by ethnicity

	Child poverty rate (%)		Proportion of children (%)		2004–05 to 2008–09		
	2004–05	2008–09	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
White	19.4	18.9	88.0	85.9	+0.1	-0.5	-0.4
Black Caribbean	21.1	31.0	1.5	1.4	-0.0	+0.1	+0.1
Black African	36.7	53.3	1.5	2.7	+0.3	+0.4	+0.6
Indian	27.7	23.4	2.3	2.1	-0.0	-0.1	-0.1
Pakistani	47.5	56.2	2.0	3.3	+0.4	+0.2	+0.6
Bangladeshi	54.1	64.0	1.2	0.8	-0.1	+0.1	+0.0
Chinese	18.4	24.7	0.2	0.3	-0.0	+0.0	+0.0
Other Asian	31.0	21.1	0.6	1.0	+0.0	-0.1	-0.1
Mixed white/black	13.3	30.4	0.5	0.7	-0.0	+0.1	+0.1
Mixed white/Asian	27.1	30.8	0.3	0.3	+0.0	+0.0	+0.0
Other	39.9	33.8	1.8	1.4	-0.1	-0.1	-0.2
All	**21.3**	**22.1**	**100**	**100**	**+0.5**	**+0.2**	**+0.8**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table A1.4. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by parental age

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
Under 25	51.7	39.4	46.4	4.0	4.4	4.5	+0.1	-0.5	-0.4	+0.2	+0.3	+0.6	+0.4	-0.2	+0.1
25-34	30.3	25.2	23.8	34.3	27.7	24.2	-0.3	-1.6	-1.8	-0.1	-0.4	-0.5	-0.3	-1.9	-2.2
35-44	23.2	19.1	20.0	46.8	50.9	49.5	-0.1	-2.0	-2.1	+0.0	+0.5	+0.5	-0.1	-1.5	-1.6
45+	18.1	17.1	18.6	14.9	17.1	20.8	-0.1	-0.1	-0.3	-0.1	+0.3	+0.1	-0.3	+0.1	-0.2
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.4**	**-4.3**	**-4.7**	**+0.0**	**+0.7**	**+0.8**	**-0.3**	**-3.6**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding. For couple parents, we take the mean of their ages.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Table A1.5. Decomposition of changes in BHC child poverty between 1998–99 and 2008–09 by housing tenure

	Child poverty rate (%)			Proportion of children (%)			1998–99 to 2004–05			2004–05 to 2008–09			1998–99 to 2008–09		
	1998-99	2004–05	2008–09	1998-99	2004–05	2008–09	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)	Compositional effect (ppts)	Incidence effect (ppts)	Total change (ppts)
Private renters	25.3	28.5	31.1	3.2	2.6	3.5	-0.0	+0.1	+0.1	+0.1	+0.1	+0.2	+0.0	+0.2	+0.2
Social renters	55.5	45.9	46.4	25.3	23.1	21.3	-0.6	-2.3	-2.9	-0.5	+0.1	-0.3	-1.1	-2.1	-3.2
Home-owners	14.4	12.4	13.5	66.7	67.9	66.7	-0.1	-1.3	-1.4	+0.1	+0.8	+0.9	+0.0	-0.6	-0.6
Other	32.7	24.5	24.8	4.8	6.4	8.5	+0.1	-0.5	-0.4	+0.1	+0.0	+0.1	+0.2	-0.5	-0.4
All	**26.0**	**21.3**	**22.1**	**100**	**100**	**100**	**-0.6**	**-4.0**	**-4.7**	**-0.2**	**+1.0**	**+0.8**	**-0.9**	**-3.0**	**-3.9**

Notes: Great Britain only. Figures may not sum due to rounding.
Source: Authors' calculations using Family Resources Surveys 1998–99, 2004–05 and 2008–09.

Appendix 2: Further micro-simulation results (supplementary to Section 5)

Table A2.1.Simulations of relative child poverty in the UK in 2010–11 under different direct tax and benefit systems

Direct tax and benefit system in 2010–11	Simulated child poverty in 2010–11 (BHC)		Simulated child poverty in 2010–11 (AHC)	
	%	Million	%	Million
Actual 2010–11 system	18.4	2.4	26.0	3.4
Default uprating since:				
2009–10	19.5	2.6	27.8	3.7
2008–09	19.8	2.6	28.2	3.7
2007–08	21.4	2.8	30.3	4.0
2006–07	21.5	2.9	30.4	4.0
2005–06	22.0	2.9	30.9	4.1
2004–05	22.0	2.9	31.1	4.1
2003–04	23.3	3.1	32.7	4.3
2002–03	26.2	3.5	34.1	4.5
2001–02	27.2	3.6	34.8	4.6
2000–01	29.4	3.9	36.3	4.8
1999–00	31.9	4.2	38.7	5.1
1998–99	32.1	4.3	38.9	5.2
GDP uprating since:				
2009–10	16.2	2.1	24.5	3.3
2008–09	18.3	2.4	27.4	3.6
2007–08	19.6	2.6	28.9	3.8
2006–07	18.9	2.5	27.9	3.7
2005–06	18.8	2.5	27.7	3.7
2004–05	18.3	2.4	27.3	3.6
2003–04	18.7	2.5	27.7	3.7
2002–03	20.5	2.7	30.7	4.1
2001–02	20.4	2.7	30.7	4.1
2000–01	22.3	2.9	32.3	4.3
1999–00	27.5	3.6	35.9	4.8
1998–99	27.7	3.7	35.4	4.7

Sources: Authors' calculations based on Family Resources Survey 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

Appendix 3. The Shapley-Shorrocks decomposition: technical details

In Section 5 we presented a Shapley-Shorrocks decomposition (Shorrocks, 1999), separating the total projected change in child poverty between 1998–99 and 2010–11 into three contributory factors:

1. The direct impact of tax and benefit reforms.
2. Population change.
3. Growth in financial variables.

This is done by manipulating the numbers in Table 5.3, which is reproduced below for reference. Here we outline the mechanics of the decomposition. In the exposition below, we take 'no tax and benefit reforms' to mean '1998–99 default uprating'. Of course, the mechanics of the decomposition are identical for the case where we take 'no tax and benefit reforms' to mean 'GDP-uprating'.

Table A3.1. Simulations of relative (BHC) income child poverty in Great Britain in 2010–11 under the actual 2010–11 tax and benefit system and an unreformed 1998–99 system, for the 1998–99 population and the 2010–11 population.

Direct tax and benefit system in 2010–11	Simulated child poverty rate (%) in 2010–11	
	1998–99 population	2010–11 population
1998–99 default-uprated	29.9	32.1
1998–99 GDP-uprated	22.3	27.7
Actual 2010–11 system	14.6	18.4
Memo: Actual 1998–99 rate	*26.0*	*26.0*

Sources: Authors' calculations based on Family Resources Survey 1998–99, 2007–08 and 2008–09 using TAXBEN and assumptions specified in the text.

The direct impact of tax and benefit reforms

We have data on the population in the base year (1998–99) and the end year (2010–11). One could thus estimate the direct impact of tax and benefit reforms between 1998–99 and 2010–11 using either the base year population or the end year population. There is no *a priori* reason for preferring either.[36] In either case, we take the difference between projected child poverty in 2010–11 under the

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[36] Intuitively, if the results differ when we use the base year and end year populations, it means that changes in the distribution of characteristics in the population over time have changed the way that tax and benefit reforms affect child poverty. For example, a reduction in the number of children of a certain type would reduce the impact of tax and benefit reforms that redistribute towards that type. Hence, using just the base year population or just the end year population to simulate the impact of tax and benefit reforms will ignore this interaction between population change and tax and benefit reforms.

actual 2010–11 tax and benefit system and under an unreformed 1998–99 system. Hence, in percentage points, the direct impact on child poverty of tax and benefit reforms between 1998–99 and 2010–11 would be:

- 14.6 – 29.9 = - 15.3 using a base-year population.
- 18.4 – 32.1 = - 13.7 using an end-year population.

Note that we uprate financial variables amongst the base-year population to end-year levels (i.e. we give the 1998–99 population 2010–11 levels of earnings) in order to separate the impact of tax and benefit reforms from the impact of earnings growth.

The Shapley-Shorrocks decomposition involves averaging the estimated impacts of tax and benefit reforms with a base-year population and an end-year population. Hence, the estimate of the direct impact (in percentage points) of tax and benefit reforms between 1998–99 and 2010-11 on child poverty in 2010–11 is:

- (-15.3 – 13.7) / 2 = - 14.5

The impact of population change

Changes in the characteristics of the population over time may change child poverty rates, if groups of children at different risks of poverty change in relative size. But the extent to which population change affects child poverty can also depend on the tax and benefit system. For example, if Group A is at a higher risk of poverty than Group B, overall poverty will tend to increase when Group A grows in relative size; but this effect will be smaller if the tax and benefit system redistributes more towards Group A.

Therefore, we can estimate the impact on child poverty of population change using an unreformed 1998–99 tax and benefit system or the 2010–11 system, and we may get different results. In each case, we simply compare the simulated child poverty rate in 2010–11 amongst a 1998–99 population and a 2010-11 population. We obtain:

- 18.4 – 14.6 = + 3.8 using a 2010–11 tax and benefit system.
- 32.1 – 29.9 = + 2.2 using an unreformed 1998–99 tax and benefit system.

Again, note that the 1998–99 population we use have had their earnings uprated to 2010–11 levels.

The Shapley-Shorrocks decomposition involves averaging the effects of population change estimated using a base-year tax and benefit system and an end-year system. Hence, the estimate of the impact (in percentage points) of population change between 1998–99 and 2010-11 on child poverty in 2010–11 is:

- (3.8 + 2.1) / 2 = + 3.0

A note on averaging the 'base-weighted' and 'end-weighted' results

Since, as discussed, there is no *a priori* reason to use either the 'base-weighted' or 'end-weighted' results in isolation, averaging the results as per the Shapley-Shorrocks decomposition has the appeal of symmetry. It also means that the total impact of all three contributory factors will add up to the total change in child poverty over the period under investigation. In any case, as we have seen for the effect of both tax and benefit reform and population change, the results obtained using the 'base-weighted' and 'end-weighted' results are not dramatically different.

The impact of growth in financial variables

This is the third and final contributory factor. We obtain the simulated level of child poverty in 2010–11 under the scenario where the level of financial variables (such as earnings) was the only thing that had changed since 1998–99, i.e. the simulated 2010–11 level amongst a 1998–99 population living under an unreformed 1998–99 tax and benefit system, but with 2010–11 levels of financial variables. We then compare this with the level of child poverty in 1998–99.

Hence, the estimated effect on child poverty in 2010–11 (in percentage points) of growth in financial variables between 1998–99 and 2010-11 is:

- 29.9 – 26.0 = + 3.9

Appendix 4

Table A4.1 Labour Market Trends for lone parents and parents in couples by sex and age of youngest child

	Age of Youngest Child	Lone Parents				Men in couples				Women in couples			
		Under 5	5-9	Over 10	All	Under 5	5-9	Over 10	All	Under 5	5-9	Over 10	All
Employment	1998–99 (%)	29.0	48.5	62.6	45.8	90.0	90.1	88.9	89.7	58.1	73.4	79.0	68.8
	98–99 to 04–05 (ppt change)	5.9	7.1	5.4	8.3	0.9	1.2	1.8	1.3	0.9	1.6	1.2	1.7
	04–05 to 08–09 (ppt change)	1.7	1.2	3.4	1.7	-0.9	0.4	-0.2	-0.4	2.4	-1.5	1.0	0.4
	2008–09 (%)	36.6	56.9	71.4	55.8	90.0	91.7	90.5	90.6	61.4	73.5	81.2	70.9
Proportion working part time	1998–99 (%)	62.0	55.5	38.8	49.5	5.2	4.9	4.9	5.1	61.6	59.5	46.5	55.2
	98–99 to 04–05 (ppt change)	0.1	-0.7	-1.6	-2.2	1.5	1.0	1.0	1.2	-1.1	-0.1	-0.7	-1.1
	04–05 to 08–09 (ppt change)	2.1	-1.9	2.3	0.9	1.9	1.3	0.6	1.3	-3.3	-5.4	-1.5	-3.0
	2008–09 (%)	64.1	53.0	39.6	48.2	8.6	7.1	6.6	7.6	57.2	54.0	44.2	51.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	140	161	240	182	474	500	522	498	195	171	205	195
	98–99 to 04–05 (avg % change)	4.5	4.7	2.9	4.1	1.8	1.5	1.0	1.1	3.7	4.1	4.1	3.1
	04–05 to 08–09 (avg % change)	-0.7	-1.1	-1.4	-0.8	-1.3	0.3	1.1	0.0	0.9	1.4	-0.7	0.7
	2008–09 (median, 08-09 prices)	177	203	269	231	500	554	577	538	250	231	254	250
Hours	1998–99 (mean hours)	22.9	25.0	30.3	26.8	44.2	44.3	44.1	44.2	22.5	24.4	27.8	25.0
	98–99 to 04–05 (change in hours)	-0.6	0.5	0.0	0.4	-2.3	-2.0	-1.8	-2.0	-1.1	-0.2	-0.1	-0.3
	04–05 to 08–09 (change in hours)	-1.0	0.6	-0.6	-0.4	-1.2	-0.6	-0.4	-0.8	0.1	1.6	0.4	0.4
	2008–09 (mean hours)	21.3	26.2	29.7	26.9	40.7	41.8	42.0	41.4	21.5	25.7	28.1	25.1
Hourly Pay	1998–99 (median, 08-09 prices)	5.98	6.50	7.05	6.58	10.45	11.07	11.55	10.96	8.08	6.91	6.96	7.30
	98–99 to 04–05 (avg % change)	4.2	4.4	3.9	3.7	2.1	2.0	1.6	1.6	3.5	3.8	3.5	2.9
	04–05 to 08–09 (avg % change)	-1.5	-1.9	-1.3	-1.2	-0.6	1.0	0.9	0.4	0.2	0.9	0.5	0.6
	2008–09 (median, 08-09 prices)	7.19	7.82	8.42	8.00	11.55	12.97	13.16	12.49	10.00	8.94	8.75	9.20

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table A4.2 Labour Market Trends for lone parents and parents in couples by sex and number of children

	Number of Children	Lone Parents				Men in couples				Women in couples			
		1	2	3 or more	All	1	2	3 or more	All	1	2	3 or more	All
Employment	1998–99 (%)	51.3	46.5	27.9	45.8	90.0	91.6	84.7	89.7	73.2	70.7	55.6	68.8
	98–99 to 04–05 (ppt change)	7.4	8.0	7.8	8.3	0.7	1.1	2.3	1.3	2.1	1.9	-1.2	1.7
	04–05 to 08–09 (ppt change)	1.7	1.0	3.4	1.7	0.4	-0.6	-1.3	-0.4	1.1	0.0	-1.0	0.4
	2008–09 (%)	60.3	55.6	39.1	55.8	91.0	92.1	85.6	90.6	76.4	72.6	53.4	70.9
Proportion working part time	1998–99 (%)	45.3	51.9	64.6	49.5	4.9	4.8	5.9	5.1	47.6	58.7	65.4	55.2
	98–99 to 04–05 (ppt change)	-1.8	-1.4	-4.7	-2.2	1.4	0.7	2.4	1.2	-0.9	-0.3	-3.2	-1.1
	04–05 to 08–09 (ppt change)	-0.2	2.9	-0.3	0.9	0.9	1.4	2.1	1.3	-2.7	-3.1	-0.9	-3.0
	2008–09 (%)	43.2	53.4	59.6	48.2	7.1	7.0	10.4	7.6	44.1	55.3	61.3	51.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	210	169	123	182	465	520	498	498	221	179	151	195
	98–99 to 04–05 (avg % change)	3.3	4.6	9.3	4.1	1.6	1.2	0.9	1.1	3.6	3.6	4.6	3.1
	04–05 to 08–09 (avg % change)	-1.1	-1.0	-3.2	-0.8	-0.6	0.8	-0.4	0.0	0.1	1.4	0.4	0.7
	2008–09 (median, 08-09 prices)	245	212	185	231	500	577	519	538	275	235	200	250
Hours	1998–99 (mean hours)	28.1	26.4	21.5	26.8	43.9	44.3	44.7	44.2	26.8	24.3	22.3	25.0
	98–99 to 04–05 (change in hours)	0.5	-0.2	1.3	0.4	-2.1	-1.8	-2.4	-2.0	-0.5	-0.4	-0.2	-0.3
	04–05 to 08–09 (change in hours)	-0.5	-0.4	0.3	-0.4	-0.6	-0.8	-1.3	-0.8	0.5	0.3	0.3	0.4
	2008–09 (mean hours)	28.1	25.8	23.2	26.9	41.2	41.7	41.0	41.4	26.8	24.2	22.4	25.1
Hourly Pay	1998–99 (median, 08-09 prices)	6.82	6.50	5.75	6.58	10.39	11.45	10.78	10.96	7.52	7.28	6.65	7.30
	98–99 to 04–05 (avg % change)	3.8	4.7	5.2	3.7	2.0	2.0	1.8	1.6	3.7	3.1	4.3	2.9
	04–05 to 08–09 (avg % change)	-1.5	-1.6	-1.0	-1.2	0.3	0.4	0.3	0.4	0.1	1.1	0.8	0.6
	2008–09 (median, 08-09 prices)	8.05	8.00	7.50	8.00	11.83	13.09	12.16	12.49	10.00	11.00	12.00	9.20

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table A4.3 Labour Market Trends for lone parents and parents in couples by sex and education level

	Education Level	Lone Parents				Men in couples				Women in couples			
		Grad	Non-Grad	None	All	Grad	Non-Grad	None	All	Grad	Non-Grad	None	All
Employment	1998–99 (%)	78.2	52.1	31.1	45.8	96.1	92.1	79.5	89.7	81.9	72.0	55.0	68.8
	98–99 to 04–05 (ppt change)	2.1	6.7	4.2	8.3	0.1	0.6	1.6	1.3	0.2	1.0	-3.7	1.7
	04–05 to 08–09 (ppt change)	0.7	1.4	-1.5	1.7	-0.5	-0.8	0.2	-0.4	-0.1	0.7	-3.6	0.4
	2008–09 (%)	81.0	60.2	33.8	55.8	95.7	91.9	81.2	90.6	81.9	73.7	47.6	70.9
Proportion working part time	1998–99 (%)	30.1	50.1	61.9	49.5	4.6	4.3	6.9	5.1	44.2	59.1	59.7	55.2
	98–99 to 04–05 (ppt change)	-0.8	0.5	-0.8	-2.2	1.2	1.0	2.1	1.2	-0.7	0.5	-0.8	-1.1
	04–05 to 08–09 (ppt change)	4.4	1.5	-2.8	0.9	0.2	1.0	3.7	1.3	0.4	-3.4	-3.8	-3.0
	2008–09 (%)	33.7	52.1	58.3	48.2	6.1	6.3	12.7	7.6	43.9	56.2	55.2	51.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	390	178	116	182	687	463	370	498	357	171	136	195
	98–99 to 04–05 (avg % change)	1.1	3.1	4.4	4.1	1.2	1.1	0.5	1.1	1.4	2.4	2.3	3.1
	04–05 to 08–09 (avg % change)	-0.3	-1.7	-0.8	-0.8	0.6	-0.8	-1.0	0.0	-0.4	-0.1	1.4	0.7
	2008–09 (median, 08-09 prices)	415	202	150	231	769	481	365	538	387	202	171	250
Hours	1998–99 (mean hours)	32.7	26.7	23.1	26.8	44.3	44.3	43.8	44.2	28.5	23.7	23.6	25.0
	98–99 to 04–05 (change in hours)	-0.2	-0.4	0.2	0.4	-2.0	-2.1	-2.4	-2.0	-1.0	-0.5	-0.6	-0.3
	04–05 to 08–09 (change in hours)	-1.4	-0.6	1.1	-0.4	-0.4	-0.5	-1.7	-0.8	-0.2	0.5	0.4	0.4
	2008–09 (mean hours)	31.1	25.6	24.5	26.9	42.0	41.8	39.6	41.4	27.3	23.7	23.5	25.1
Hourly Pay	1998–99 (median, 08-09 prices)	10.82	6.50	5.27	6.58	15.30	10.26	8.12	10.96	11.65	6.87	5.60	7.3
	98–99 to 04–05 (avg % change)	1.6	3.2	3.0	3.7	1.7	1.5	1.4	1.6	1.7	2.2	2.5	2.9
	04–05 to 08–09 (avg % change)	-0.5	-1.8	-0.6	-1.2	0.5	-0.5	-0.7	0.4	-0.2	0.0	0.0	0.6
	2008–09 (median, 08-09 prices)	11.78	7.40	6.30	8	17.65	11.13	8.60	12.49	13.02	7.97	6.67	9.2

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table A4.4 Labour Market Trends for lone parents and parents in couples by sex and age of parent

Age		Lone Parents					Men in couples					Women in couples				
		Under 25	25–34	35–44	45+	All	Under 25	25–34	35–44	45+	All	Under 25	25–34	35–44	45+	All
Employment	1998–99 (%)	22.3	38.2	56.6	60.5	45.8	72.9	90.3	91.9	86.3	89.7	37.8	63.3	73.9	75.0	68.8
	98–99 to 04–05 (ppt change)	2.9	9.3	6.3	4.9	8.3	9.0	-0.3	0.9	3.0	1.3	5.0	-0.3	0.9	1.9	1.7
	04–05 to 08–09 (ppt change)	2.6	0.7	1.3	3.2	1.7	-12.4	0.2	-0.2	0.3	-0.4	-0.4	0.3	-0.4	2.5	0.4
	2008–09 (%)	27.8	48.2	64.1	68.6	55.8	69.5	90.3	92.6	89.5	90.6	42.5	63.4	74.4	79.4	70.9
Proportion working part time	1998–99 (%)	73.0	58.5	45.2	36.5	49.5	9.4	4.9	4.5	5.9	5.1	68.2	58.8	54.9	48.3	55.2
	98–99 to 04–05 (ppt change)	-3.3	0.0	-1.4	-0.6	-2.2	-1.2	1.6	1.0	1.2	1.2	-2.1	-0.5	-0.5	-0.7	-1.1
	04–05 to 08–09 (ppt change)	-1.9	0.7	2.6	0.9	0.9	4.9	2.0	1.3	0.7	1.3	-6.5	-4.7	-2.7	-0.3	-3.0
	2008–09 (%)	67.9	59.1	46.4	36.8	48.2	13.1	8.5	6.8	7.8	7.6	59.7	53.6	51.6	47.2	51.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	99	146	210	285	182	275	450	520	543	498	117	182	195	225	195
	98–99 to 04–05 (avg % change)	5.7	4.8	3.8	1.3	4.1	1.2	0.9	1.0	1.4	1.1	5.1	3.8	3.9	3.3	3.1
	04–05 to 08–09 (avg % change)	0.4	-1.7	-1.0	-0.7	-0.8	0.1	-1.2	1.1	-0.1	0.0	-1.5	0.8	0.9	-0.2	0.7
	2008–09 (median, 08-09 prices)	140	180	253	298	231	298	450	577	590	538	148	235	254	271	250
Hours	1998–99 (mean hours)	19.2	24.4	28.0	31.0	26.8	41.5	44.4	44.5	43.6	44.2	20.7	23.6	25.4	26.9	25.0
	98–99 to 04–05 (change in hours)	1.1	-0.4	0.1	0.4	0.4	-2.1	-2.7	-1.8	-1.8	-2.0	-1.3	-1.3	-0.3	0.2	-0.3
	04–05 to 08–09 (change in hours)	-0.5	-0.4	-0.3	-1.1	-0.4	-0.7	-1.4	-0.8	-0.4	-0.8	-1.0	0.0	0.6	0.5	0.4
	2008–09 (mean hours)	19.8	23.6	27.7	30.3	26.9	38.7	40.4	41.9	41.4	41.4	18.4	22.3	25.6	27.6	25.1
Hourly Pay	1998–99 (median, 08-09 prices)	4.89	5.97	7.10	8.42	6.58	6.63	9.70	11.46	12.42	10.96	5.40	7.15	7.48	7.52	7.30
	98–99 to 04–05 (avg % change)	5.6	3.9	4.0	1.9	3.7	1.7	2.1	1.8	1.8	1.6	2.9	3.2	3.2	4.2	2.9
	04–05 to 08–09 (avg % change)	-2.7	-1.6	-1.7	-0.6	-1.2	-1.0	-1.6	1.0	0.0	0.4	0.3	0.3	1.5	-0.1	0.6
	2008–09 (median, 08-09 prices)	6.08	7.07	8.41	9.21	8.00	7.03	10.27	13.23	13.85	12.49	6.50	8.72	9.60	9.61	9.20

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table A4.5 Labour Market Trends for parent by regions and countries of the UK

Region/Country		London	South East	East Anglia	South West	W. Mids	E. Mids	Yorkshire	North West	North	Scotland	Wales	N. Ireland	All
Employment	1998–99 (%)	67.4	78.7	77.9	79.0	75.0	77.0	74.2	73.3	70.0	75.5	73.3	70.5	74.7
	98–99 to 04–05 (ppt change)	0.1	1.4	1.5	1.8	2.1	1.4	2.3	4.0	5.9	3.4	2.0	3.2	2.1
	04–05 to 08–09 (ppt change)	2.2	0.2	0.5	-0.1	-3.8	0.8	0.5	-2.6	0.0	1.5	1.4	3.9	0.1
	2008–09 (%)	69.7	80.3	79.8	80.8	73.3	79.3	77.0	74.7	75.8	80.4	76.7	77.7	76.9
Proportion working part time	1998–99 (%)	25.4	28.6	30.0	29.9	27.9	28.9	29.3	27.4	29.2	27.6	26.8	23.1	28.0
	98–99 to 04–05 (ppt change)	-1.7	1.1	0.9	1.6	-0.2	-0.2	0.2	-0.1	1.6	0.3	0.9	0.9	0.3
	04–05 to 08–09 (ppt change)	2.2	-1.3	-1.2	0.4	0.5	0.9	-0.5	0.1	-3.0	0.8	-3.1	-0.1	-0.2
	2008–09 (%)	25.8	28.4	29.7	31.8	28.1	29.5	28.9	27.5	27.8	28.8	24.6	23.9	28.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	412	409	324	308	325	325	320	325	318	325	317	312	344
	98–99 to 04–05 (avg % change)	2.3	1.0	2.2	2.2	2.3	1.5	1.0	1.3	0.6	2.2	1.7	1.0	1.7
	04–05 to 08–09 (avg % change)	0.5	0.4	-0.2	0.4	-1.1	-1.2	-0.1	0.3	0.7	-0.1	-0.4	0.6	-0.5
	2008–09 (median, 08-09 prices)	481	442	365	356	356	339	337	356	340	369	346	338	375
Hours	1998–99 (mean hours)	35.5	35.3	34.6	34.9	35.1	35.5	34.9	34.8	34.1	35.3	35.5	36.1	35.1
	98–99 to 04–05 (change in hours)	-0.8	-1.6	-0.9	-1.8	-1.1	-1.5	-1.3	-1.4	-0.8	-1.4	-1.3	-0.9	-1.3
	04–05 to 08–09 (change in hours)	-0.6	-0.1	-0.5	-0.3	-0.5	-0.7	-0.4	-0.3	-0.1	-0.6	-0.3	-0.4	-0.4
	2008–09 (mean hours)	34.1	33.6	33.3	32.7	33.5	33.3	33.2	33.1	33.2	33.3	33.8	34.8	33.4
Hourly Pay	1998–99 (median, 08-09 prices)	10.99	10.39	8.39	8.31	8.49	8.44	8.33	8.70	8.46	8.83	8.44	8.08	9.03
	98–99 to 04–05 (avg % change)	2.5	2.4	2.9	2.9	2.5	2.8	2.4	2.1	1.9	2.9	1.8	2.5	2.6
	04–05 to 08–09 (avg % change)	0.2	0.0	-0.1	1.1	-0.1	-1.5	-1.2	0.3	0.3	0.3	1.3	0.6	-0.1
	2008–09 (median, 08-09 prices)	12.83	11.96	9.94	10.30	9.82	9.38	9.14	9.96	9.61	10.64	9.89	9.61	10.47

Notes: Years refer to financial years.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).

Table A4.6 Labour Market Trends for parents by ethnicity

Ethnicity		White	Black Caribbean	Black African	Indian	Pakistani	Bangladeshi	Chinese	Mixed/ Other	All
Employment	1998–99 (%)	76.0	68.4	61.3	73.4	41.7	33.9	65.0	57.1	74.7
	98–99 to 04–05 (ppt change)	2.7	2.4	-3.4	3.6	4.7	4.6	5.4	1.6	2.1
	04–05 to 08–09 (ppt change)	0.3	0.6	6.0	-1.8	4.8	7.2	3.8	5.0	0.1
	2008–09 (%)	79.0	71.4	63.9	75.2	51.2	45.7	74.2	63.7	76.9
Proportion working part time	1998–99 (%)	28.3	25.4	22.7	20.0	21.9	19.8	23.4	29.0	28.0
	98–99 to 04–05 (ppt change)	0.4	-4.0	-1.0	0.0	5.4	22.9	-5.0	-3.4	0.3
	04–05 to 08–09 (ppt change)	-0.3	4.7	-1.6	0.7	4.9	1.8	11.6	-0.7	-0.2
	2008–09 (%)	28.4	26.0	20.1	20.6	32.3	44.5	30.0	25.0	28.1
Earnings (2008–09 prices)	1998–99 (median, 08-09 prices)	347	351	325	325	283	156	390	314	344
	98–99 to 04–05 (avg % change)	1.6	2.2	2.7	3.6	-1.2	-1.5	5.1	2.9	1.7
	04–05 to 08–09 (avg % change)	-0.1	0.3	-1.3	-1.1	-0.1	6.0	-12.5	-4.7	-0.5
	2008–09 (median, 08-09 prices)	380	404	362	385	262	180	308	308	375
Hours	1998–99 (mean hours)	35.1	34.4	34.3	38.0	37.1	34.2	40.2	34.1	35.1
	98–99 to 04–05 (change in hours)	-1.3	0.3	0.6	-1.7	-3.2	-4.6	-2.5	0.2	-1.3
	04–05 to 08–09 (change in hours)	-0.3	-2.0	0.0	-1.1	-2.2	-1.1	-4.6	-1.2	-0.4
	2008–09 (mean hours)	33.5	32.7	34.9	35.1	31.7	28.6	33.1	33.1	33.4
Hourly Pay	1998–99 (median, 08-09 prices)	9.06	9.68	8.29	8.41	6.84	4.87	11.14	8.96	9.03
	98–99 to 04–05 (avg % change)	2.1	1.8	3.7	3.2	2.7	3.5	3.1	2.5	2.6
	04–05 to 08–09 (avg % change)	0.3	0.2	-2.2	-0.3	-2.9	3.1	-9.0	-4.5	-0.1
	2008–09 (median, 08-09 prices)	10.63	11.08	9.53	10.33	7.14	7.20	8.57	8.49	10.47

Notes: Years refer to financial years. Figures are for the UK as a whole.

Sources: Authors' calculations based on Labour Force Survey (April-June 1998 onwards).