

***Can current policy end child poverty in Britain
by 2020?***

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First published 2006 by the Joseph Rowntree Foundation

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Acknowledgements

The research in this report sprang from an idea put forward by One Parent Families and Child Poverty Action Group and we are indebted to Kate Bell, Tina Haux, Alison Garnham and Paul Dornan for their support and help throughout the project. Many thanks to Aruna Ramyeed and Simon Lunn from the DWP HBAI team who provided prompt and helpful data information and to Steve Topping from the Tax Benefit Model Tables team at DWP who patiently answered all my queries and provided assistance when asked. The Joseph Rowntree Foundation has been generous and enthusiastic supporters of the LOIS model and Chris Goulden, Anne Harrop and Ann Bowtell in particular. Holly Sutherland, Adrian Sinfield, Chris Goulden and Susan Harkness all gave helpful comments and guidance that were very much appreciated. Mike Brewer also helped greatly with advice and information. All errors or omissions remain ours however, despite so much help and advice.

Final work on this report was undertaken during a time when Martin Evans was an Economic and Social Science Research Council (ESRC) Research Fellow RES-000-27-0180.

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Glossary

AHC	After Housings Costs (poverty income measurement)
BHC	Before Housing Costs (poverty income measurement)
CT	Council Tax
CTB	Council Tax Benefit
CTC	Child Tax Credit
DWP	Department for Work and Pensions
EMTR	Effective Marginal Tax Rate
FACS	Family and Children Study
HB	Housing Benefit
HBAI	Households Below Average Income
i-bJSA	Income-based Jobseekers Allowance
IS	Income Support
LOIS	Lifetime Opportunities and Incentives Simulation
NIC	National Insurance Contribution
NMW	National Minimum Wage
ODPM	Office of the Deputy Prime Minister
OECD	Organisation for Economic Co-operation and Development
TBMT	Tax Benefit Model Tables
Uprating	Keeping the value of benefits constant in either price or relative terms
WRAP	Work Related Activity Premium

Introduction

Unpicking the poverty commitment

The promise to abolish child poverty within a generation, by 2020, will be a fundamental test of British social policy. So far, this ambitious commitment is doing fairly well (Brewer 2005). But it is becoming increasingly clear that the current set of policies will not continue to reduce the numbers of children in poverty at the same rate, and that reaching the target will be more difficult as we get nearer the 2010 half-way point for several reasons. First, the characteristics of those that have already been moved out of poverty were in the main the 'easiest to help' and policy will have to do more to help people with greater disadvantage. Second, the poverty target is a moving target, especially when poverty is defined as a percentage of median income. As median income rises, fiscal policy instruments have to work harder to keep up. Third, the main method of reducing poverty is to increase employment rates of workless families with children with a combination of active labour market programmes and in-work tax credits and childcare provision. Increasing employment is dependent on macro economic growth and job growth, which has been very good over the past 10 years or more but is unknown for the future. On the other hand, increasing employment rates are also based on favourable conditions at the individual level and especially a good set of micro-economic fiscal incentives that match the characteristics of individuals at the margins of employment. Alongside the poverty target are employment targets – an 80 per cent employment rate overall – and targets for reducing employment gaps for the low-skilled, disadvantaged neighbourhoods and ethnic minorities and, of most relevance to child poverty, a 70 per cent employment rate for lone parents by 2010.

There are then two main questions concerning policy:

- How will the current policy approach continue to work from now¹ until 2020?
- What new policy approaches will be needed?

Achieving the policy target not only means the appropriate policy packages and their effective implementation but also means accurately and consistently measuring child poverty. After consultation, the Government has proposed three measures of child poverty that will be used (DWP 2004c):

¹ All figures in this report are based on 2005/06 financial year tax and benefit levels.

- 1) A measure of absolute low income – defined as 60 per cent of median income in 1998/9 prices (£210 for a couple with two children) and then adjusted over time by prices.
- 2) A relative low income measure, 60 per cent of contemporary median income before housing costs.
- 3) A combined material deprivation and relative low income measure based on those who are both below 70 per cent of contemporary median and unable to afford a set profile of goods and services.

The question of measurement is at the heart of understanding what the target of ‘zero child poverty’ really means. There are a variety of potential benchmarks. The Government has said that eradication of child poverty will, in practice, mean that the UK compares favourably with the countries in Europe with the lowest child poverty rates. This means that ending child poverty is not necessarily moving to a zero rate but moving to around 5 per cent of children in poverty to match the lowest child poverty rates in Europe, such as those in Denmark and Sweden for example. One consequence of adopting an international benchmark for child poverty is that poverty measurement has to adopt an internationally consistent methodology. This means two methodological conventions have to be adopted:

First, adopting a different equivalisation scale (the technique to make household income reflect underlying size and composition, a crucial methodological issue if we are to accurately rank households to say who has more income relative to their needs.² International comparison uses the ‘modified OECD scale’. The Households Below Average Income (HBAI) series (DWP 2005a) and previous British poverty figures have been based on the McClements equivalence scale. This change will most affect the way we take account of children’s needs as they grow older and will not be discussed in detail here.

Second, the use of a ‘before housing costs’ income definition (BHC). The HBAI series and previous poverty measures have always looked at poverty using income before and after housing costs (AHC). This is

² There are two main considerations – firstly, the number of people in the household, so that we can say that a five person household with an income of £500 is equal to a one person household with an income of £100 because they both have an equal per-capita income. Secondly, there are however economies of scale, so that a household with more than one person does not spend equal amounts per-capita because there is shared benefit from much expenditure on common needs such as rent, fuel, and other items. This leads to a variety of scales that give different weights to second and third adults and to children.

because of the large role that means-tested housing allowances (Housing Benefits [HB]) play in the incomes of the poorest. The British benefits system provides full coverage of rent costs for those on social assistance (Income Support [IS] and income-based Jobseekers' Allowance [i-bJSA]). This means that the incomes of the poorest households can often be doubled by HB if they are tenants, and that, for instance, subsidised tenants in public housing are 'poorer' than identical tenants in the private sector solely because of the level of their rent.

Accurately identifying and profiling poverty is best served by using a number of poverty measures and the Government is right not to plump for a single measure. Additionally, using a target based on matching the lowest poverty incidence in our European peers is a bold and ambitious policy aim. However, the elimination of child poverty target is *fundamentally a domestic policy matter* and we must be able to measure and contextualise child poverty taking into account British policy structures. We must also be able to ensure that the change of measurement of poverty to match international comparison does not lead to significant differences that confuse and undermine the most important goal – which is surely to ensure that families with children have living standards that enable them to participate fully in British society. This means that it is essential to align how we measure poverty to the underlying fiscal structures that support people out of work and provide incentives to work.

This methodological change to the way that we measure poverty means that we have to add the question 'How does measuring poverty affect policy outcomes?' to our previous two policy questions outlined above. Put simply, not only do we need to know how existing policies will work and what amendments to policy will be required, we also need to know how such performance and amendment is reflected through the changes in method of measuring poverty.

When we put these questions together, we have a very complicated and technical analytical exercise. The current system is itself immensely complicated with overlapping entitlement to tax, national insurance payments, tax credits, housing allowances and other elements of the fiscal package. The use of childcare affects these, as does the choice of hours of work and, for couples, whether one or both parents work. These complicated packages of taxes and benefits will change as inflation and uprating occurs between now and 2005 even if people's circumstances do not. However, of course, they do change – both through everyone getting older, and through a huge range of events – through new children being born, to changing or losing employment and to separation, divorce and re-partnering and marriage.

This report looks across this large and complex policy area and looks forward from 2005 to 2020 when the policy target to eliminate child poverty should be fully in place. In Part 1, we look at the current set of policies in 2005 and the underlying changes in poverty, earnings and prices that have occurred since 1997 and are likely to affect the policy and poverty environment between now and 2020. To do so, we join together the poverty measurement and work incentives issues to describe how current policy promotes employment and poverty reduction. Part 2 then uses a set of family profiles to show what will happen to current policy over the next 16 to 18 years for a range of families with children, and how that will affect them. The starting point is 2005 and the birth of their first child. How will the current policy package ensure that this generation is not poor? Part 3 then looks at a variety of policy changes that have been discussed or are under consideration. The final part of the report draws together the findings in a set of discursive conclusions.

Part 1

The 2005/06 system, inflation and income growth

1.1 The 2005/06 tax and benefit system

How does the current system operate to produce incentives to work and to reduce poverty for families with children?

The British system of taxes and benefits for low income families pivots on a definition of employment based on 16 hours of work a week. Below this level of work fiscal support is based on a set of 'out of work' benefits (Income Support and Jobseekers' Allowance and Incapacity Benefits). Once hours of employment reach 16 hours a week, then in-work tax credits supplement earnings.³ For families with children, there are additionally two forms of financial support that operate across the 16 hour rule for both in-work and out-of-work families. First, Child Benefit is paid at the same rate to all families both in and out of work and second, Child Tax Credit is also paid to those both in and out of work but is tapered away to a minimum payment as income rises for those in work with higher earnings. However, when describing how the system relates to poverty level incomes and provides work incentives, it is best to distinguish between in-work and out-of-work families.

1.1.1 Out-of-work families

Let us take two simple families as examples: a couple with two children and a lone parent with a single child. Both families have a child aged five and the couple have an additional 11-year-old.⁴ When out of work (for simplicity we will say this means not working at all) these families will receive means tested social assistance for the adults. This is Income Support (IS) for those that are not required to work such as the lone parent family, and income-based Jobseekers Allowance (i-bJSA) for the couple. These social assistance benefits are paid at the same rates.⁵ Additionally, both families will receive Child Benefit, which is paid at a higher rate for the first child and then at a second lower rate for all other children. Child Tax Credit is also paid on a per-child basis. While the families are out of work, then no part of this basic income (IS and i-bJSA)

³ For young people under 25 without children there is a 30 hour work eligibility requirement for in-work tax credits.

⁴ These specific ages of children are only important when comparing to calculated estimates for the poverty lines for the families below.

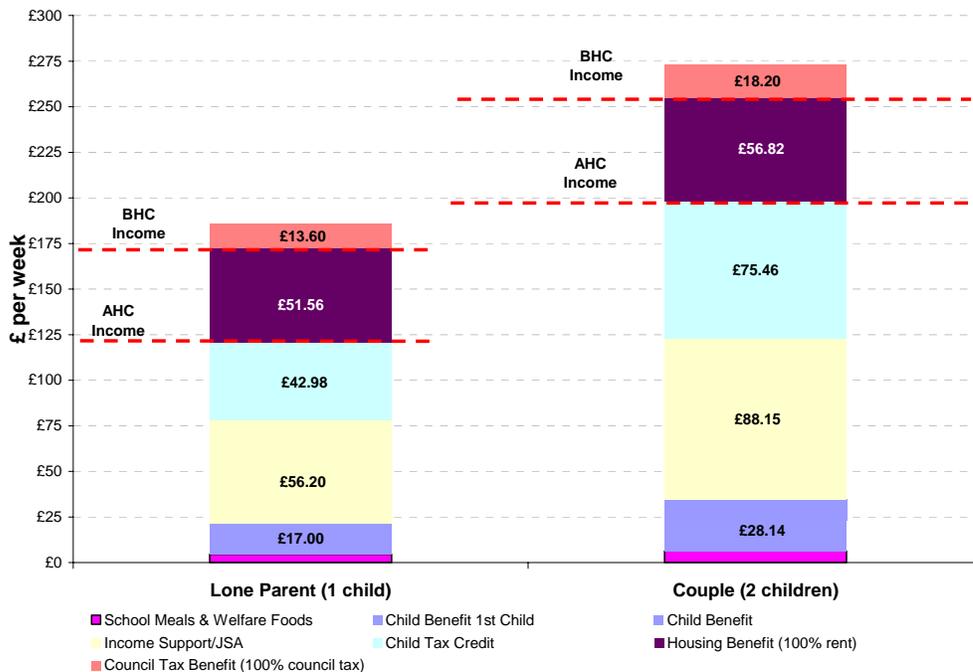
⁵ The rates of JSA and IS vary with age, with lower rates for under 25s and for under 18s. All individuals will be assumed to have over 25 rates throughout our analysis.

is supposed to be used for payment of rent or of council tax and separate benefits are given to reflect 100% of both rent and council tax liability. These are Housing Benefit (HB) and Council Tax Benefit (CTB) respectively. The amount of HB and CTB thus varies by the level of rent and council tax paid by individuals.

Figure 1.1 shows how these out of work income packages are made up in 2005 for both families. To give illustrative levels of rent and council tax we use the figures given in the annual DWP Tax Benefit Model Tables (DWP 2005b).

The lone parent family receives a weekly cash total of £181 from the out-of-work income package. How does this cash income relate to the poverty line?

Figure 1.1
2005 out-of-work income packages for two families with children
Lone parent family with single child aged under 11 and a couple with two children aged under 11



Source: DWP Abstract of Statistics (DWP 2005c) and Tax Benefit Model Tables (DWP 2005b)

To compare this income level to poverty lines we must first change it to meet the income definitions used to measure poverty. It is first necessary to get to a net income figure and to subtract taxes: this simply means that Council Tax Benefit is reduced by the equivalent Council Tax liability. This leaves a net income before housing costs (BHC measure)

of £172 a week. An AHC income definition subtracts the rent from BHC income, resulting in £121 a week.

Turning to the couple family, we see that they get higher levels of cash benefits compared to the lone parent family. They received more Child Benefit and higher Child Tax Credits because they have two children. They also, according to DWP Tax Benefit Model Table assumptions, pay slightly higher rent and council tax to reflect their need for a larger property to meet their needs. Using the same income definitions as before, we can define the couple's BHC income as £255 a week and their AHC income as £196 a week.⁶

How do such incomes relate to poverty levels? There are two problems with directly comparing these incomes from 2005 benefit packages to poverty levels. First, the most recent figures we have for poverty are for 2003. To estimate what poverty would be in 2005 we extrapolate the 2003 data using average rise in median income over the preceding period from 1997. We can then compare 2005 benefit incomes to estimated 2005 poverty lines. The second problem is that, while the weekly cash benefits reflect the fiscal assumptions about family size and composition (how much extra couples get compared to single people and how much children of different ages receive), these assumptions are NOT the same as the assumptions used in the *equivalisation* of income when poverty is measured. To compare these weekly incomes to poverty we therefore have to turn the equivalised poverty line incomes for such families into non-equivalised cash terms.

Table 1.1 gives the actual poverty levels in cash terms in 2003/04 for these families and then the estimated poverty levels for 2005 alongside the actual income levels from out of work benefits. The difference between the poverty line is called the 'poverty gap', which is shown in cash terms and as a percentage of the poverty line (i.e. the out of work income for a couple with 2 children aged 5 and 11 is £63 below £318 and thus 20 per cent below the poverty line).

⁶ The calculation of IS level income out of work is complicated by Child Tax Credit being an annual amount rather than a weekly amount and the different assumptions underlying calculation of a corresponding weekly rate of CTC. We have rounded up to nearest pound.

Table 1.1
Poverty levels and poverty gaps for non-working families

	2003/04 Poverty	Average increase 1997/98-2003/04*	2005/06 Poverty	Out of work income** 2005	Poverty gap £	Poverty gap %
Couple with 2 children aged 5 and 11						
BHC	£306	4.0%	£318	£255	£63	20%
AHC	£262	4.5%	£286	£198	£88	31%
Lone parent with single child aged 5						
BHC	£172	4.0%	£179	£172	£7	4%
AHC	£136	4.6%	£148	£121	£27	18%

Notes: All sums are nominal non-equivalised figures

*1997/98 is base year due to different policy from 1997 on IS levels for lone parents and children's rates of IS and tax-credits.

** Income based on DWP Tax Benefit Table 2005 assumptions for public sector rents and council tax and rounded to nearest pound.

Source: Authors' calculations from nominal table of unpublished Table C from HBAI supplementary tables: *Unequalised money values for overall distribution mean, median, 50 per cent of mean and 60 per cent of median income for different family types in nominal prices, Great Britain* produced by HBAI team DWP.

The couple family relying on out-of-work benefits have a poverty gap of £88 or 31 per cent using AHC assumptions and £63 or 20 per cent using BHC assumptions. The poverty gaps for the lone parent are £27 or 18 per cent using AHC assumptions and only £7 or 4 per cent using BHC assumptions.

It is noticeable that the differences between AHC and BHC estimates are substantial, with BHC measures leading to lower poverty gaps. This is also reflected in national data where BHC measures give smaller headcounts of poverty in addition to lower average poverty gaps.

Which is the most appropriate? There are pros and cons for both approaches and AHC measures for high income owner occupiers can certainly under-estimate income where housing is being over-consumed and/or used as an investment good. However, for low income families, there is one serious disadvantage for BHC figures and that is the role of Housing Benefits. We have already discussed the definition of BHC and AHC incomes and HB will occur in BHC incomes *without* reducing income to reflect the liability for rent that underlies this portion of income. Choice in housing is far more constrained for low income families and public sector housing is allocated in the main by administrative procedures and waiting lists. One perverse consequence of using a BHC income definition for low income and HB-entitled families is that poverty can be reduced purely by raising the rent levels. If this is done then HB

rises to match the higher income and BHC income rises as a consequence. This means that, if the same couple family as shown above were assumed to be in *private* rented accommodation, then the DWP use an illustrative rent of £176.70 (DWP 2005b) – over three times the rent assumed for public sector. This alternative assumption would mean that their BHC income out of work would rise to £372 per week. This, when compared to the 2005 poverty line, would mean a cash poverty clearance of £56 or 14 per cent. This means that, in theory, BHC poverty could be abolished by raising the rents of those out of work and on benefits.⁷ But if this occurred, AHC poverty levels would remain unchanged. This is clearly perverse.

1.1.2 In-work families

Current policy focuses on making work pay. The tax credit system ensures that low-paid work is rewarded and that families with children are better off moving into work from Income Support/JSA and thus potentially moving out of poverty. But how far does moving into work ensure that families move out of poverty? Figure 1.2 shows the results from calculations that use the DWP's Tax Benefit Model Tables to calculate entitlement to benefits for the same couple family with two children discussed above, and then compares the resulting incomes to BHC and AHC poverty lines. Our calculations use the National Minimum Wage (NMW) as a basis and show the outcomes of working successive additional hours a week on incomes and the tax benefit package from the 16 hours point.

There is a small but important inconsistency in the income definitions used by government between those used to analyse work incentives and those used in poverty measurement. BHC and AHC definitions of incomes for poverty measurement in the HBAI series (DWP 2005a) do not match the BHC and AHC definitions uses in Tax Benefit Model Tables.⁸ Our calculations move to a consistent measurement and adopt the HBAI approach.

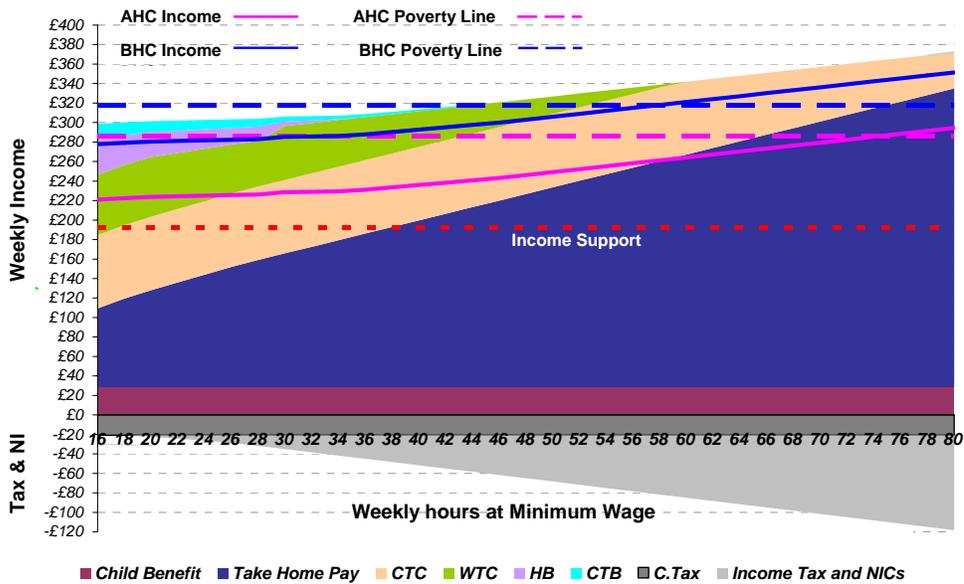
Figure 1.2 shows the position for a couple with two children – the same model family that we used previously and will continue to use throughout this report. Policy makes work pay as the income gains from employment

⁷ Of course if this happened extensively then the whole income distribution of BHC income would change and the relative poverty line with it – so it is probably truer to say that individuals can be lifted out of poverty by rent rises rather than all out-of-work-renters.

⁸ Council Tax Benefit is included in TBMT BHC definitions without deduction of council tax, which is deducted only in the AHC definition alongside rent (and childcare costs).

compared to Income Support levels are substantial. Even at 16 hours of work a week this family is more than £29 better off than on IS – a 15 per cent increase in income in AHC income (the pink solid line in Figure 1.2.)⁹ This difference between out-of-work and in-work incomes is an important element in promoting incentives to work and is termed ‘*the replacement ratio*’. It is usually expressed using out-of-work income as a proportion of income in work – in this instance £192 as a proportion of AHC income at 16 hours a week of £221, or 87 per cent.

Figure 1.2
Couple with two children working at national minimum wage
(Total hours worked by one or both members of couple)



Notes: Children aged 5 and 11
Rent £56.82 and Council Tax £20.90 per week as per TBMT assumptions for local authority renter

Source: Authors’ calculations using DWP Tax Benefit Model Tables¹⁰ and poverty lines from Table 1.1

Increasing earnings (hours of work at the minimum wage in this example) alters the tax benefit package because *means-tested* support, HB, CTB, CTC, and WTC are withdrawn as income rises. These changes are shown in Figure 1.2 by the wedge shaped areas for HB, CTB and WTC that taper and become thinner as income rises. CTC does not begin to taper until WTC entitlement ends and is less pronounced in Figure 1.2. Below the zero line of the x-axis are taxes, of

⁹ It is only sensible to compare IS levels of income using AHC income definitions.

¹⁰ Tax Benefit Model Tables use different definitions of BHC and AHC income from HBAI analysis as TBMT treat council tax as a housing cost and not a tax. This means that BHC incomes are higher than HBAI equivalents. TBMT also, quite sensibly, take childcare costs from AHC incomes, which is not consistently done in HBAI reports.

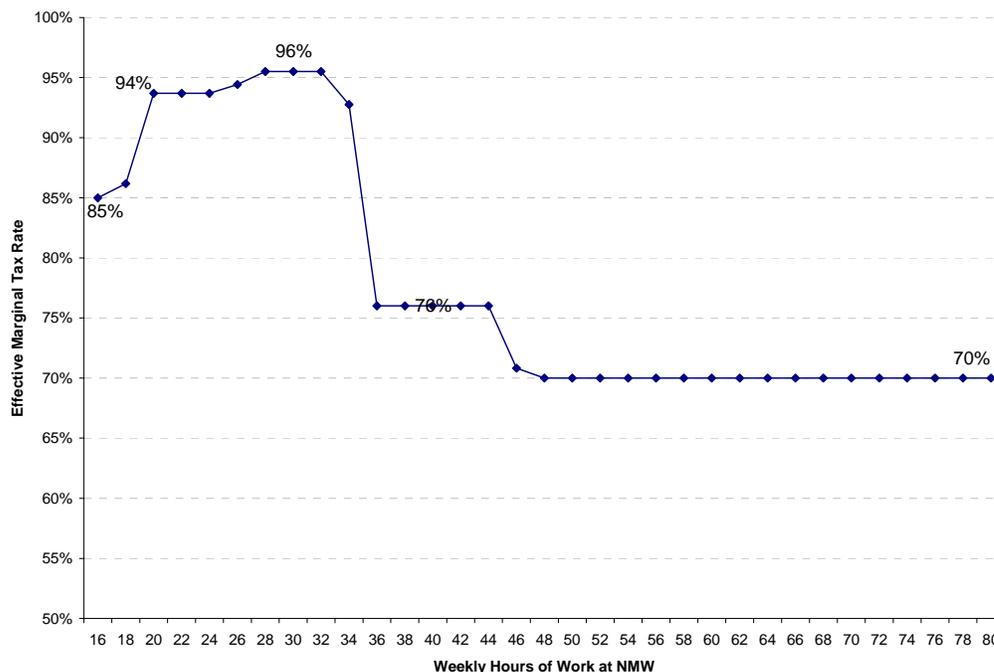
which council tax is a continuous liability of £20.90 a week. However, at 20 and more hours a week income tax and national insurance contributions (NICs) also become payable, as shown by the lighter grey wedge below the x-axis in Figure 1.2.

Does working take this family out of poverty? Figure 1.2 clearly shows that this family could struggle to move out of poverty when working for the minimum wage. Using a BHC income definition, the blue solid line in Figure 1.2 does not cross the BHC poverty line until 58 hours of weekly work – either one earner working 58 hours a week or the combination of full time and part-time working. If we move to the AHC income measure that more accurately reflects work incentives and replacement rates, then it takes 74 hours of work to cross the poverty line.

Figure 1.2 shows how difficult it is to lift income above the poverty line as earnings rise. At 16 hours of work, the poverty gap (AHC) is £65 or 23 per cent at 40 hours a week, equivalent to a single full-time earner, and the poverty gap has only narrowed to £50 or 18 per cent. This is despite a rise in gross earnings of £120 a week. This phenomenon is a clear example of what is called the ‘poverty trap’ that results from the fact that the combination of taxes and reductions in means-tested benefits combine to give very low marginal gains from extra hours of work. The combination of taxes and means-tested benefit tapers means that the net gains are far far less than the gross increases in earnings.

This shallow profile of real income gains is explained in Figure 1.3, which shows the effective marginal deduction rate – more commonly known as the effective marginal tax rate (EMTR) and the term we employ – for this family. At 16 hours, for each additional pound of earnings they only keep 15 pence – an effective marginal tax rate of 85 per cent – caused by the withdrawal of HB and CTB. However, as income rises and they pay tax and NICs and WTC begins to be withdrawn, the EMTR rises to 96 per cent. This means that they only keep four pence in every pound of additional earnings. Another way of expressing this is that the minimum wage is reduced to a marginal rate of reward of around twenty pence an hour. These EMTRs are highest where the combination of HB, CTB and tax credit withdrawal occurs alongside payment of tax and NICs. This means that those with higher rents and council taxes will face high EMTRs for larger ranges of earnings, a point we return to below. The lowest rate of EMTR for this family is 70 per cent – up to the point where both adults are working 40 hours a week, a total of 80 hours at the minimum wage. This results from tax credits being withdrawn alongside payment of income tax and NICs.

Figure 1.3
 Effective marginal tax rates
 Couple working at minimum wage with two children aged 5 and 11



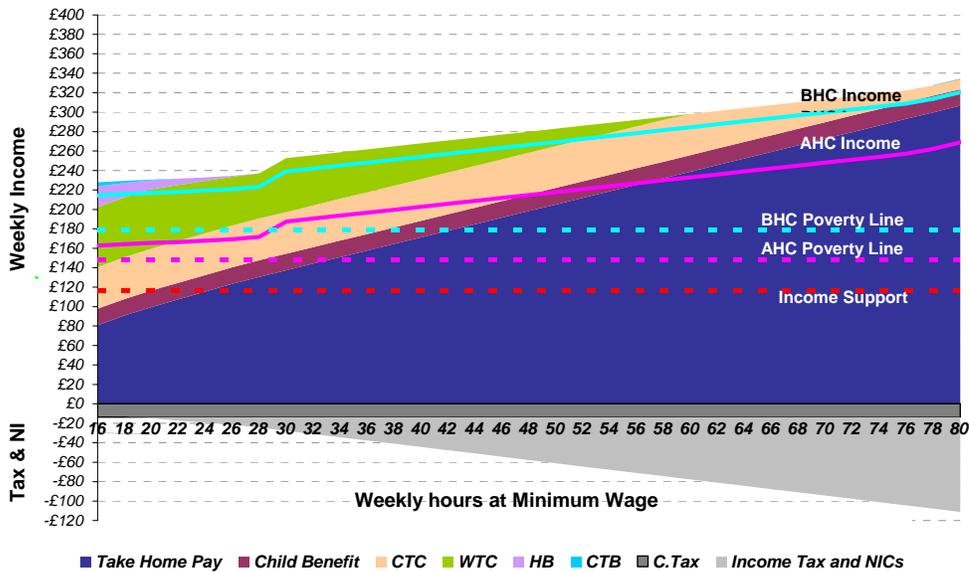
Source: DWP Tax Benefit Model Tables 2005

For a couple, the most common decision is whether to supplement one full time earner, usually the man, with additional part-time or full-time earning by the other partner (usually the woman). High EMTRs are estimated to reduce second earner employment, with most attention paid to the effect of tax credits on such reduced participation (Adam, Brewer & Shephard 2006). Figure 1.3 shows that EMTRs never fall below 70 per cent for a couple with two full time workers each working 40 hours a week at the minimum wage – a total of 80 hours of work a week.

How does our model lone parent family compare? Figure 1.4 shows the tax benefit package for our lone parent with a single child aged five on the same basis shown for the couple in Figure 1.2. The difference in poverty clearance between this lone parent family with a single child and the previously shown couple family with two children is dramatic. Even when only working 16 hours, the lone parent achieves poverty clearance in both AHC and BHC measures. Given that earnings are exactly the same, why is this? The main reason is that fiscal support through tax credits and child benefits is weighted towards small families who receive *per capita* greater assistance than large families. Allowances for couples and single-headed families are the same in nominal terms but this cash equality means that couple-headed families are worse off on a per capita basis. Both child benefits and tax credits also award higher amounts for

the first child, a reflection of the costs of having *any* children. All second and subsequent children receive equal amounts but again, this means that the largest proportional awards go to the smallest families. This is true across both single and couple parents – so that small single parent families get less than large ones, for instance, and is not due to an assessment that lone parent families, who arguably have fewer opportunities for economies of scale, have higher needs.

Figure 1.4
Lone parent with one child working at national minimum wage



Notes: Child aged 5
Rent £51.56 and Council Tax £13.60 per week as per TBMT assumptions for local authority renter
80 hours used as a maximum to ensure scale matches Figure 1.2

Source: Authors' calculations using DWP Tax Benefit Model Tables and poverty lines from Table 1.1

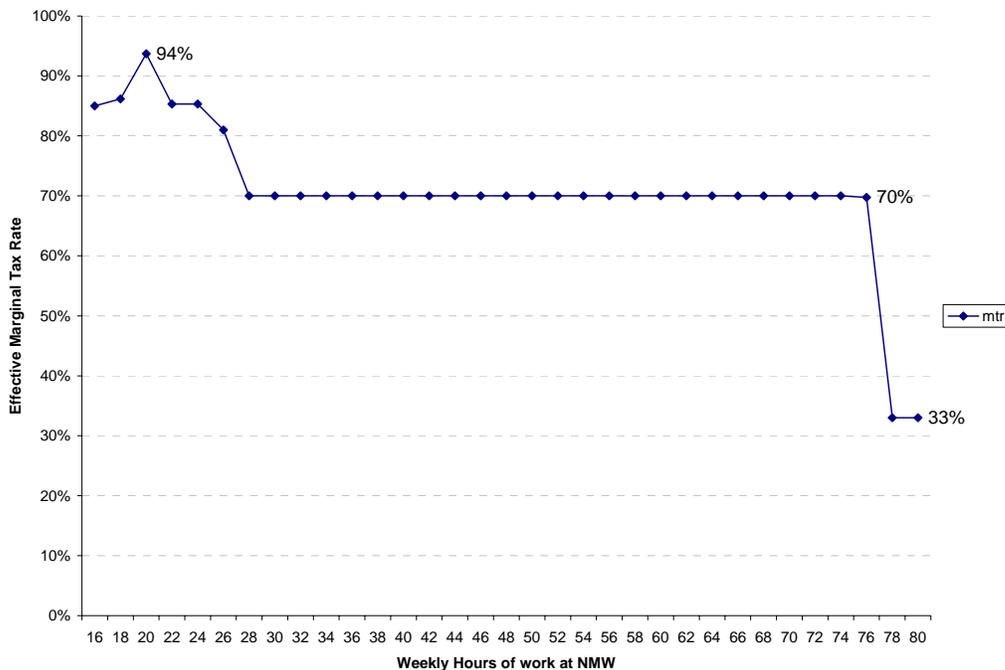
Returning to Figure 1.4 we see that the single-child lone parent family has a £15 or 10 per cent poverty clearance at 16 hours work on AHC income assumptions. This income level also equates to a 74 per cent replacement rate. The combination of poverty clearance and work incentives are thus very good, even at the minimum wage for this size and type of family. Of course, if we look at BHC income then poverty clearance is much higher – £35 or 20 per cent at 16 hours of work. This lone parent family also has very small gains from additional hours of work, but it is noticeable that the additional WTC at 30 hours has a noticeable impact on income levels – it raises poverty clearance from 18 to 27 per cent (moving from 29 to 30 hours)

Figure 1.5 shows the effective marginal tax rates for this lone parent family. The highest EMTR is 94 per cent at 20 hours of work but the

EMTR falls to the 70 per cent level from 26 hours of work at the minimum wage – the rate determined by the combination of income tax, NICs and tax-credit withdrawal.

Both these simple model families illustrate how the current system in 2005 provides the combination of work incentives and anti-poverty impact. However, we have seen that family size is crucial to both work incentives and poverty impact. The other issue that potentially affects both poverty impact and work incentives are other high cost factors – of in-work costs such as travel and other incidental costs that are not directly covered by specific fiscal instruments but also of costs that are more directly linked to the current set of benefits and tax credits: rent (covered by Housing Benefits), council tax (Council Tax Benefit) and child care costs (of which a portion can be covered by Working Tax Credit). How do high costs alter poverty and work incentives?

Figure 1.5
Effective marginal tax rates – lone parent with one child



Source: Authors' calculations from DWP Tax Benefit Model Tables

1.2 High costs

The issue of high costs arises for a number of reasons. Some locations, such as London, have much higher costs of living and of travel, rents and childcare in particular. However, rent and childcare costs also differ according to the form of provision. Social provision is subsidised at source and rent and childcare places are charged at a lower level and

paid for through taxation or other revenues. Private provision on the other hand charges at a market level and the subsidy comes from fiscal allocations – housing benefit for rent and WTC for childcare – to the individuals who have to pay such charges. Similarly travel costs on public transport are also determined by the overall balance between public subsidy and fare charges.

We take each of these areas of high costs in turn, beginning with rent.

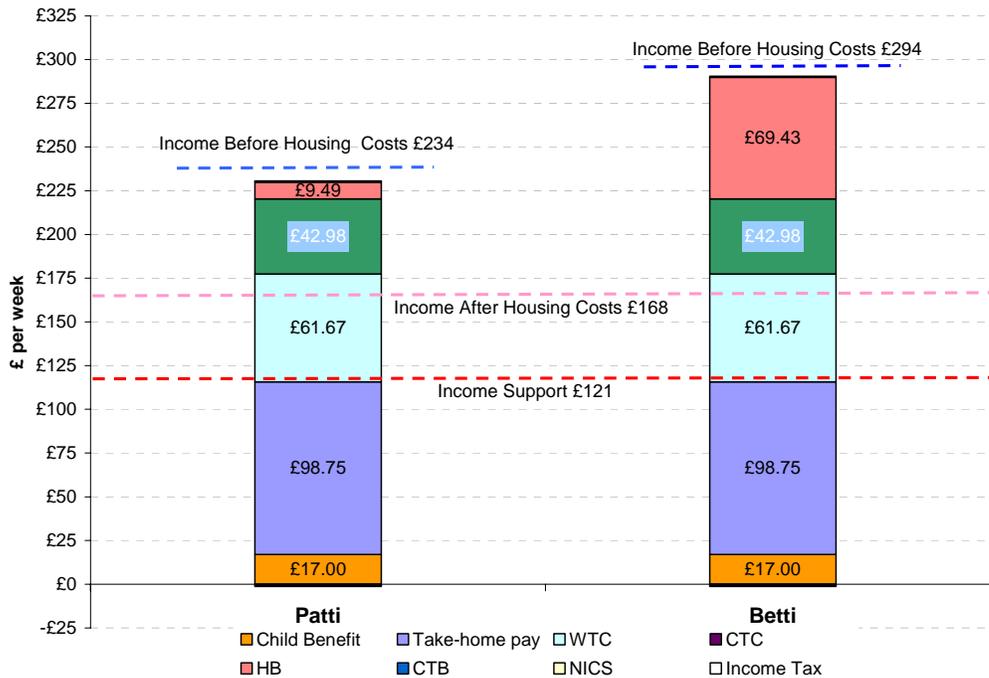
1.2.1 Housing costs

We have already argued that housing costs are essential to consistent measurement of poverty and work incentives. For a family to be better off in work it means that increased income from a combination of earnings and tax credits and lower (if any) HB has to ensure that not only rent is covered but there is also additional income that keeps income higher than IS levels. One of the main original ideas behind increasing the generosity of in-work benefits through Working Families Tax Credit in 1999 and, since 2003, from Working and Child Tax Credits, was to lift families out from HB entitlement. This would mean that they are better off and no longer subject to the highest levels of EMTR we have seen in the previous section. Tax credits are taken as income for the purposes of calculating HB and CTB, and while it is true that high awards of tax credits will often remove entitlement at a low level of earnings to HB and CTB where rents and council tax are low, there is a problem because higher rents, and high levels of rent inflation, can soon whittle down the gains from tax credits.

How do different levels of rent affect work incentives and poverty levels?

Figure 1.6 shows the position of two identical lone parents (we call them Patti and Betti) who both have a single child and earn £100 a week. Patti has a low rent (local authority) and Betti has a high rent (private) using the DWP's own assumptions about rent levels in these sectors (DWP2005b). These two lone parents have identical work incentives because their AHC incomes are identically above IS level. They have 71 per cent replacement ratios and thus have identical incentives to have moved from IS into work and to remain in work. However, Betti has a far higher BHC income because she receives a lot more HB to pay her rent.

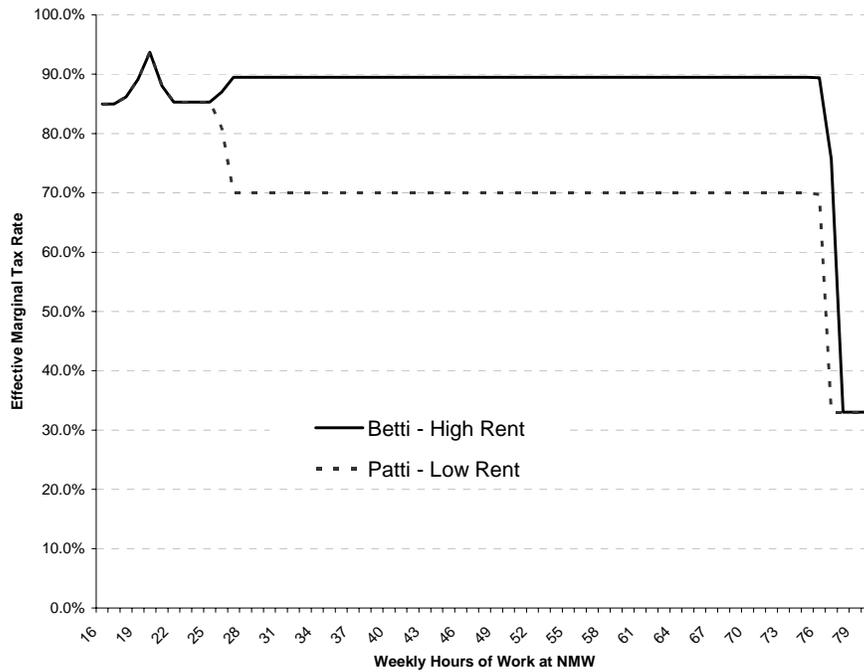
Figure 1.6
 Identical lone parents earning £100 p.w. in 2005/06 with different rent levels



Source: Tax Benefit Model Tables

However, if we compare their returns from work, that is their work incentives through EMTR, then there is a substantial difference between them. Figure 1.7 shows Patti and Betti's effective marginal tax rates by the number of hours they can work and show that Betti's high rent alters her EMTR by extending it far further. The effect of high rents is to keep HB in payment as earnings rise and this keeps EMTR at the 90 per cent level until the point where Betti would have to work an incredible 76 hours a week at the minimum wage before she could keep more than 10p in the pound of her additional earnings.

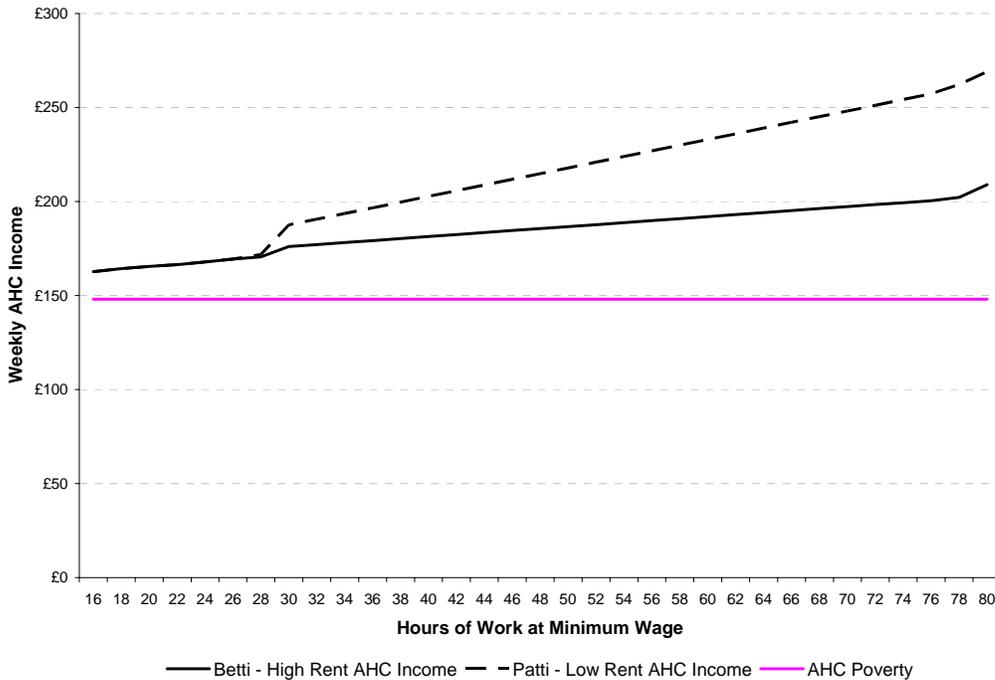
Figure 1.7
Effective marginal tax rates of identical lone parents with high or low rent



Source: DWP Tax Benefit Model Tables

How does this effect poverty? Figure 1.8 shows the AHC income lines that underlie Betti and Patti's profiles as they move from 16 to 80 hours of work a week at the minimum wage. We already know from the previous section that lone parent families with one child will have poverty clearance at 16 hours of work a week but the level of poverty clearance clearly also depends on the level of rent. Figure 1.8 shows that the low rent helps to increase poverty clearance as earnings rise. Poverty clearance is 27 per cent at 30 hours of work for Patti paying low rent but only 19 per cent for Betti paying high rent.

Figure 1.8
Poverty profiles of high and low rent payers working at minimum wage



Source: Authors' calculations from DWP Tax Benefit Model Tables.

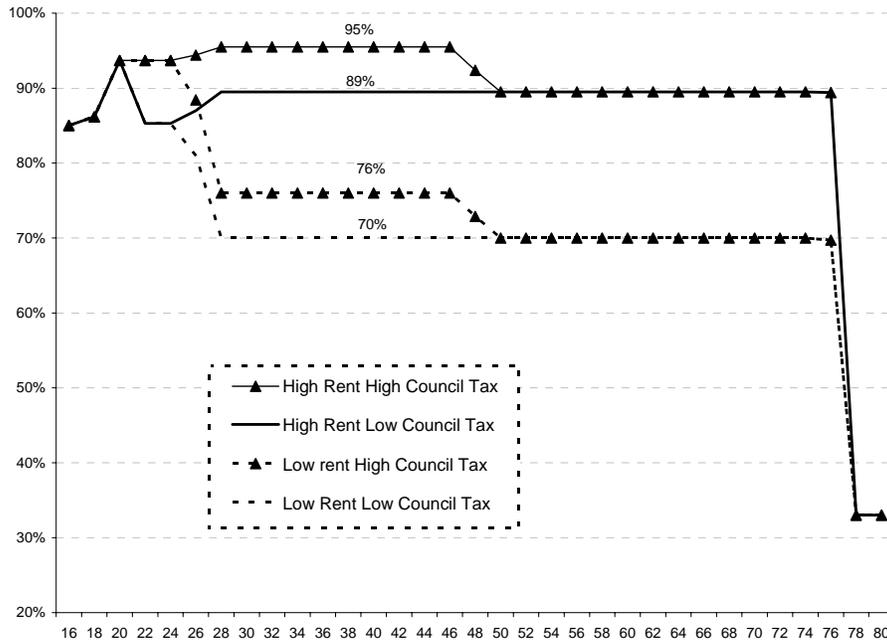
1.2.2 Council Tax

Council tax is a flat rate tax on all income levels for the same household – much like rent. However, council tax has no differential impact on AHC and BHC income – it is taken from both because it is a factor in calculating disposable income when measuring poverty. High levels of council tax come from a combination of property value (size and location) and from local government finance.

What effect does a high level of council tax have on poverty and work incentives?

Figure 1.9 shows the effective marginal tax rates for same lone parent single child family working at the minimum wage but for a combination of rent levels and council tax levels. The low rent and high rent assumptions that have already been used are put alongside a low council tax (£13.60 – the DWP Tax Benefit Tables assumption) versus a high council tax assumption – £25 a week. Figure 1.9 shows that high council tax, alongside rents, raise the EMTR by six per cent – raising the EMTR alongside HB receipt to 96 per cent and raising the rate to 70 per cent where tax NICs and Tax Credit withdrawal coincide to 76 per cent.

Figure 1.9
 Effective marginal tax rates for lone parent with single child – effect of Council Tax levels on high and low rent assumptions

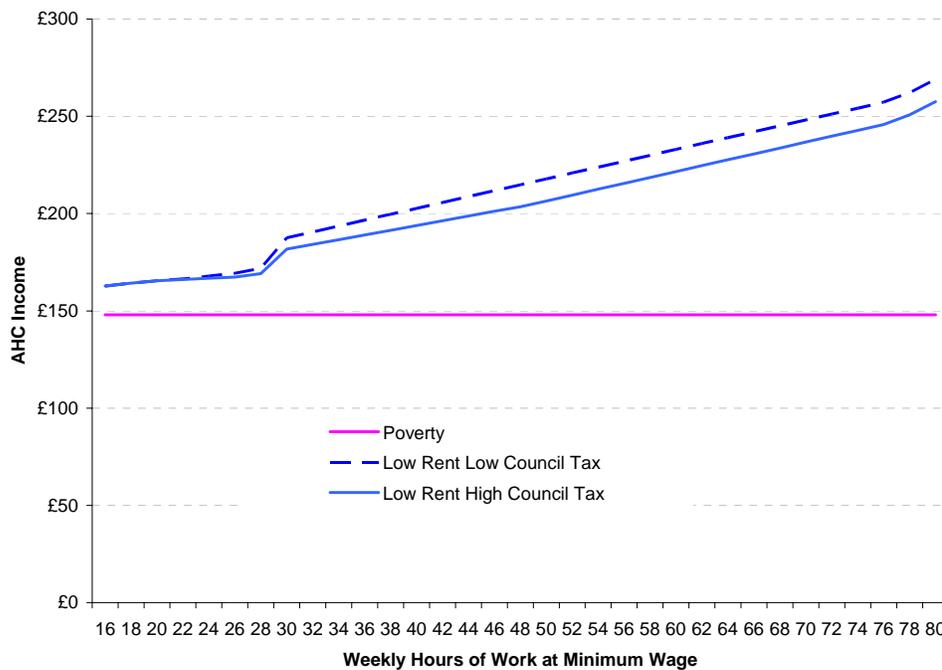


Source: Authors' calculations from DWP Tax Benefit Model Tables

Notes: Low Council Tax £13.60 p.w., High Council Tax £25 p.w. Rent levels as per Figure 1.7.

What effect do council tax levels have on poverty? Figure 1.10 shows that high council tax reduces poverty clearance. Poverty clearance in AHC income terms is lower, the higher the council tax – reducing poverty clearance at 30 hours of work from £40 to £34 or from 27 to 23 per cent holding rent levels constant at the low local authority public rent level.

Figure 1.10
Lone parent working at minimum wage – effect of levels of Council Tax



Source: Authors' calculations from DWP Tax Benefit Model Tables

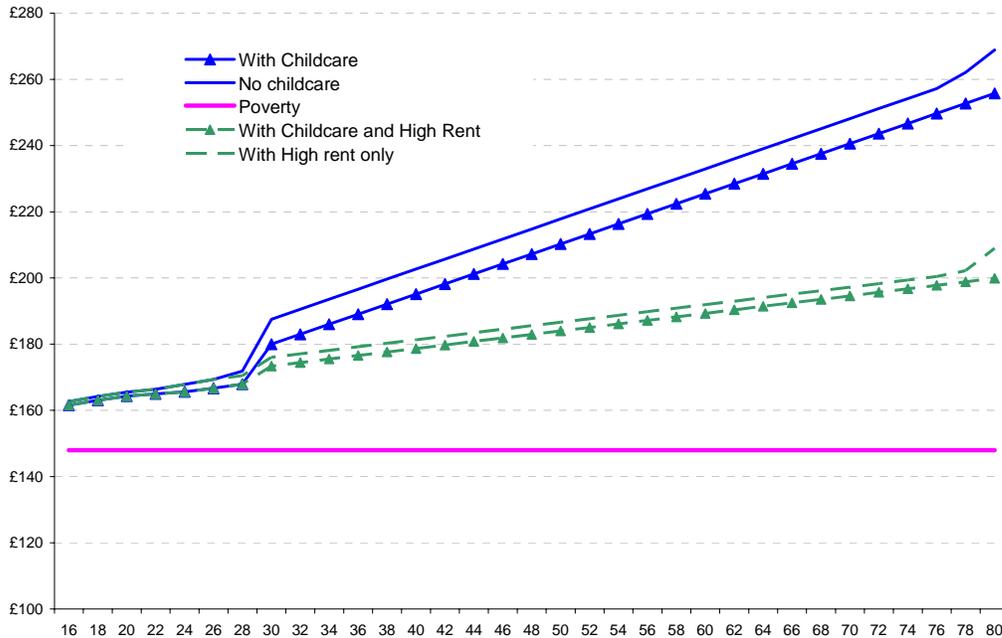
1.2.3 Childcare costs

The issue of paid childcare is not an easy one to demonstrate simply through the model families and earning assumptions used so far. Uptake of childcare depends on a wide range of factors – the number of hours worked and timing of these hours, the underlying school hours of any school age children, which dictates potential need for childcare hours and the price and quality of childcare. Many lone parents work part-time to avoid childcare and many low paid parents will use informal childcare from neighbours or relatives rather than pay for regulated and formal childcare from nursery, childminder or other provider.

However for single earner lone parent families with children and for two-earner couples with children Working Tax Credit will help towards 70 per cent of weekly costs incurred up to specified maximum levels. How does such support affect poverty and work incentives for parents working at the minimum wage? We continue to use our example of a lone parent with a single child but show the effect of a *fixed* cost of childcare that does not vary according to the number of weekly hours of work. This is obviously just an illustrative case to show the potential impact of childcare costs on poverty and work incentives and does not take account of the fact that hours of work and use of childcare would be inter-related. Figure 1.11 shows the effect of paying £25 a week

childcare costs across the whole range of earnings from 16 hours at the minimum wage to 80 hours, in line with previous illustrative examples above.

Figure 1.11
Poverty and lone parent working at minimum wage – effect of childcare



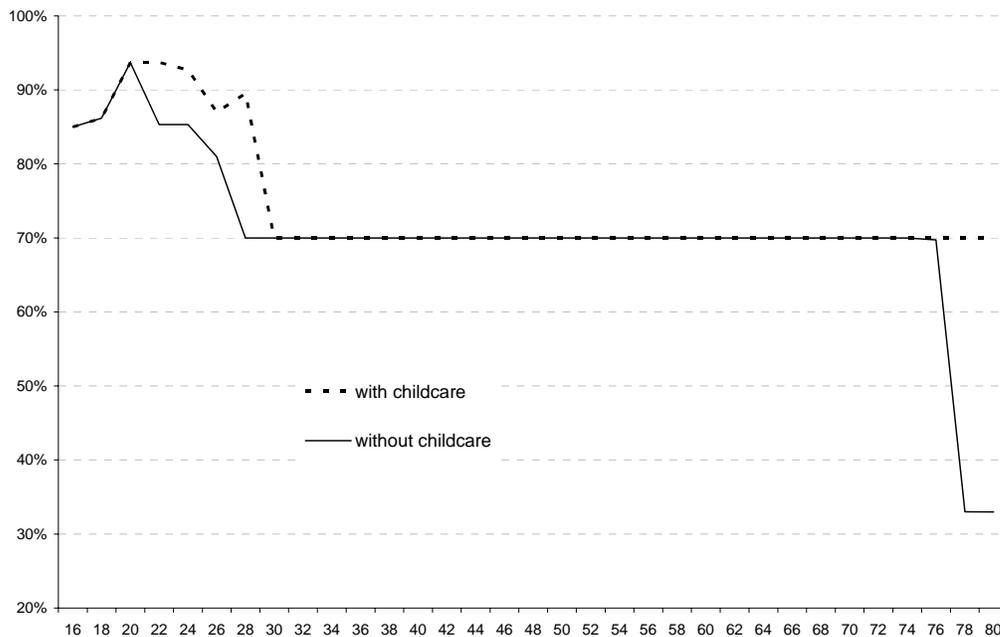
Source: Authors' calculations from DWP Tax Benefit Model Tables

Figure 1.11 shows that childcare reduces poverty clearance but that the amount of such reduction depends on a combination of income and rent. For the baseline low-rent-paying lone parent then HB and CTB disregard childcare payments and this means that there is a very small difference in poverty clearance while HB remains in payment. While HB continues in payment, poverty clearance falls by around £1 or 0.8 per cent. At the point at which income increases and HB ceases to be paid then the difference between full charges and the 70 per cent covered by WTC leads to a *net* childcare cost at around 30 per cent of charges (in this case £7.50 a week on a £25 a week full charge). These payments reduce poverty clearance by £7.50 or 5 per cent. Only when income rises to beyond WTC levels (not shown clearly in Figure 1.11) do net costs increase as CTC begins to be withdrawn.

The impact of high rent, previously discussed, is, for those also paying childcare costs, to limit net reductions in poverty clearance for as long as HB remains in payment, as clearly shown in Figure 1.11. It is the rising housing costs that make the large impact on poverty clearance and the additional impact of childcare is limited to a 0.8 per cent reduction in poverty clearance.

How do childcare costs thus affect work incentives? At the margins of work then the combination of HB disregards and increased WTC mean that childcare costs makes almost no difference to replacement rates – around one half of a percentage point. On higher incomes, paying the 30 per cent net charge will make a larger percentage fall in replacement rates. In this example, around a two to three percentage point reduction in replacement rates between 30 hours and 50 hours of work a week at the minimum wage. Effective marginal tax rates are little changed by payments of childcare. While in receipt of HB the rates are worsened but are never greater than 96 per cent. Childcare additionally means that tax credits will taper out at higher incomes than if there was no childcare, and thus extends the 70 per cent EMTR further up the hours/earnings profile as shown in Figure 1.12 below.

Figure 1.12
Lone parent at minimum wage – effective marginal tax rates with childcare costs of £25 a week



Source: Authors' calculations from DWP Tax Benefit Model Tables

Readers are reminded that these profiles are illustrative only and more representative examples would introduce childcare at a point in the hours/earnings profile rather than have it spread across the whole profile. It is extremely rare for childcare to be paid for alongside low hours and low earnings.

1.2.4 Travel costs

Travel costs, like childcare, are likely to reflect hours of work. If hours of work are constrained by caring, school hours and other structural limitations of having children, then travel time will be likely to be similarly constrained. Earnings levels also will constrain travel costs, with higher earners more likely to travel further and commute to their workplace. There is no direct specific fiscal support for travel costs for low paid earners, unlike housing, council tax and childcare. Those moving into work will have to meet travel and other work-specific costs from their overall income – and thus from the combination of tax-credits and earnings.¹¹

The constraints of arranging work around time commitments to children, (school hours, childcare arrangements etc) mean that many low income families use a car. The logistic arrangement of linking journeys to school, childcare and work can be daunting. Keeping travel short and cheap helps minimise other constraints but can lower the prospective job profile, even for those that live near central business districts or other areas with high levels of job opportunities. Travel costs also differ geographically, with London having high travel costs, in particular for one-off travel journeys by underground.

What effect do travel costs have on poverty? To assess the costs of travel and their impact on poverty would require a redefinition of income across the whole population in order to take out work-related travel costs from income when measuring poverty. As high earners have higher costs this could alter the overall poverty line and leads to difficult questions about assumptions of what is essential and non-essential travel. However, we can suggest how travel costs may affect poverty. If we assume that the poverty line remains constant and just deduct these costs of travel from poverty clearance for this family, then £10 of weekly travel costs reduces poverty clearance to around £5 a week or 3 per cent. It would only take travel costs of around £15 a week (at 16 hours of work), equivalent to a three-day travelcard for Zones 1-2 in London, to effectively remove all poverty clearance.

It is easier to think of travel costs as they affect those at the margins of work, and of them being an element in being 'better off' in work and thus part of the work incentives discussion. For instance, we know that our model lone parent with a single child is better off by around £40 a week at 16 hours of work at the minimum wage when compared to their living

¹¹ The costs of travel cards and other transitional costs to help start a job can be covered by Jobcentre Personal Advisors through discretionary funds.

standards on income support. Travel to work costs of £10 a week would reduce that by a quarter and raise effective replacement rates from 74 per cent to 79 per cent.

Travel costs could also have an effect on working additional hours, especially if they involved another journey or changed the underlying costs of the travel to work, for instance by moving travel into a peak time. For example, if working additional hours meant that peak hour travel could no longer be avoided a day travel card in London (Zones 1-2) would cost an additional £1.30 per-day.

1.2.5 Combinations of high cost

The examples outlined so far in this section illustrate the current design of fiscal policy and show how poverty and work incentives are potentially affected by high costs of different types. Of course, geography tends to concentrate high costs – particularly in London where it may be that travel, rent, childcare and council tax and other high living costs together make it more difficult to effectively combat child poverty through employment. There is also the additional factor that large and thus high needs families may have high costs of rent, childcare and council tax.

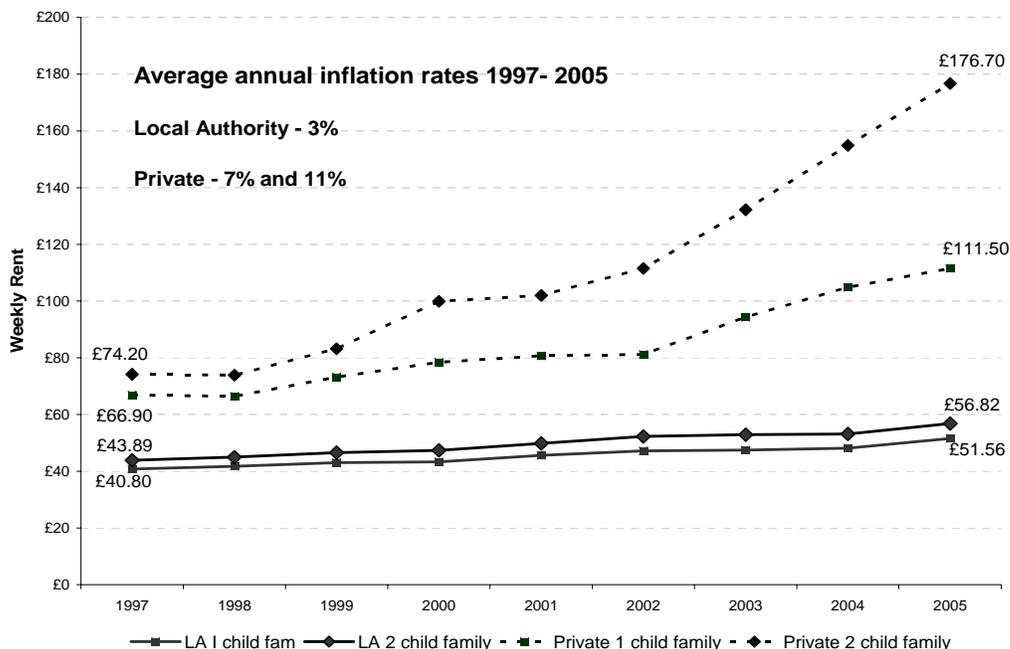
So far we have only outlined the current 2005 system and the issue of costs. What is additionally important and essential to understanding how policy will continue to combat child poverty in the future, is the way that the current system reacts to changes in costs over time. Inflation is a dreaded word, and the overall news on inflation levels is very good; overall price inflation is very low – around 2 to 2.5 per cent in recent years. But there are still substantial dangers from inflation to combating child poverty. First, there is the problem previously mentioned, that poverty uses a relative income measure and thus rises in general faster than prices. This means that the system has to be carefully updated to ensure continued effectiveness against child poverty. Second, there are some elements of prices that have larger impacts on poor people, for instance rents, and there is the potential for both high cost and high differential inflation for these items. It is to this second point that we now turn. How have recent price changes for high cost items changed and how does this potentially threaten policy to abolish child poverty?

1.3. Inflation and uprating – 1997-2005

1.3.1 Rents

A consistent and comprehensive set of data on rents across Britain and across tenures is surprisingly difficult to find. There are data for the different tenures – private, local authority and registered social landlords – but rarely is it comparable, for instance, to find rent levels for a two-bedroom flat across the tenures. One way around this problem is to use the Department for Work and Pensions’ own assumptions on rent levels that it uses each year when creating the Tax Benefit Model Tables (TBMT). These tables use data from a range of sources to give indicative rent levels according to family types. However, they only use local authority and private rents. Figure 1.13 shows how these rent level assumptions have changed since 1997. Local authority rents have risen slightly ahead of inflation at around three per cent per annum, which means that even the lowest rent costs in the public sector are rising faster than benefit levels are being uprated in general – a point that we return to below. In the private sector the TBMT indicative rents for a one-child and two-child family, which were already 1.6 to 1.7 times higher than local authority rents in 1997, have risen much faster, by between 7 per cent per annum for a one-child family and by 11 per cent per annum for a two-child family. By 2005 this means that private rents were between twice and three times the levels of local authority rents.

Figure 1.13
Rent levels from Tax Benefit Model Tables 1997-2005

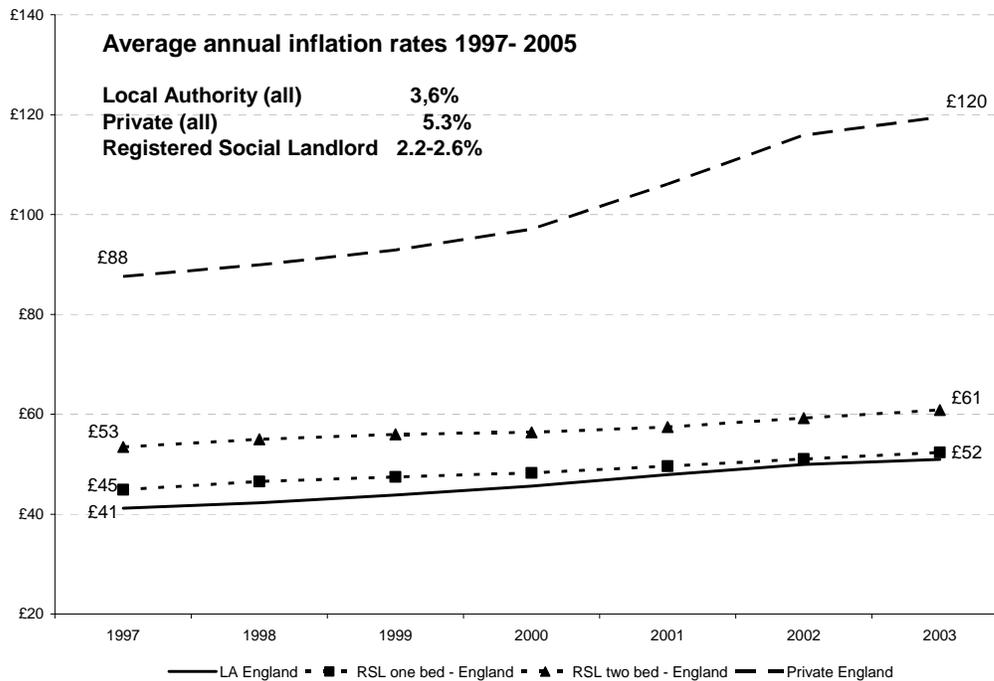


Source: Tax Benefit Model Tables 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004 & 2005

Of course, despite their adoption by the DWP as *indicative* rent levels, it is probable that these rent rises are not really *representative* of what is happening across the board in the rented tenures. However, it should be remembered that these rents are designed by DWP to reflect profiling of how the tax benefit system changes as incomes rise and as people move from welfare to work.

A more representative set of rent figures comes from a series published by the Office of the Deputy Prime Minister (ODPM) and includes rents from local authorities, registered social landlords and survey material on private rent levels. This data for England is shown in Figure 1.14 and shows that private rents rose more than 5 per cent from 1997 to 2003, with local authority rents rising more than 3 per cent, both above overall price inflation, and with registered social landlord (RSL) rents rising at 2.2 to 2.6 per cent. The price difference between private and social rents rose from around 1.5 to 1.6 times as much in 1997 to over two times by 2003. Of course, the price differences reflect differences in quality and location of the stock as well as differences in subsidised administratively allocated tenancies and market priced tenancies.

Figure 1.14
Rent levels in England by tenure 1997-2003



Source: Office of Deputy Prime Minister Rent Statistics – Tables

There is also a locational factor that operates across tenures in price differences. The most obvious of these is the difference between London and other areas of the country in rents and other costs. Rents in London

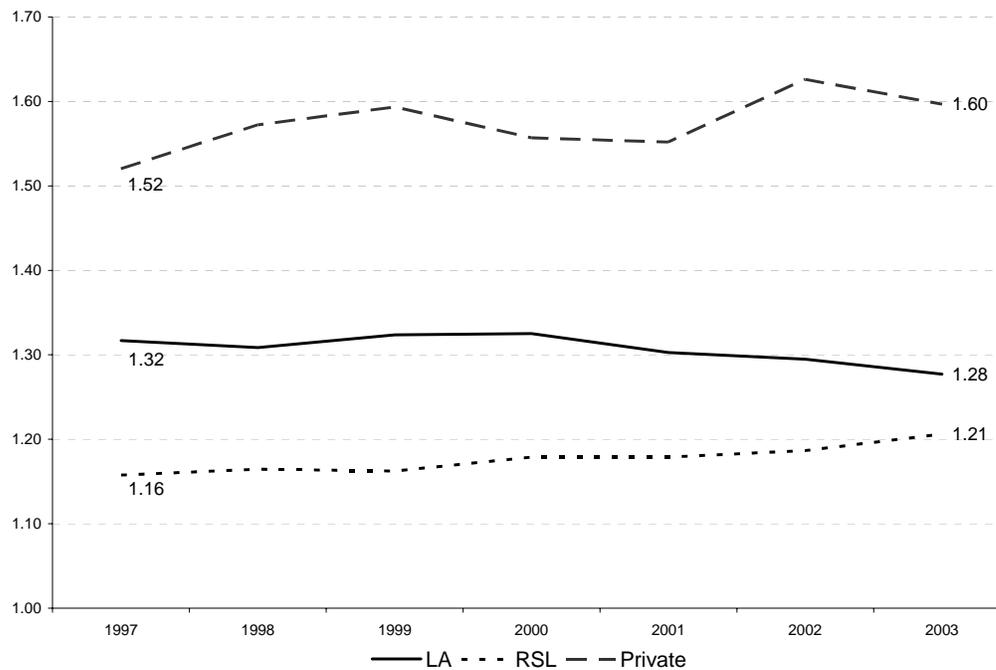
for both social and market rents are higher than for England as a whole. Figure 1.15 shows how the additional average London weight (the average London rent divided by the average England rent) has changed between 1997 and 2003. London rents in the private sector have, over the whole period, risen faster than England and the overall trend is a relative rise in London rents from 152 to 160 per cent of English average rents. London rents for local authorities have declined slightly relative to England as a whole, from 132 to 121 per cent while RSL rents in London have risen relative to the rest of England from 116 to 121 per cent. We have made no allowances for changes in stock or for differences in rates of new lettings that may in part explain these differences.

We can thus say that between 1997 and 2005:

- rents are rising faster than inflation
- rent inflation and levels vary widely between tenures
- rent inflation and levels also vary widely between London and elsewhere.

These high rates of rent inflation will not matter to those who receive Income Support and thus who receive 100 per cent of rent paid by HB. All increases in rent will be reflected in higher awards of HB to match. However, for low earners and others earnings and tax credits will have to have risen sufficiently to compensate for extra rent liability over time to avoid declining AHC disposable incomes and to ensure that poverty gaps are not widened or poverty clearance reduced.

Figure 1.15
London rent price weight (1=England)



Source: Authors' calculations from ODPM tables

1.3.2 Council Tax

Table 1.2 shows the rises in council tax that have occurred since 1997. The main set of figures use the figures for council tax that are used by the DWP itself to analyse work incentives in the Tax Benefit Model Tables. Additionally, the retail price index for council tax and rates is shown for comparison. The rise in council tax has been very dramatic, whichever set of data is considered. Illustrative council tax rates for discussion of work incentives have risen on average by between 6 and 7½ per cent each year since 1997, between twice and three times the underlying rate of inflation. Across the whole population, and thus not so focused on the low earning and out of work populations, council tax has risen by almost 12 per cent per year on average. Like rent, such rises for the very poorest and those receiving Income Support do not matter as they are met in full by Council Tax Benefit. However, for those on low earnings and receiving tax credits these costs will have reduced real incomes and reduced poverty clearance over time if earnings and tax benefits have not risen sufficiently to compensate.

Table 1. 2
Council Tax 1997-2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Overall rise	Average annual rise
Tax Benefit Model Tables											
Single no kids	7.50	8.10	8.70	8.80	9.40	10.10	10.70	11.90	12.40	65.3%	6.5%
Couple no kids	10.20	11.30	11.90	12.20	12.80	13.50	14.30	16.30	16.50	61.8%	6.2%
Single 1 child	8.10	8.70	9.40	9.90	10.40	11.20	11.90	13.10	13.60	67.9%	6.7%
Single 2+ child	8.80	9.40	10.10	11.10	11.40	12.60	13.40	14.60	15.40	75.0%	7.2%
Couple 1 child	10.70	11.70	12.60	12.90	13.70	15.00	16.10	17.60	18.20	70.1%	6.9%
Couple 2+ child	11.60	12.60	13.40	14.50	15.50	16.40	17.90	19.50	20.90	80.2%	7.6%
Retail Price Index											
	109.3	119.0	129.6	145.3	159.2	178.4	209.6	238.1	--	117.8%	11.8%

Sources: TBMT 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004 and 2005 and Table 4.10 ONS
Focus on Consumer Prices July 2005

1.3.3 Childcare costs

Like rents, data on childcare costs is difficult to find on a consistent basis and there are real consistency and measurement differences between sources of data on childcare (Brewer and Shaw 2004). Surveys of providers tend to show high levels of inflation in childcare costs (Daycare Trust 2005 and previous versions). Table 1.3 shows the Daycare Trust's evidence of price changes for three types of childcare: childminders, a full-time nursery place for a child aged over two and summer play schemes. Childminding costs across England have increased by an average of around 9 per cent since 2001. Costs are higher in London, around 20 per cent higher on average but are rising more slowly at around 7 per cent per annum. Nursery costs are rising by around 6 per cent a year across England but are higher in London – by about a quarter – and are also rising faster, at about 10 per cent per year. Summer play schemes are also rising in price very quickly; around 9 per cent annually in England. Such schemes in London are both cheaper than England as a whole (20 per cent) and also rising more slowly, pointing to underlying greater levels of subsidy at local level.

Table 1.3
Provider costs of childcare 2001:2005

	2001	2002	2003	2004	2005	Overall change	average annual rise	average London weight
£ per week								
Childminder								
England	89	112	117	120	125	40.7%	8.9%	
Inner London	110	139	141	132	146	33.2%	7.4%	
London weight	1.23	1.24	1.21	1.10	1.17			1.19
Nursery								
England	110	112	119	123	138	24.9%	5.7%	
Inner London	135	133	152	149	197	46.1%	9.9%	
London weight	1.22	1.19	1.28	1.21	1.43			1.26
Summer play scheme								
England		58.46	67.7	73.7	76.05	30.1%	9.2%	
Inner London		51.32	48.24	70.8	58.36	13.7%	4.4%	
London weight		0.88	0.71	0.96	0.77			0.83

Source: Daycare Trust Childcare Providers Survey 2005 and previous versions

However, reported provider costs are not an accurate way of establishing how the costs of childcare to family income have changed, particularly for low income families. Data consistency problems between national surveys and consistent reporting over time make analysis of price changes difficult. For instance, reports on the Families and Children Study (FACS) have presented data on childcare costs since 1999; however there is no set of published tables over time to allow a consistent comparison of childcare costs on a unit cost basis (per child) keeping family employment, age of child and type of childcare consistent. Brewer and Shaw's analysis across FACS and Family Resources Survey suggests: '*There has been a steady rise in the real price of childcare, particularly for children in lone parent families. For lone parents, according to FRS, the average annual real rise since 1995 has been around five per cent. Since 2000, though, it has been seven per cent in term time and ten per cent in the school holidays*' (Brewer and Shaw 2004). These findings suggest that the Daycare Trust figures for annual inflation are fairly low because the nominal change in prices will add 2 per cent or more to Brewer and Shaw's real estimates, making nominal childcare cost inflation to be over seven per cent at the lowest and nine to twelve per cent at the highest.

1.3.4 Travel

Table 1.4 shows that travel prices are rising ahead of prices overall with national trends showing a 3 to 4 per cent annual rise in travel costs. Costs of public transport in London are also rising at or above overall prices – especially in the central area where travelcards have risen by 4 per cent per annum on average. However, the cost of bus journeys has fallen in real terms, especially where passes are used. These London prices under-report the much larger increase in one-off short distance travel, particularly on the underground where pricing has encouraged purchase of season tickets or other discounted multi-journey tickets.

Table 1.4
Travel prices 1997-2004

RPI annual average indices									Overall change	Average annual rise
	1997	1998	1999	2000	2001	2002	2003	2004		
Fares and other travel costs	169.6	173.3	178.7	184.6	190.5	195.9	209.7	217.0	27.9%	3.6%
Rail	187.5	195.2	202.3	205.8	213.7	218.6	222.3	230.8	23.1%	3.0%
Bus and coach	183.4	189.4	196.3	204.2	212.8	219.3	228.5	240.2	31.0%	3.9%
Other travel costs	149.5	151.1	155.2	160.9	164.9	169.8	188.9	192.3	28.6%	3.7%
London prices (£ per week)										
7 Day Travelcard										
Zones 1-2	15.70	16.60	17.60	18.20	18.90	19.30	19.60	20.20	36.3%	3.9%
Zones 1-6	33.00	34.00	34.90	35.40	36.40	36.90	37.20	38.30	19.7%	2.3%
7 Day Bus Pass										
All Zones	12.00	12.00	12.50	11.50	9.50	8.50	8.50	9.50	-8.3%	-1.1%

Sources: *ONS Focus on Consumer Prices* July 2005 and Transport for London data provided to Authors

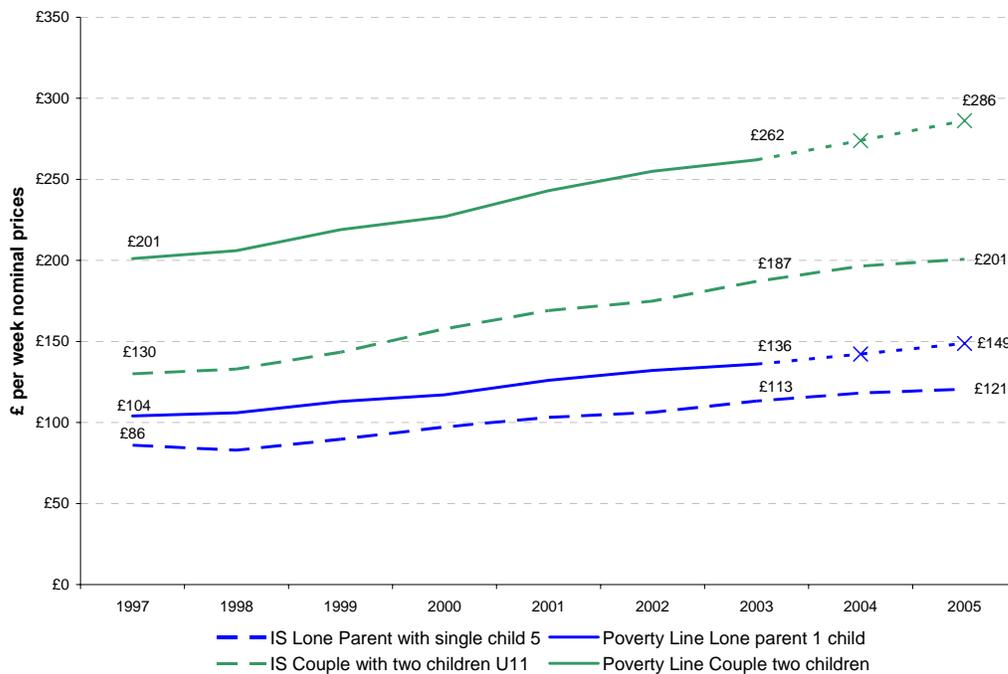
Sections 1.3.1 to 1.3.4 have shown that the threat of inflation combined with the issue of high cost items is of potential real concern for child poverty policy. Rents, council tax, childcare and travel are all rising faster than prices and hence threatening to undermine the ability of in-work tax credits to lift incomes over the poverty line. We now turn to see if policy interventions have kept up so far. How has the Government uprated taxes, tax credits and benefits since 1997?

1.3.5 Uprating of out-of-work benefits

The record on uprating out-of-work incomes for families since 1997 has been mixed. Additional elements of Income Support for lone parents were withdrawn in 1998 but subsequently the rates of Income Support for children and for Child Tax Credits have been raised significantly.

Over the same period, underlying IS for parents' needs have risen only by prices (actually the ROSSI prices index, which discounts housing costs). Figure 1.16 shows what has happened to out-of-work support for a couple with two children (both aged 5 to 10) and for a lone parent with a single child (also aged 5 to 10) and compares these to the rise in poverty lines. The cash poverty gaps, a measure of shortfall in adequacy of benefit levels in maintaining living standards at the relative poverty line, have grown – from £71 for a couple with two primary school aged children in 1997 to around £85 in 2005 and from £18 to £28 for a lone parent with a single primary school aged child.

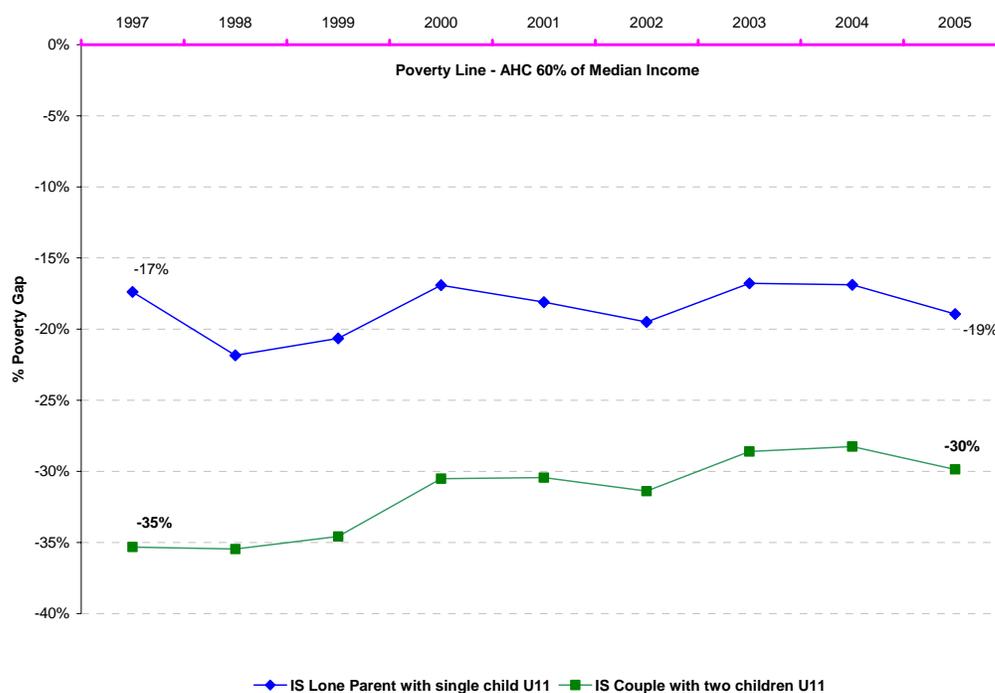
Figure 1.16
Poverty lines and Income Support levels
Income in non-equivalised nominal amounts 1997-2005



Source: DWP data from HBAI team and Table 5.7 of Abstract of Statistics and DWP Tax Benefit Model Tables

Figure 1.17 shows the poverty gaps in percentage terms as the shortfall in income from Income Support and the poverty line for the same families. Proportional poverty gaps have risen for the lone parent family, from 17 per cent to 19 per cent shortfall and have fallen for the couple family, from 35 per cent to 30 per cent. However, factors that produce these profiles – the changes to rates of IS and CTC and the underlying differences in uprating of adult (IS) and child (CTC) amounts in most recent years – make the underlying outcomes of these changes opaque. The long term effect of such differential uprating of adult and child components of benefits and tax credits is an issue that we return to and consider in Part 2.

Figure 1.17
Out-of-work family poverty gaps 1997-2005



Source: DWP data from HBAI team and Table 5.7 of Abstract of Statistics and DWP Tax Benefit Model Tables

1.3.6 Uprating of in-work benefits, tax and tax credits

We have already discussed how Income Support and means-tested JSA benefits for adults are only uprated by prices. This uprating decision also has a direct effect on HB and CTB as these benefits are reduced by tapers for income levels above IS (of 65% and 20% respectively for every pound). This has the effect of eroding the basic starting point for in-work support for rents and council tax over time as earnings, even low earnings and the minimum wage, are rising much faster than prices.

The other main element of in-work transfers are tax credits. Working and Child Tax Credits are not uprated consistently. The government has promised to uprate the child tax credit element of CTC in line with earnings for 'the duration of this Parliament'¹² and we have already shown that this has continued a short-term trend of increasing child elements of out-of-work support. This commitment also means, of

¹² Gordon Brown: 'So today I can announce that payments for children under the child tax credit will rise each year in line with earnings and over the coming three years by a total of 13 per cent. Including child benefit, rising in this period from the £28 a week we inherited to a maximum of £63 a week for the first child and £111 a week for two children.' Hansard, 16 Mar 2005.

course, that this element of CTC will rise with earnings for in-work calculations of tax-credits. However, other elements of the tax credit rates are not to follow – especially the income thresholds above which tax credits are tapered down as income rises. These are approximately rising with prices leading to erosion in relative value alongside rising earnings. Table 1.5 shows there is no real consistency at all to uprating of tax credits since their introduction over the past three years. The underlying income threshold to entitlement to tax credits when working has only risen by 1.6% – less than underlying prices, whereas the elements of tax credit have risen by 3.1%. Over the same period, child elements of CTC have actually risen by more than 8 per cent a year on average, ahead of earnings. These differential upratings make it difficult to assess how far generosity will change over time when put alongside earnings changes in order to maintain incomes against a rising relative poverty line. We analyse the potential effects of this on child poverty reduction in Part 2.

Table 1.5
Uprating of tax credits 2003-2005

	2003- 2004	2004- 2005	2005- 2006	Overall change %	Average annual rate of change %
Working Tax Credit	£	£	£		
Basic element	1,525	1,570	1,620	6.2%	3.1%
Extra for couples and lone parents	1,500	1,545	1,595	6.3%	3.1%
30 hour element ^a	620	640	660	6.5%	3.2%
Disabled worker element	2,040	2,100	2,165	6.1%	3.0%
Enhanced disabled adult element	865	890	920	6.4%	3.1%
Maximum eligible childcare expenditure	135	135	175	29.6%	13.9%
Maximum eligible childcare expenditure, 2 or more children	200	200	300	50.0%	22.5%
Child Tax Credit					
Family element	545	545	545	0.0%	0.0%
Family element, extra for child under 12 months	545	545	545	0.0%	0.0%
Child element	1,445	1,625	1,690	17.0%	8.1%
Disabled child additional element	2,155	2,215	2,285	6.0%	3.0%
Enhanced disabled child additional element	865	890	920	6.4%	3.1%
Common elements					
First threshold	5,060	5,060	5,220	3.2%	1.6%
Second threshold	50,000	50,000	50,000	0.0%	0.0%
First threshold if not entitled to Working Tax Credit	13,230	13,480	13,910	5.1%	2.5%

Source: IFS updated by authors

In-work benefits operate alongside taxation and the effect of Income Tax and National Insurance contributions, like tax credits and HB and CTB, depends on how the income thresholds for taxation are uprated over time. Since 1997, there has been a one-off realignment of a lower rate of tax and a harmonisation of NIC and tax starting points in 1998, but otherwise tax and NI thresholds have overall only risen by the same level as prices. This means that earnings are rising faster than taxes and thus the tax-take rises through so-called *fiscal drag*.

Figure 1.18
Thresholds for in-work benefits, taxes and tax credits 1997-2005

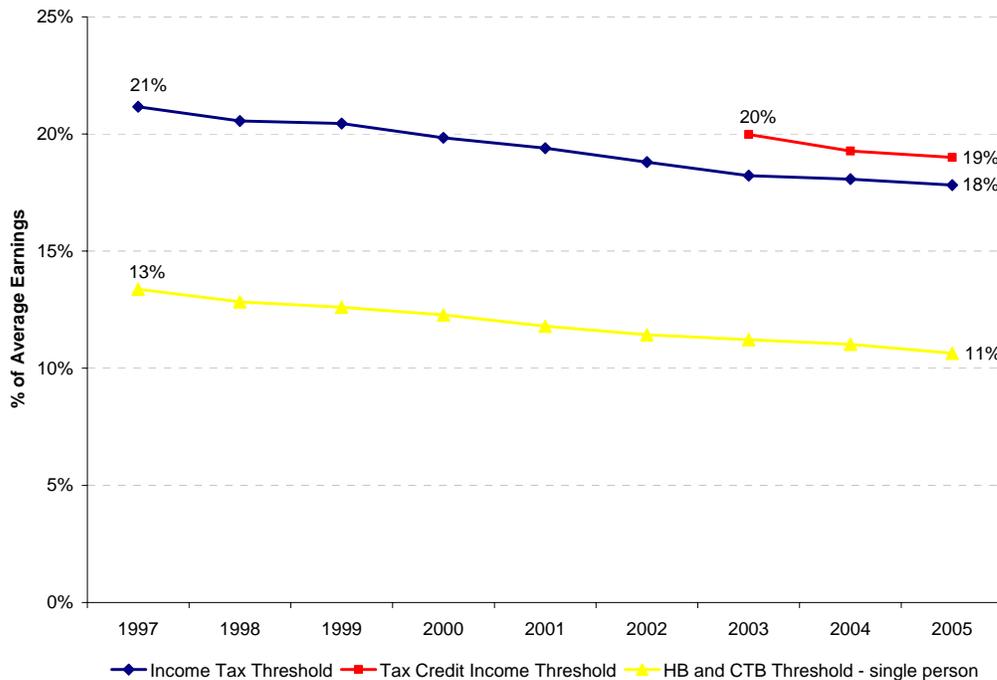


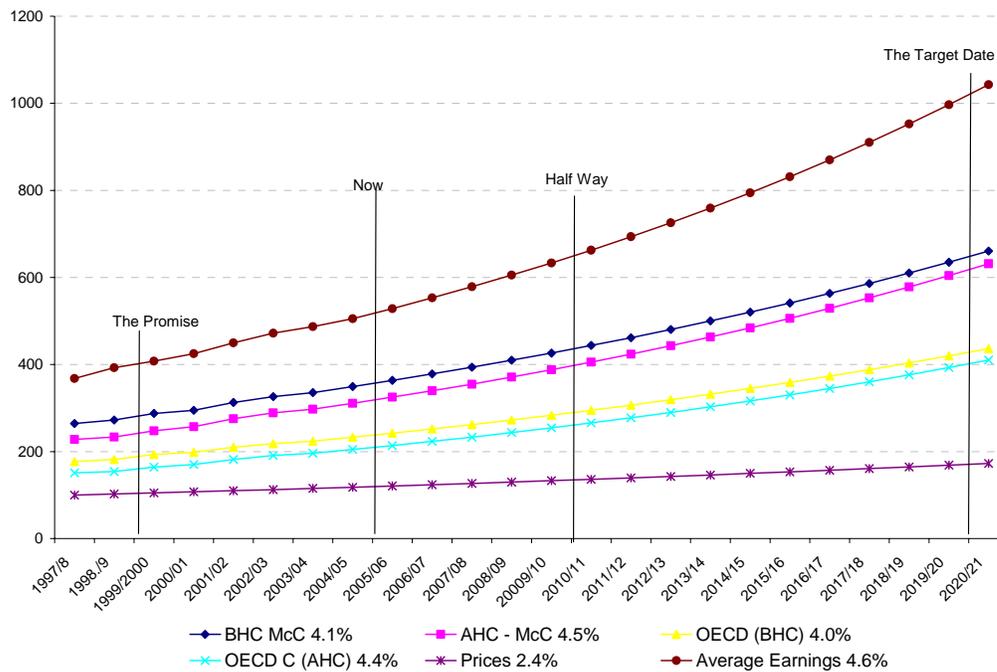
Figure 1.18 shows what has happened over time to the three main fiscal thresholds since 1997. Income tax thresholds (now aligned to NIC thresholds) have fallen from 21 per cent to 18 per cent of average earnings. Housing Benefit and Council Tax Benefit thresholds (for a single person) have fallen from 13 per cent to 11 per cent. The lowest tax credit income threshold has fallen slightly from 20 to 19 per cent over three years since it was introduced in 2003. The National Minimum Wage (NMW) is due to rise with overall earnings in the medium term and this means that tax is becoming more regressive for the lowest paid at the same time as the relative generosity of in-work transfers is eroded. Neither of these trends is good for long term poverty abolition.

1.3.7 Fiscal assumptions and income growth

So far we have only looked at the 2005 system and what has happened since 1997. The final question of current policy context relates to how the current assumptions on uprating will compare to inflation over the longer term and, in particular over the next 15 years in the run-up to child poverty abolition. How do current assumptions on fiscal uprating match trends and projections for earnings, prices and poverty? Figure 1.19 shows what has happened to prices, earnings and median incomes over the period since Labour's return to power in 1997, and then projects what will happen to these figures if the underlying trends remain the same. There has been strong earnings growth, 4.64% a year in nominal terms since 1997, and the latest average earnings figures for 2004 show average of all weekly earnings at £504.90 (DWP abstract table 3.2). This past trend roughly matches government assumptions about what will happen to earnings growth in the medium to long term in pension planning of 4.55 per cent (DWP 2002). Price inflation has been held below earnings at an average of 2.4 per cent per annum for the retail price index for all prices since 1997, which again matches DWP medium to long term assumptions for pensions (DWP 2002).

Figure 1.19
Inflation, earnings and median income growth 1997-2020

Nominal prices



Source: Author's calculations

What matters for the poverty commitment is median incomes and how they are expected to change. From 1997 to 2003 there is evidence that median incomes have risen between 4 and 4.5 per cent depending on which equivalence scale is used to measure household income. The existing measures of income, using the McClements equivalence scale, show that income rose between 1997 and 2003 at 4.1 per cent before housing costs (BHC) and at 4.5 per cent after housing costs (AHC). Additionally, to allow for housing costs in future profiling, the DWP (DWP 2005a) has adopted this scale to allow for an AHC measure, the so-called OECD Companion scale. Median income growth using these OECD equivalence scales has risen by 4 per cent between 1997 and 2003 for the basic OECD scale and by 4.4 per cent using the companion AHC scale

Poverty, when defined as a percentage of contemporary median income, will grow at the same rate as underlying median income growth – and the main relative poverty line measure will be 60% of median income.

Part 1 Summary and conclusions

Part 1 has described and analysed the 2005/06 tax credit and benefit system to show how families with children receive financial support both in and out of work. We have used two simple model families – a lone parent with a single child of primary school age and a couple with two children of this age. We have shown how these two model families are affected by the issue of high costs – for rent, council tax, childcare and travel – and then outlined how such costs have risen since 1997 and the likely erosion of living standards for low-earning families that will occur under such trends. We saw how living standards for families relying on benefits had changed since 1997 and how this was affected by uprating assumptions. Finally, this section looked ahead to the next 15 years to show the likely changes to incomes, prices and poverty lines. Overall the findings and conclusions from this chapter are:

- The choice between an After Housing Cost (AHC) and Before Housing Cost (BHC) poverty measure results in important differences in defining poverty and poverty levels. AHC measures more closely relate to actual living costs and usually result in higher poverty counts and poverty gaps.
- Out-of-work benefits give a couple with two children a 31 per cent poverty gap using AHC measure and a 20 per cent poverty gap using BHC. The same benefits give a lone parent with a single child an 18

per cent poverty gap using AHC and a 4 per cent gap using BHC measures.

- The income definitions used by the Department for Work and Pensions to calculate work incentives and to measure poverty are not consistent – leading to potential confusion over the outcomes of in-work incentives and poverty clearance.
- In-work benefits and tax credits for a couple with two children ensure that employment, even at only 16 hours a week, raises incomes significantly above the level available from benefits when out of work. However, for the low paid it is difficult to move out of poverty, requiring 58 hours a week at the minimum wage to clear BHC poverty and 74 hours to clear AHC poverty (using DWP assumptions about social housing rent levels).
- Working longer hours in low paid employment, however, is not supported by the tax benefit system because of very high marginal tax rates – 96 pence for every pound earned at their highest and often at 70 pence in the pound. This means that escaping poverty by increasing work is held back by this ‘poverty trap’.
- The design of benefits and tax credits leads in part to smaller families having lower poverty gaps out of work and a greater ability to cross the poverty line when in work. This means, for instance, that a lone parent family with a single child achieves poverty clearance, on BHC definitions, by working 16 hours and will also be 10 per cent above poverty on AHC levels using DWP assumptions about social housing rent levels.
- Rent levels made little impact on the immediate gains from work for low paid families in 2005/06 – identical families with identical earnings but different levels of rent will have different BHC income levels if Housing Benefit is received but their AHC incomes will be identical. However, higher rent levels extend eligibility for HB as income rises and thus prolong the worst levels of high marginal tax rates – thus worsening work incentives in work.
- The problem of high rent is worsened over time because rent rises have been outstripping prices (and in some instances earnings) since 1997. Local authority rents have been rising between three and four per cent per annum, while private rents have risen between five and eleven per cent, depending on type and source of data. These rises will erode the gains from in-work tax credits and benefits which are due to rise more slowly.

- Council tax also reduces the gains from moving into work for low paid families and, like rents, has been rising far faster than general inflation – between six and eight per cent per annum. If this trend continues, these costs will also erode the gains from in-work tax credits and benefits.
- Childcare costs are another draw on in-work incomes that erode the gains from tax credits and benefits. Like rents and council tax, these have been rising ahead of inflation at between six and ten per cent per annum. If this trend continues these costs will erode the gains from in-work tax credits and benefits
- Additionally, travel costs in London and elsewhere have been rising well ahead of inflation and will erode the gains from in-work tax-credits and benefits if the trend continues.
- High costs such as rent, council tax and childcare can be experienced cumulatively in some areas of the country – in particular London.
- Since 1997 poverty gaps when out of work have fallen (on an AHC basis) from 35 to 30 per cent for a couple with two children and have remained fairly stable for a lone parent with a single child at between 17 to 19 per cent.
- The ability of benefits and tax credits to combat relative poverty depends fundamentally on their relative value over time. Uprating is primarily price based and even the promise to uprate the child element of tax credits with earnings is only temporary. Thresholds for in-work tax credits and benefits have fallen in relative terms since 1997, eroding the ability of such fiscal support to combat poverty.
- The combined problem of firstly high inflation in the particularly regressive areas of rents, council tax and childcare, and secondly limited uprating policies, means that fiscal support is unlikely to keep up with the rise in median incomes and relative poverty lines. The gap between price inflation and incomes and poverty will rise over time, so that the nearer we get to the child poverty target date of 2020, the worse the shortfall in fiscal support for employment and children under the current system of uprating.

Part 2

2005-2020

Living under the poverty promise

This second part of the report uses the information and insights from Part 1 to look ahead over the next 15 years. What will happen to families who rely on the current set of policies from 2005 to 2020?

We do this analysis using a unique analytical tool, the Lifetime Opportunity and Incentives Simulation (LOIS), which can calculate the effects of inflation and family change on a large range of hypothetical families. LOIS employs hypothetical illustrative families and follows them over a period of time – allowing for the combined effect of ageing, inflation and uprating alongside any changes of circumstances such as earnings or family composition that we would like to assess. For this analysis we use LOIS to simulate the current policy framework for a range of families who have their first child in 2005. We are thus able to follow these children and their parents and any subsequent siblings from now until the poverty target date of 2020. These hypothetical and illustrative babies will live all of their childhood under the implementation of the promise to abolish child poverty. How will the poverty promise and today's policy package evolve alongside them as they grow and finally reach the age of 16 in the year 2021: the first full year in which child poverty is due to be abolished?

2.1 LOIS – Summary details

The Lifetime Opportunities and Incentives Simulation – LOIS

LOIS is a computer simulation programme that produces lifetime profiles of a wide range of British income maintenance programmes. LOIS was originally developed to profile the British 2003/04 tax and benefit system (Evans and Eyre 2004). It has been adapted and updated to the 2005/06 system specifically for this report. The original LOIS programme profiled incomes over whole lifetimes, from the age of 16 to a potential age of 95. For the purposes of this report, LOIS has been reset to profile families that have their first child in 2005 and then follow them until their youngest child becomes 16. This means a period of 16 to 18 years, depending on the number of children and their spacing that the assumptions for two model family lifetimes use. LOIS can operate on a current price basis by calculating lifetimes lived in today's prices but in this report we uprate taxes and benefits according to current stated assumptions and practice.

Price inflation, median income growth and earnings inflation are extrapolated trends from 1997-2004/5. Individual components of prices, such as rents, council tax, and childcare costs, all items identified in Part 1 as having potential influence on poverty and work incentives, can be set separately and are used to profile the potential effects of differential inflation in this report.

The tax benefit system used in this version of LOIS is 'cut down' to only reflect benefits for children and working age adults. No simulation of pension outcomes is made. Inbuilt formulae calculate a large variety of income components over the lifetime including benefits and tax credits, pensions, tax and national insurance. In this report there is no simulation of savings and mortgage loan interest payments or house values.

Outputs from LOIS are in a variety of forms.

Final incomes can be reported according to several definitions for poverty measurement. We employ four measures on all simulations in this report:

Before Housing Costs Income – using the McClements BHC equivalence scale;

After Housing Costs Income – using the McClements AHC equivalence scale;

Incomes using OECD revised equivalence scale – on a before housing costs basis;

Incomes using the OECD Companion equivalence scale – on an after housing costs basis.

Effective Marginal Tax Rates can be calculated for all parts of the lifetime based on a single earner working one additional hour at the underlying hourly earnings figure.

Summary tables of poverty, marginal tax rates and income and taxation are produced to show profiles of child poverty gaps and clearance.

Profiles – trends, events and alternatives

LOIS is an extremely adaptable simulation programme based on the potential to change any aspect of individual earnings or demographic circumstances on a quarterly basis. This allows a huge pattern of underlying trends and life events to be simulated together. The profiles in this report are based on two hypothetical family types, introduced later in

this part of the report. These ‘model family lifetimes’ are then simulated to have changes in underlying trends and life events separately and simultaneously to separately estimate the potential effects of any type of change. Under all these simulations the tax benefit policy system is kept constant and unchanged.

The third part of this report also allows for some elements of policy change. However, it is important that these are limited to changes either in uprating practice or to underlying profiles that reflect a policy change that is unrelated to the tax benefit system – such as reducing periods of unemployment, increasing training and thus earning capacity. Throughout these simulations of policy change there is no change to the inter-relationship between elements of the tax-benefits system – for instance, through changing the rates of one particular element of the system.

Readers who want more details about the LOIS simulation programme can see full details in Evans and Eyre, 2004.

The remainder of this report follows the same two hypothetical families developed in Part 1: a couple who have two children aged 5 and 11 and a lone parent with a single child aged 5. These hypothetical families are not designed to be representative of all families, but are instead used to profile the potential of the tax benefit system under a range of alternative illustrative sets of circumstances. The key to interpretation of the output from these simulations is that they are based on a counterfactual question: ‘*What would happen to incomes, child poverty and work incentives if the current system was rolled forward unchanged to 2020?*’ The simulations are thus a guide to the strengths and weaknesses of the current set of fiscal instruments over the next 15 years or so and a tool which can contribute to discussions of policy change. One way of seeing the simulations is that they are a stretched out version of DWP’s own Tax Benefit Model Tables that alter over time to reflect inflation, uprating of taxes and benefits, and hypothetical changes in family circumstance and employment.

2.2 Family of Maria Brace

Our first model family lifetime is a couple who have two children. The results we show solely cover the years in which children are present in the family and for these purposes we define children as being aged less than 16. This family is called after the woman who is the mother of the children, Marie Brace, or ‘The Braces’. (We imply no marital status by using a single name for the family when she is partnered.) Their details are given below.

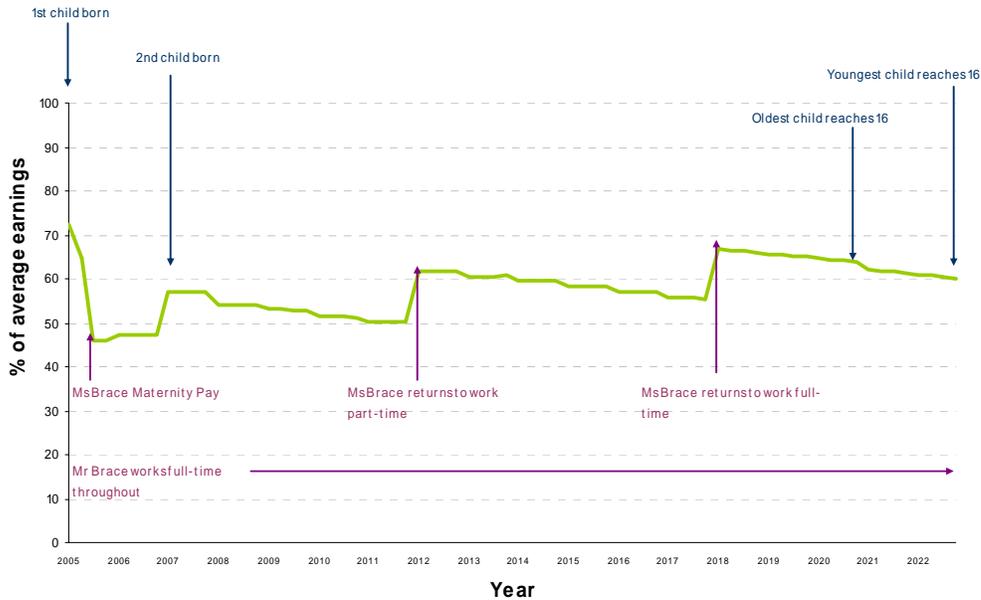
The Brace family

- The first child is born in 2005 when both Marie and her partner are 26 years old.
- The second child is born two years later in 2007.
- The male partner's work history is that he works 40 hours a week in a low paid job. The wage rate we give him is 1.3 times the national minimum wage. This is £6.56 an hour, which is close to a commonly set level for low pay at 60 per cent of median wages.
- Maria stops work on the birth of the first child and returns to work when the second child starts school in 2012 (when the second child reaches the age of 5). She returns to work for 20 hours a week and we give her the same wage rate as her partner (for ease of interpretation) at 1.3 times the national minimum wage. She then increases work hours to 35 hours a week when the second child starts secondary school, and remains on the same wage rate.
- The Brace family live in local authority rented accommodation and we use 2005 rent and council tax rates from DWP Tax Benefit Model Tables and then inflate these rates without changing underlying assumptions about moving homes as family circumstances change.

These circumstances are very simple and stylised so that they form an illustrative baseline set of results that can then be compared to more complicated simulations later.

Figure 2.1 shows the disposable income of the Braces from the point of birth of their first child in 2005 to the point at which the eldest child becomes 16. We have added all the events to the graph to link the overall income profile with demographic events (in blue and above the income line) and economic events and trends (below the line in maroon).

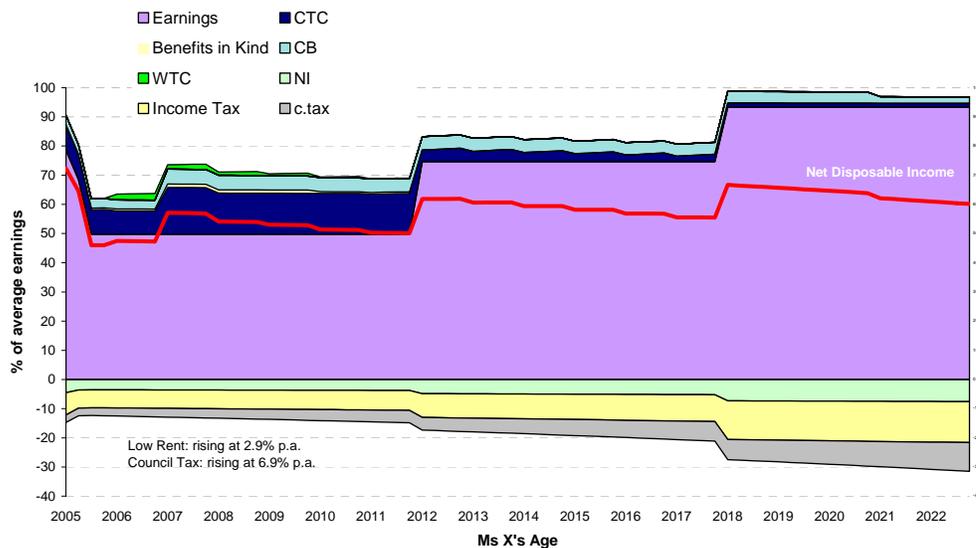
Figure 2.1
Brace family disposable income: overview



Source:

Author's calculations from LOIS simulation programme

Figure 2.2
Brace family income from earnings, taxes and benefits 2005-2023



Source: Authors' calculations from LOIS simulation programme

Figure 2.2 shows the same profile but additionally shows the income and tax components¹³ that make up this profile. Earnings level falls in the first six months as maternity pay ends and they rely on a single earner. The

¹³ Council tax is not shown.

loss of earnings is not made up for with the package of Child Benefit, Child Tax Credit and Working Tax Credit that is awarded. Tax and NICs change as earnings change and rise as Marie Brace returns to work and then moves to full time work in 2018 when her youngest child reaches secondary school age. However these changes are within an overall wedge shape that shows greater relative proportions of income being paid in tax due to fiscal drag.

These baseline calculations use DWP Tax Benefit Model Table rent and council tax assumptions for rates in 2005. This means a social rent level (£51.56 in 2005) rising by 2.9 per cent per annum, the trend increase over 1997 to 2004. Council tax is £13.60 rising by 6.9 per cent per annum (an average of trend 1997-2004 increases used in TBMT).

How do such changes in earnings, family composition, inflation and the uprating compare to poverty?

Figure 2.3 shows the poverty profile for the Brace family and uses all four poverty measures from HBAI, OECD and the McClements equivalence scales and before and after housing cost assumptions.¹⁴ The table below shows the different equivalence scales associated with the OECD and the McClements measures.

Equivalence scales

Equivalence scales help to more accurately equate incomes across households of different sizes and composition. They allow for the fact that there are economies of scale that arise from shared consumption and also weight needs according to age of members of the household, on the assumption that children use fewer resources than adults, for instance.

¹⁴ To fully estimate the future poverty line for the population as a whole we would need to know the aggregate effect of fiscal drag and other extrapolated effects on incomes and the tax benefit system on the income distribution and thus median income. We do not have the ability to make such calculations as each element is inter-related in the overall income profile and increased fiscal drag, for instance, could well have an effect on average earnings increases and thus affect overall incomes. Our calculations merely extrapolate existing poverty and earnings levels and existing policies and uprating practices. This means that the poverty line we extrapolate is a static one and does not alter to reflect underlying changes in population composition or incomes and does not reflect any outcomes from the extrapolated tax benefit system. This caveat applies to all future poverty profiles in the remainder of this report.

HBAI equivalence scales for families with children

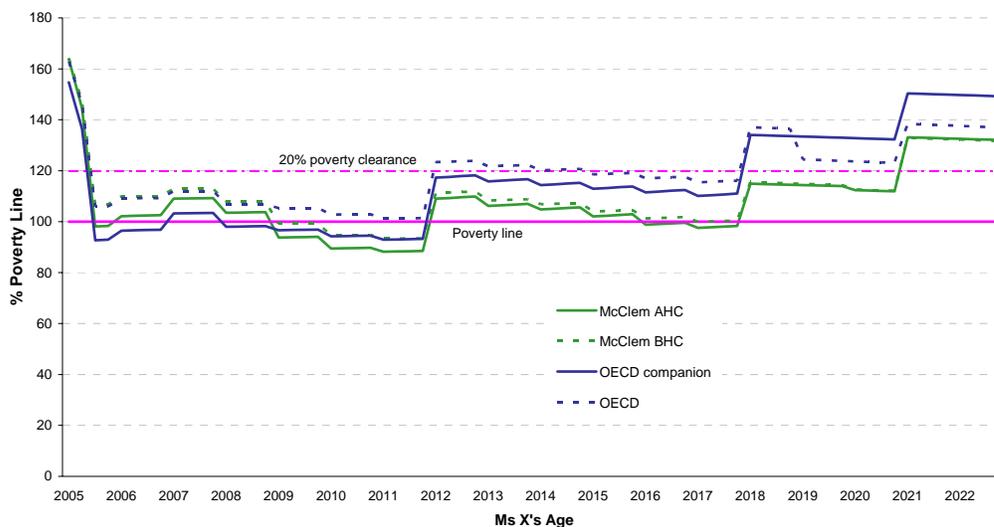
<i>Family members</i>	Old HBAI series		Future HBAI & poverty target	
	McClements AHC	McClements BHC	<i>Family members</i>	OECD (modified)
Head of household	0.55	0.61	Head of household	0.67
Partner	0.45	0.39	Partner	0.33
Child 0-1	0.07	0.09	Child under 14	0.2
2-4	0.18	0.18		
5-7	0.21	0.21		
8-10	0.23	0.23		
11-12	0.26	0.25		
13-15	0.28	0.27		
16+	0.38	0.36	Child over 14	0.33

Source: Table 2.1 and 6.1 Appendices 2 and 6 of DWP (2005a)

Notes: Scales set to couple = 1

The above table clearly shows the differences in assumptions between the McClements scales and the modified OECD scale: first, the OECD scale gives less weight to the second adult (partner) and secondly the assumptions for children are completely different. The OECD scale gives all children the same weight, whereas McClements changes by age. The OECD scale also treats all children aged 14 and over as equivalent to other adults in the household, whereas the McClements scales continue to give different child weights up to the age of 15, after which children are treated as equivalent to other adults.

Figure 2.3
Brace family: poverty outcomes on four HBAI poverty measures



Source: Authors' calculations from LOIS simulation programme

Figure 2.3 shows the effect of using the different equivalence scales (and different housing costs assumptions). Overall, BHC measures (solid lines) give higher incomes and thus show less poverty than AHC figures (dotted lines) and the OECD equivalence scales give higher income and are also flatter over time as children age because, unlike the McClements scale, they do not alter to give weight to older children until the age of 14. At this age the OECD scale treats the child as a further adult in the household and this is seen in 2019 by a large drop in income relative to the poverty line as the oldest child becomes 14. At the point that the youngest child becomes 14 the eldest is 16 and is no longer used in the calculation. The effect of relative decline in the value of fiscal instruments over time is clearly evident as there is a trending down of income relative to the poverty line between each event point until Marie Brace returns to work and overall income is less affected by tax credits and benefits, although fiscal drag will mean that the increased relative tax take does lower income over time relative to the poverty line.

Table 2.1
Brace family child poverty years baseline profile

	McClements BHC	McClements AHC	OECD	OECD Companion
Years above PL	14.75	12.5	18.00	12.5
Av clearance	13.7%	13.8%	19.2%	26.7%
Years below PL	3.25	5.50	0.00	5.50
Av gap	-3.9%	-5.8%	-	-3.3%

Source: Authors' calculations from LOIS simulation programme

Table 2.1 gives the summary results for all the years when there are children in Marie Brace's family. The summary data is in two forms, the duration of poverty clearance and gaps (in years) and the size of such clearance and gaps as a percentage of the poverty line. The size of gaps and clearance is only shown for the time when income is below or above the poverty line respectively. The difference in profiles that arise from using different equivalence scales is remarkable. At one extreme the modified OECD scale gives no years of poverty and an average of over 19 per cent poverty clearance for all 18 years. This average clearance level conceals much lower levels of poverty clearance when the children are young – shown clearly in Figure 2.3. The lowest point of poverty clearance occurs just before Marie returns to work part time as the combination of increased tax-take and decreased generosity of in-work tax credits means that income is at its lowest point, only one per cent above the poverty line. The OECD companion scale, on the other hand, shows that allowing for housings costs leads to 5.5 years of poverty overall and an average poverty gap of three per cent. The remaining

years have higher poverty clearance of 27 per cent – with the differences caused in the main by the higher income levels that result from assumptions about the children aged over 14 and their equivalent share of housing costs.

The profiles that result from using the old assumptions from previous Households Below Average Income series employ The McClements equivalence scales. Overall these show worse poverty outcomes – larger gaps and smaller levels of clearance. The after housing cost measure (AHC) leads to the worst overall poverty profile for the Brace family. They have five-and-a-half years in poverty with average poverty gaps of almost six per cent. The before housing cost measure (BHC McClements) shows only three-and-a-quarter years of poverty with an average gap of four per cent and the remaining years above poverty with average clearance of under 14 per cent.

2.3 The Solomon family

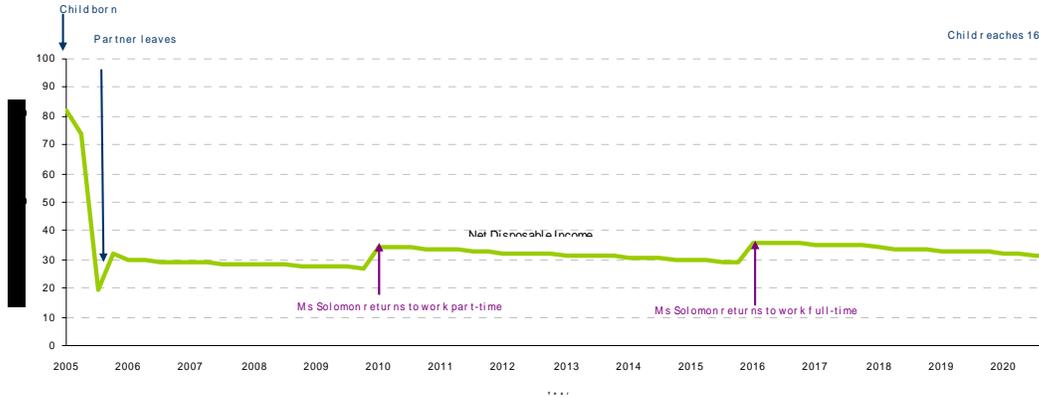
Our second model family lifetime is a lone parent family named after the mother, Elona Solomon. The family, called in shorthand The Solomons, are a version of the baseline profile used in the Brace family. They have exactly similar ages at partnering and age of the birth of their first child but separate after six months, and Elona Solomon is left as a lone parent from that point on. Their profile is described below.

The Solomon family

- Elona Solomon is partnered and gives birth in 2005 at 26-years-old to her first child.
- Her partner leaves six months after the birth of her child. He worked for 40 hour per week at 1.3 times the national minimum wage.
- Elona returns to work when the child starts primary school in 2010 and works 20 hours a week for 1.3 times the national minimum wage.
- When her child reaches secondary school Elona increases work hours to 35 at the same hourly rate of pay.

Figure 2.4 gives a graphical overview of the Solomon family's disposable income over the 16 years in which there is a child present from 2005 to 2021. Disposable income is shown as a percentage of average earnings over the period. Demographic events are shown in blue above the line and work history is shown below the line in maroon.

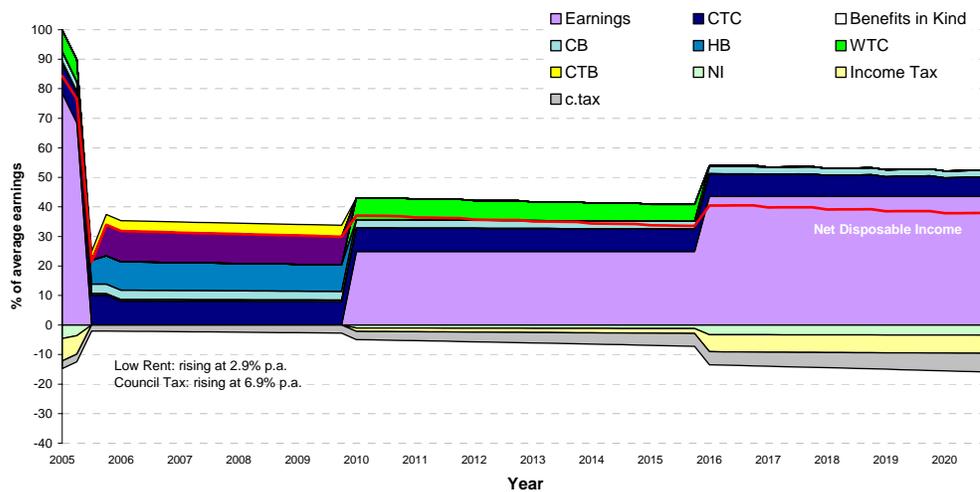
Figure 2.4
Solomon family 2005-2021 overview



Source: Authors' calculations from LOIS simulation programme

Figure 2.5 shows the changing profile of earnings taxes and benefits and disposable income that gives rise to this income profile. Figure 2.5 shows the same fall in the earnings level in the first six months as for the Brace family as maternity pay ends and they rely on a single earner. But at the six month point, Elona is left on her own with the baby and there is no earnings coming into the household. The family rely on Income Support and associated HB and CTB and Child Tax Credit and Child Benefit (and welfare foods). Elona returns to work in 2010 and receives WTC in addition to earnings but also pays income tax and NICs. She then moves to full time work in 2016 when her youngest child reaches secondary school age and at this point loses entitlement to WTC.

Figure 2.5
Solomon family: income from earnings, taxes and benefits 2005-2022

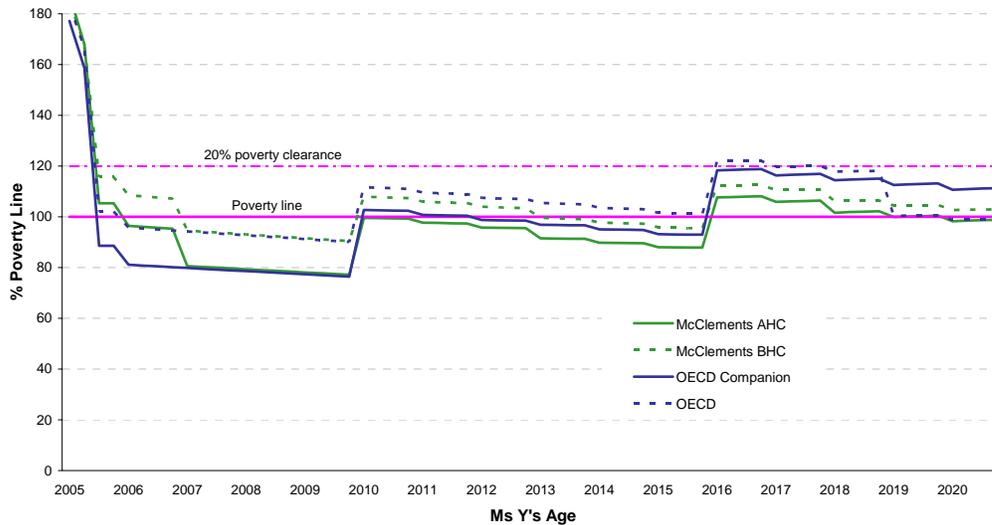


Source: Authors' calculations from LOIS simulation programme

What poverty profile arises from this history of family formation, breakdown and earnings assisted by the tax and benefit system? Readers are reminded of the static projection of poverty levels that do not reflect any changes in population composition or changes in incomes and taxes and benefits beyond linear extrapolation. Figure 2.6 shows the poverty profile for the Solomons using all four HBAI measures as previously used for the Brace family and Table 2.2 gives the summary poverty profiles for years in poverty and poverty gaps and poverty clearance.

Figure 2.6 clearly shows that the separation from the earning partner and move to IS leads to poverty. Or does it? Once again we see that the income using the McClements BHC measure does not immediately move below poverty. However, income using the OECD companion measure clearly shows a 13 to 19 per cent poverty gap in the later half of 2005 and income using the McClements AHC measure also shows poverty at growing levels as the child ages until it too shows an approximate 20 per cent poverty gap over the 2007 to 2010 period. These differences clearly show the different assumptions about young children, and the higher needs assumed for young children by the OECD scales compared to The McClements – and also clearly show the difference if rent is not taken into account in both versions of after housing costs measures.

Figure 2.6
Solomon family: poverty outcomes 2005-2021 on four HBAI poverty measures



Source: Authors' calculations from LOIS simulation programme

Does returning to work part time lift the Solomon family out of poverty? The answer in the short term is yes; and on all four measures, but only just – the McClements AHC measure gives a poverty line income in the first months after return to work and other income definitions give poverty clearance that varies up to the highest using the OECD measure of around 12 per cent. However, while Elona only works part-time the family slides slowly towards poverty on all measures. This is because income is constant in relative terms and fiscal instruments are losing relative generosity because of price increases and fiscal drag. Even the most generous measure – income using the modified OECD scale – shows poverty clearance reduced to zero by 2016. At this point income using the AHC McClements scale shows a 14 per cent poverty gap. However, at this point Elona increases her hours to full time (35 hours) and she achieves poverty clearance once again. But again it erodes over time – both due to fiscal drag and uprating but also due to the changes in age bands in the equivalence scales. Income using the OECD scale clearly falls back to poverty level as the child reaches 14, while smaller incremental bandings by age in the McClements scales have a more gradual and lesser overall effect. After Housing Cost income using The McClements equivalence scales also shows the Solomon family sliding back into poverty as the child's teenage years progress. Table 2.2 confirms that income measures using BHC definition show less poverty incidence and higher levels of clearance for the Solomon family. The modified OECD measure of income gives the profile with least poverty, with 11 years of poverty clearance out of 16 years and an

average 15 per cent poverty clearance level. The highest incidence and depth of poverty comes from using the AHC McClements income measure. This gives a total of eleven-and-a-half years of poverty, in other words three-quarters of all childhood years, with an average gap of almost 10 per cent. The remaining quarter of the Solomon family's child years are spent above the poverty line with an average clearance of 12 per cent.

Table 2.2
Solomon family: child poverty years baseline profile

	McClements BHC	McClements AHC	OECD	OECD Comp
Years above PL	10.0	4.5	11.0	7.5
Av clearance	10.7%	12.1%	14.8%	10.7%
Years below PL	6.0	11.5	5.0	8.5
Av gap	-5.0%	-9.5%	-5.9%	-12.6%

Source: Authors' calculations from LOIS simulation programme

To repeat, these two LOIS profiles of the Brace and Solomon families are baseline sets of results to which we can now turn to additionally consider the problems of high costs and differential inflation. What would happen if the concerns about the effects of high costs on poverty and work incentives discussed in Part 1 are now applied over the 2005 to 2020 period?

2.4 Effects of paying high rent

We assess the potential effect of high rents and high levels of rent inflation by changing only the assumption about the levels of rent paid and projected rent inflation on the Braces and the Solomons. This means two changes. First, we move from an assumption based on local authority rent levels from the DWP Tax Benefit Model Tables (TBMT) to an assumption from the same source based on private rents. In 2005 prices, this means moving from a social rent level of £51.56 to a private level of £111.50. We keep this underlying rent figure constant and do not try to show the effect of moves between different types or sizes of property to match changes in family size and circumstance. Second, we change the assumptions for rent inflation. Part 1 showed that existing trends from 1997 to 2005 could give us an annual rent inflation figure of 5.3 per cent for the whole sector (which will include a decline in stock with registered rents) and figures of between 7 and 11 per cent if we use the TBMT illustrative rents. Eleven per cent annual inflation of rents is probably too high to be sustainable over the next 16 years or more as the market would adjust (although external pressure on rents from international renters in London may distort home rental markets and lead

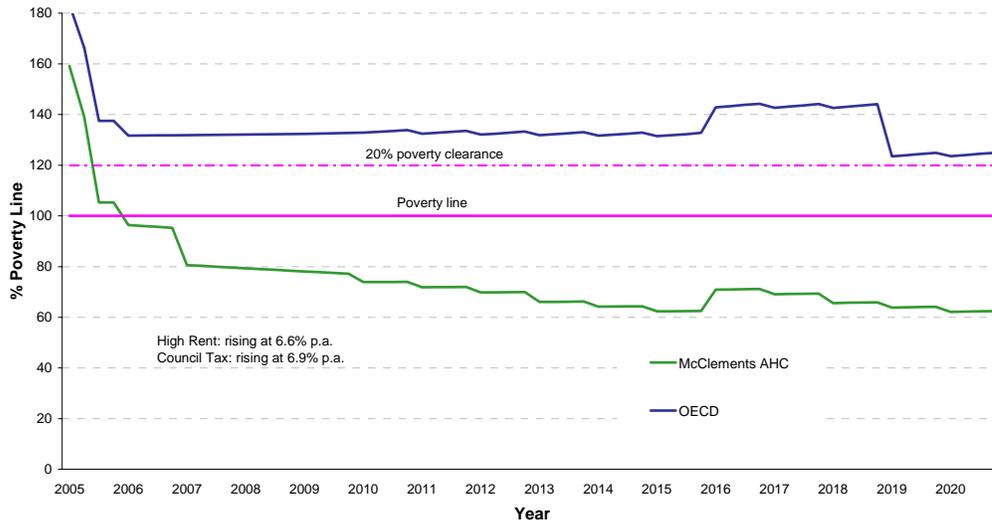
to less downward adjustment) while 5 per cent is probably too low. We choose a low inflation figure of 6.6 per cent to illustrate what happens if rents rise higher than earnings under a private rental market.

There is one major caveat that must be applied to our estimates. As we have previously warned we do **not** change the underlying computation of the poverty lines to match any change across the incomes of the **whole population** caused by these rent levels. As previously stated, the separate poverty lines from 2003 HBAI figures are inflated through a simple linear extrapolation of 1997 to 2003 trends. However, these poverty lines already reflect rent inflation at or around the levels we predict but these levels would not reflect a general change to higher rents across the whole tenure – for instance through a move to privatise the social rented sector. Interpretation of the results must therefore be based on individual profiles of high cost rather than one of a greater prevalence of high costs across a wider population.

Figure 2.7 shows the effect of these higher rent and higher inflation assumptions on the Brace family's poverty profile. From this point forward in the report we show two income lines in graphs of poverty profiles and use the modified OECD and the McClements AHC equivalence scales in order to show the best and worst outcomes for poverty overall. The profile for the OECD line changes only slightly from Figure 2.3, since the higher rent leads to eligibility for housing benefits for a short period of two years after the birth of the first child only. On the birth of the second child HB entitlement ends as increased tax credits remove entitlement as HB thresholds are rising only with prices alongside underlying IS. Using OECD equivalence scales this means that the Braces still have no years of child poverty but have a small increase in their poverty clearance levels from 19 per cent in the baseline to almost 20 per cent. However, the AHC McClements equivalence scale shows a very different outcome from this combination of increased rent and changed benefit profile. The effect of only changing rent levels and assumptions about rent inflation move the Brace family to a position where they would spend 97 per cent of childhood years in child poverty: 17.5 out of 18 years, compared to only five-and-a-half years in the baseline case shown in Table 2.1. Not only does duration of poverty increase but the depth of poverty also increases to an average gap of almost 25 per cent, whereas the family was only 6 per cent below the poverty line previously – and for a much shorter time.

Figure 2.7

Brace family: child poverty profile 2005-2023 – market rent assumption



Source: Authors' calculations from LOIS simulation programme

Table 2.3 gives more detail and also shows the outcomes from the other income definitions not shown in Figure 2.8. This clearly shows that the OECD measure gives an average 19 per cent poverty clearance throughout the children's time in the family while the AHC McClements' measure gives an average 25 per cent poverty gap for all but the first six months after the birth of the first child.

Table 2.3

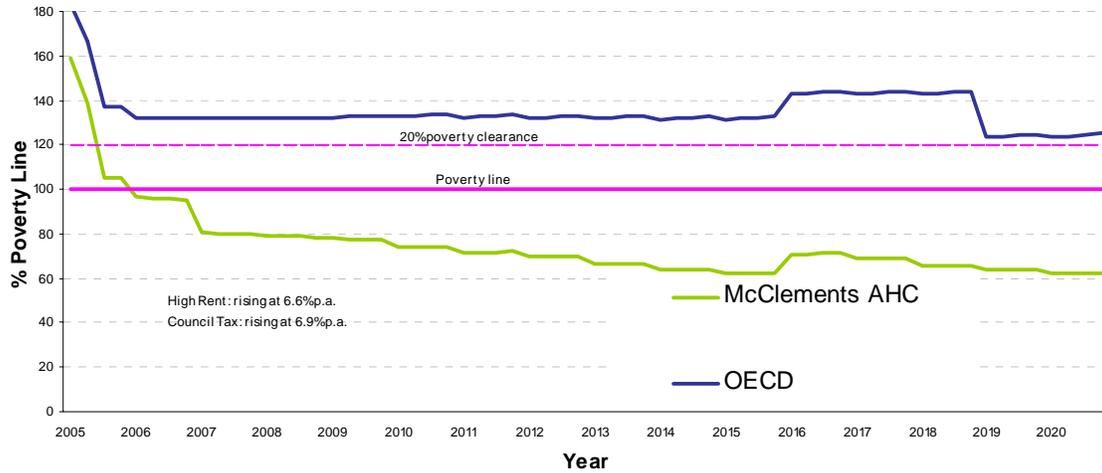
Brace family: child poverty years – market rent assumption

	McClements BHC	McClements AHC	OECD	OECD Comp
Years above PL	14.75	0.5	18.0	0.5
Av clearance	17.2	25.4	19.8	18.5
Years below PL	3.25	17.5	0.0	17.5
Av gap	-3.9	-24.5	-	-20.0

Source: Authors' calculations from LOIS simulation programme

How does a higher rent assumption affect the Solomons? Figure 2.8 shows their poverty profile with the same assumptions for a private market rent used for the Braces. Once more it is axiomatic that there is no resulting change in OECD profile because is on a Before Housing Cost assumption. However, income using the AHC McClements equivalence scale shows a huge increase in poverty depth and duration compared to the baseline case. The Solomon family enter poverty after separation and fall further and further into poverty despite entering work as soon as the only child starts school, and moving to full time work when the child enters secondary school.

Figure 2.8
Solomon family: child poverty profile 2005-2023 – market rent assumption



Source: Authors' calculations from LOIS simulation programme

Table 2.4
Solomon family: child poverty years – market rent assumption

	McClements BHC	McClements AHC	OECD	OECD companion
Years above PL	16.00	0.75	16.00	0.50
Av clearance	32.9	27.2	35.0	40.8
Years below PL	0.00	15.25	0.00	15.50
Av gap % of PL	-	-28.5	-	-25.4

Source: Authors' calculations from LOIS simulation programme

Table 2.4 gives a more detailed overview of poverty using all four HBAI poverty measures. The OECD measure actually improves on the baseline results because the higher rent leads to higher levels of housing benefit while the family rely on Income Support, Elona's subsequent low earnings do not lift her out of HB entitlement and the family continue to receive HB throughout the remaining years of childhood. This means that their profile using both before housing costs poverty measures leads to 16 years free from child poverty. The OECD equivalence assumption gives an average level of poverty clearance of 35 per cent. However, if housing costs are taken into account, then there is a completely different picture: higher housing costs have, quite logically, made the Solomon family worse off with the same earnings profile. Indeed, using the McClements AHC measure, the Solomons experience child poverty in 15.3 out of 16 years (96 per cent of childhood) and the average gap is

almost 29 per cent, but the position worsens in teenage years even with the mother working full time.

2.5 The effects of childcare costs

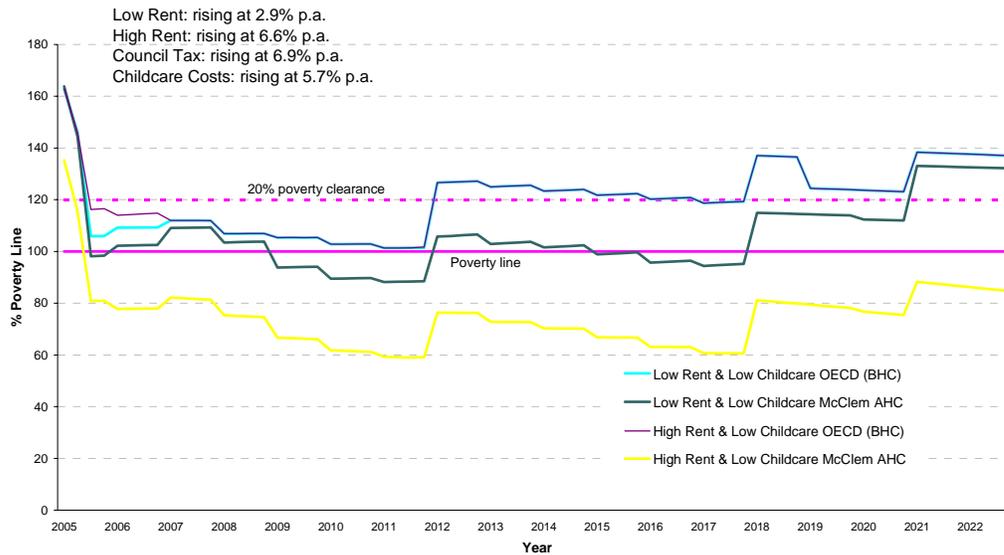
What difference would childcare costs make? As we have previously discussed in Part 1, the issue of childcare is linked to a choice of hours of work and it is likely that a choice of hours will be made to limit or avoid childcare costs in low-paid families or the use of informal childcare will be taken up – with lower costs but no WTC subsidy. In order to have consistent profiling of model family lifetimes, our approach is not to change the underlying assumptions about earnings history but to add a range of childcare costs to the existing profiles to see the additional effect, holding all other circumstances constant. This approach once more emphasises how far these hypothetical cases are illustrative profiles rather than empirically based representative families.

We first begin by adding a small but reasonable level of childcare costs – £13 a week – based on an assumption of solely having to pay for care and holiday clubs outside of term times (but spread as an average cost rather than being lumped during holiday periods). We apply these costs from the time of return to work until the youngest child's 13th birthday. We assume that childcare costs continue to rise by 5.7 per cent per annum (and thus slightly ahead of earnings) as they have done between 1997 and 2005 (see Part 1). We then add these childcare costs to our baseline (low rent) and high rent profiles. Once more we preface the resulting profiles with the same caveat as before; changing up-take and levels of childcare and higher rent levels may affect the level of the poverty line in a way that we cannot estimate.

Figure 2.9 shows the effect of childcare costs on both the baseline poverty profiles with low rents (see Figure 2.3 and Table 2.1 previously) and on the high rent profiles of the Brace family (see Figure 2.7 and Table 2.3 previously). The effect of childcare costs increase are twofold. First, they increase the levels of WTC payments, which if not offset against the costs incurred lead to a higher gross income in before housing cost income measures. This means that, as Table 2.5 shows, the years of poverty clearance using income defined using the OECD equivalence scale increase when compared to the baseline – from 14.75 to 18. Poverty clearance levels also rise by almost one percentage point.

Figure 2.9

Brace family poverty: 2005-2020 rent levels and low childcare costs



Source: Authors' calculations from LOIS simulation programme

Table 2.5

Brace family: child poverty years – childcare and rent assumptions

	Low rent		High Rent	
	OECD	AHC McClements	OECD	AHC McClements
Years above PL	18.0	11.5	18.0	0.5
Av clearance	20.3	13.9	20.9	25.4
Years below PL	0.0	6.5	0.0	17.5
Av gap % of PL	-	-6.0	-	-25.5

Source: Authors' calculations from LOIS simulation programme

The second effect of childcare costs reflects the additional outlay incurred as net disposable income is lower as a result of only 70 per cent of costs being met by WTC payments; the Braces will still have to find the other 30 per cent. This additional net cost can thus be subtracted from AHC measures through a combined AHC-childcare income assumption. Such a combined AHC and after childcare costs measure has not been used consistently in HBAI profiles but was produced for the 2002/03 poverty profiles (DWP 2004a). In that profile the overall low incidence of childcare costs across the general population only reduced AHC poverty lines by a very small margin. That finding means that for these illustrations the same AHC poverty line is used as previously.

The effect of childcare costs only occurs during periods of earnings and thus the main effect is to reduce poverty clearance levels and for the AHC McClements income measure to decline relative to the poverty line. This results in both a reduction in one year above the poverty line

and a decrease in overall poverty clearance levels and increased poverty gaps when compared to baseline profiles. Years in poverty rise from rising 5.5 to 6.5 and the average gap increased from 5.8 to 6 per cent.

The combination of high rents and these same childcare costs gives rise to the same order of change in high rent poverty profiles shown earlier in Figure 2.8 and Table 2.3. Average poverty clearance over all 18 years rises from 20 to 21 per cent when measured using the before housing costs OECD equivalence scale. Average poverty gaps for the 17.5 years of poverty rise from 24.5 to 25.5 per cent when using the AHC McClements scale.

What happens if child costs are higher than these modest assumptions? Table 2.6 shows the outcome of doubling and then tripling childcare costs alongside the high rent assumptions. Doubling childcare costs raises incomes above the poverty line in OECD before housing measures by around a half of one per cent on average making poverty clearance climb to 21.5 per cent and then again to 22.2 per cent if costs are tripled. This is because tax credits rise to reflect higher childcare charges and OECD BHC income definitions do not discount childcare or housing costs. In after housing costs calculations that also discount net childcare costs, poverty gaps increase by around one per cent on average, to 26.5 per cent for 17.5 years if childcare costs are doubled and to 27.6 per cent if costs are tripled. These sorts of combinations of high rents and high childcare costs illustrate the potential threats to poverty in work faced by the low paid in London or other high costs areas.

Table 2.6

Brace family: child poverty years – high childcare and high rent assumptions

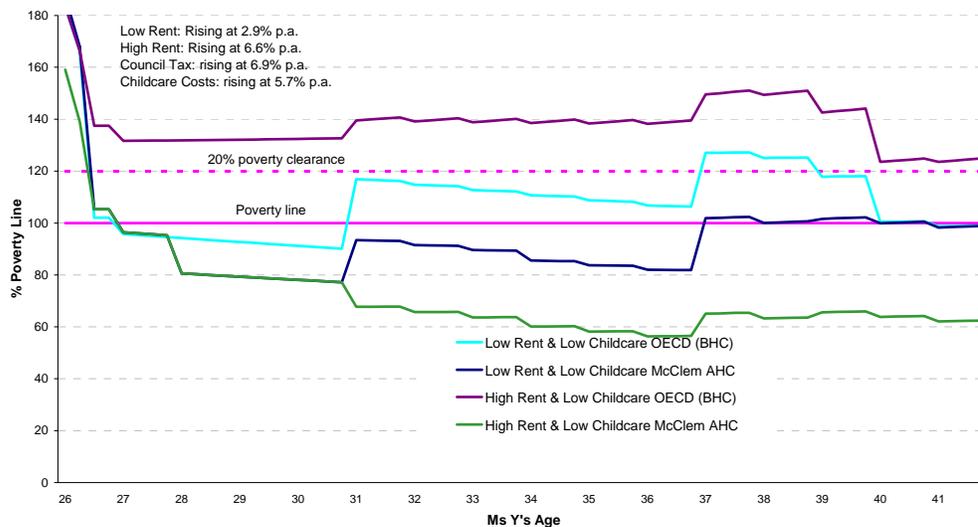
	Double childcare costs		Triple childcare costs	
	McClem AHC	OECD	McClem AHC	OECD
Years above PL	0.5	18.0	0.5	18.0
Av clearance	%	21.5%	%	22.2%
Years below PL	17.5	0.0	17.5	0.0
Av gap	26.5%	-	27.6%	-

Source: Authors' calculations from LOIS simulation programme

How do childcare costs affect the lone parent Solomon family? Figure 2.10 shows the very large differences in potential poverty outcomes when the OECD and The McClements equivalence scales are used alongside each other. Once more it is worth outlining the causes and

consequences of these differences as they affect the Solomons. As childcare costs increase WTC entitlement, they increase BHC income by 70 per cent of these costs at the margin and thus even though Elona is paying the net 30 per cent difference she is treated as better off.¹⁵ This can clearly be seen in Figure 2.11 as income falls at the age of 39 when the childcare costs stop (as the child reaches 13). Thus the Solomon family have higher poverty clearance levels in work (but similar poverty gaps when receiving IS) when rent is low compared to the baseline profile using OECD equivalence scale assumptions– see Figure 2.6 and Table 2.2. The combined effect of high rent and these childcare costs raises incomes still further above the poverty line as the Solomons received both HB and additional childcare elements of WTC, which leads to the rather perverse outcome that the Solomon family are *never* in poverty using the OECD measure (see Figure 2.8 and Table 2.4 for comparison).

Figure 2.10
Solomon family: poverty 2005-2020, rent levels and low childcare costs



Source: Authors' calculations from LOIS simulation programme

On the other hand, when we consider the Solomons' circumstances using an after housing costs measure that additionally deducts childcare costs, a truer reflection of replacement rates and being better off in work, then their poverty profiles look very bleak. The costs of childcare mean that, compared to the baseline profile (Figure 6 and Table 2.2), Elona is no longer able to beat poverty when she returns to work and, as she

¹⁵ The Government announced that childcare costs will be paid up to a maximum of 80% rather than 70% from April 2006. This means that the shortfall will reduce to 20%. See <http://www.hmrc.gov.uk/pbr2005/pn02.htm>.

continues to work here income falls over time – the same story of fiscal drag and failure of in work benefits to keep up with the poverty line as before but now worsened because childcare costs are rising just ahead of earnings, and thus income growth as well. When these childcare costs are combined with high rent assumptions the previous profile shown in Figure 9 and Table 2.4 worsens further and the Solomons are worse off in work, in ever deepening poverty over time.

Table 2.7 shows an overview of the poverty profiles for both forms of poverty measure for both the low rent and high rent assumptions with consistent low childcare costs.

Table 2.7
Solomon family: child poverty years – childcare and rent assumptions

	Baseline (Low rent)		High rent	
	OECD	AHC McClements	OECD	AHC McClements
Years above PL	11.00	4.75	16.00	0.75
Av clearance	16.2%	9.7%	38.3%	27.2%
Years below PL	5.00	11.25	0.0	15.25
Av gap % of PL	-5.9%	-12.8%	-	-31.7%

Source: Authors' calculations from LOIS simulation programme

Comparing these overviews with the original and high rent results (Tables 2.2 and 2.4 respectively) then on AHC assumptions childcare costs make little difference to durations in poverty for the Solomons – because the period where income is above the poverty line is in the first year – at the time before separation and during receipt of earnings and maternity pay. The family are always poor in AHC terms when they receive IS. The key effect of childcare costs is thus to reduce the levels of real disposable income when in work and these show through lower levels of poverty clearance and higher levels of poverty gaps. Poverty clearance under the low rent baseline assumption falls from 12 to 10 per cent and poverty gaps rise from 10 to 13 per cent on average. Poverty clearance under the high rent assumption remains constant (because this only reflects the first year when no childcare costs are incurred) but gaps widen from 29 to 32 per cent. Using the OECD measure we see directly opposing outcomes – less poverty not more. Poverty clearance levels in the low rent case rise from 15 to 16 per cent and in the high rent case from 35 to 38 per cent.

2.6 Overview of future poverty and costs and trends

In this first section of Part 2 we have used LOIS to project forward some simple linear trends of poverty, rents and childcare costs to illustrate the

potential problems of both poverty measurement and differential inflation and uprating of fiscal instruments. The findings are pretty stark, but first we should remind readers that LOIS only uses a combination of linear extrapolation alongside a set of model family circumstances and events. There is no underlying adjustment to reflect behavioural changes – for instance it is unlikely that the Solomon family would enter work faced with high rents and high childcare costs and become progressively poorer as a result – and there is no underlying population data that allows us to alter assumptions about poverty levels as the population and its behaviour and incomes change over time. The profiles are simple hypothetical projections – but nevertheless complex and quite powerful in their illustrative potential.

In Part 1 we saw that incentives to work crucially rested in part on rents and childcare costs but these were only captured in poverty measurement when after housing costs and after childcare costs were used. The use of LOIS has enabled us to take these issues forward to illustrate the potential effect on poverty of rents and childcare. It is clear that if current trends continue then using the OECD before housing costs poverty measure becomes less and less reliable as a measure of poverty that coherently joins the Government's poverty target to its employment target.

But income measurement problems reflect underlying structural problems with the way that fiscal instruments are linked to inflation as well as the costs that family incomes have to bear. The taxes and benefits are not adequately uprated to meet a poverty target based on a fixed point in evolving contemporary income distributions. Put simply, median income is rising faster than fiscal help to avoid poverty for families. When this underlying problem is then joined by rents and childcare costs that are rising faster than earnings, the problems worsen. However, if one measures poverty using the OECD before housing costs measure, these worsening trends can be ignored.

These findings, however, assume simple linear profiles where the only risks are those of underlying trends in income maintenance and prices and earnings. The next sixteen years will also bring with it continued risks of interruptions to earnings and changes to family life and we now turn to these to see what additional illustrative effects such events can have on our model family lifetimes.

2.7 Lifetime risks

So far our analysis of model family lifetimes has just looked at simple linear trends over the next 16 to 18 years and how inflation and uprating

will continue to address poverty and how this changes due to differential costs and inflation of rents and childcare. We now turn to look at some risks that would threaten or interrupt earnings.

2.7.1 Unemployment and the no pay, low pay cycle

All our profiles are based on low paid families and there is one major factor that is missed through a simple continuous linear projection of earnings for such families: the threat of unemployment. It is now established that low pay is linked to unemployment for men (Stewart 1999) and that for many low paid jobs there is an equal chance of unemployment and low pay, the so-called 'no pay, low pay cycle'. Recent evidence has also shown that lone parents have high risks of leaving employment and this is linked to low paid occupations (Evans, Harkness and Ortiz 2004).

Leaving a job is more likely to occur after recent job entry. There is, in effect, a trial period during which employer and employee assess how the employment works out and if either thinks it doesn't the job will end. However, there are also risks of unemployment that are linked to temporary fixed term employment that is more common in some occupations and sectors. How is it best to set up a stylised profile to show such risks?

The main reason for looking at the risks of unemployment is that interruptions to employment threaten the current work-based policy model that will combat child poverty. We know that taking up work is the major way of leaving poverty, and we have shown so far that fiscal instruments are currently set up to ensure that in-work poverty becomes a bigger problem over the next 16 years as we near the target date for child poverty elimination, 2020. For these reasons, and to avoid too much complexity in simulation profiles, we use three separate periods of unemployment rather than a series of repeated and frequent periods in and out of work that can characterise so-called 'churning' in and out of work.

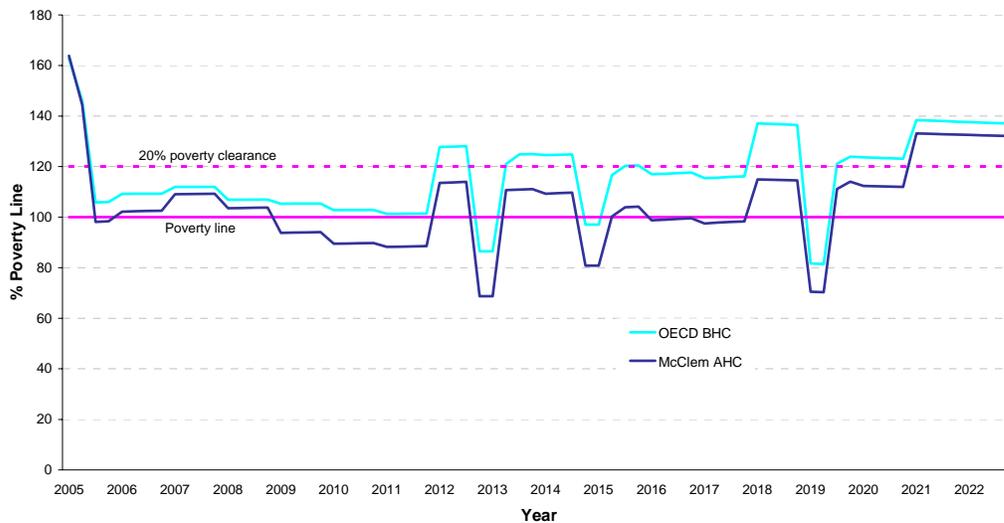
We additionally presume a period of six months for each period of non-employment (our minimum would be a period of three months). We also choose to make the second earner or woman unemployed and keep the man in the Brace family in continuous work. The reason for this is primarily so that we can compare consistently across the Brace and Solomon families by having the woman move between employment and unemployment to see how this affects a couple and a lone parent family. By making the second earner unemployed and not the first earner, we also avoid the probability of joint withdrawal from employment that may

occur if we put forward unemployment for the male full-time earner. For these reasons it is worth stressing once again that the profiles are illustrative rather than representative.

How do periods of unemployment threaten the poverty profile of the Brace family? We return to the baseline set of assumptions outlined in 2.1 and show the effect of three repeated periods of six months unemployment for Marie Brace; the first six months after she has returned to work part time, the second two years later after 18 months in her second part-time job and the last some nine months after her starting her full-time job, which she takes up when the youngest child starts secondary school.

Figure 2.11 shows the poverty profile with these periods of employment and unemployment using incomes equivalised using the OECD and AHC McClements scales. The differences between poverty profiles for these measures show the expected differences that reflect the rent assumptions – a low local authority rent rising above prices but below earnings. However, one point of interest is that unemployment threatens poverty even when using the OECD measure. This means that the policy of ending child poverty is directly threatened by even short-term unemployment, which itself is an inherent characteristics of the low paid work for parents that is itself supposed to be a route out of child poverty.

Figure 2.11
Brace family: poverty profile and periods of unemployment



Source: Authors' calculations from LOIS simulation programme

On OECD equivalence assumptions, unemployment of the second earner will produce poverty with gaps of 14 per cent, 3 per cent and 19

per cent in order of their occurrence. The different effects on poverty result from their being no contributory JSA payable for the first period; Marie Brace has only been working six months and has not made contributions necessary to qualify. She does however have contributory JSA for the second and this lowers the family's poverty gap. However, on the third occasion the unemployment hits at the point when the youngest child turns 14 and thus the equivalence scale rises dramatically at exactly the time when family income declines.

Poverty gaps using the AHC McClements income definition are higher of course, and the first period of unemployment leads to a 31 per cent gap, the second to a 19 per cent gap (again smaller due to contributory JSA) and the third to a 30 per cent gap.

Table 2.8 shows the overview poverty profile using the OECD and McClements AHC income measures. Unemployment raises the incidence of poverty under both measures when compared to the baseline results for the Braces (see Figure 2.3 and Table 2.1). Even using the OECD measure will record poverty during unemployment (unless rent is high and HB is claimed as this will then make BHC incomes higher) and this means that unemployment in this example gives the Brace family one-and-a-half years of poverty with an average poverty gap of around 12 per cent. It also means that average poverty clearance remains the same at 19 per cent. The additional one-and-a-half years of poverty changes the McClements AHC profile by increasing average poverty gaps from 6 to 10 per cent.

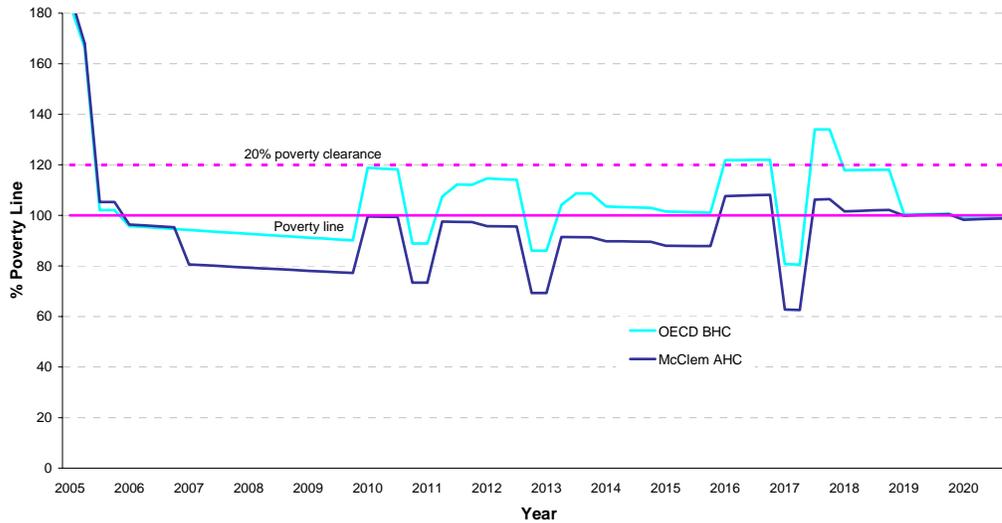
Table 2.8
Brace family: poverty profiles with periods of unemployment

	OECD BHC	McClem AHC
Years above PL	16.5	11.0
Av clearance	19.4%	15.3%
Years below PL	1.5	7.0
Av gap	-11.6%	-10.3%

Source: Authors' calculations from LOIS simulation programme

How do periods of unemployment affect the model lone parent family? Figure 2.12 shows the impact of three exactly similar periods of unemployment. The spacing and duration of these periods of unemployment exactly replicate those for Marie Brace, but they start two years earlier as Elona Solomon has only the one child and thus returns to work part time when primary school starts – two years earlier than Marie.

Figure 2.12
Solomon family: poverty profile and periods of unemployment



Source: Authors' calculations from LOIS simulation programme

Unemployment means that Elona returns to IS or JSA and thus means she returns to poverty. Underlying income levels on out-of-work benefits decline over time compared to both BHC and AHC poverty lines. This means that using the OECD definition of income her poverty gaps are 11 per cent for the first period of unemployment, 14 per cent for the second and 20 per cent for the third. Using the AHC McClements income measure, these poverty gaps are higher, at 27 per cent, 31 per cent and 37 per cent respectively.

Table 2.9 shows the overall child poverty profile that springs from these three periods of unemployment after Elona's return to work for the whole 16 years from 2005 to 2021. Unemployment lowers the number of years of poverty clearance using the OECD scale, which had previously shown all working years free from poverty in the baseline profile (Figure 2.6 and Table 2.2). The total duration of child poverty with three periods of unemployment rises from 5 years to 6.5 years. The after housing costs poverty measure shows less increase in years of poverty because working did not consistently lift income above the poverty line for the Solomons in any case, even before her periods of unemployment, but her average poverty gap rises from 9.5 to 12.8 per cent.

Table 2.9
Solomon family: poverty profiles with periods of unemployment

	OECD BHC	McClem AHC
Years above PL	9.5	4.25
Av clearance	14.5	12.9
Years below PL	6.5	11.8
Av gap	-8.0	-12.8

Source: Authors' calculations from LOIS simulation programme

2.7.2 Separation/divorce

Our two model family lifetimes have so far been based on the large majority of childhood being based on either being in a couple or being in a lone parent family where separation occurred six months after birth. However, it is additionally important to see separation as a risk event for the couple family, the Braces. What would happen to their child poverty profile if separation occurred later in childhood? There are many potential variations of timing of separation, but in policy terms it is interesting to explore the effect of separation once the woman has returned to work. The likelihood of separation during employment leading to job-leaving depends on how family life and work can adapt to the loss of the partner, and in this and most instances, the loss of the higher earner.

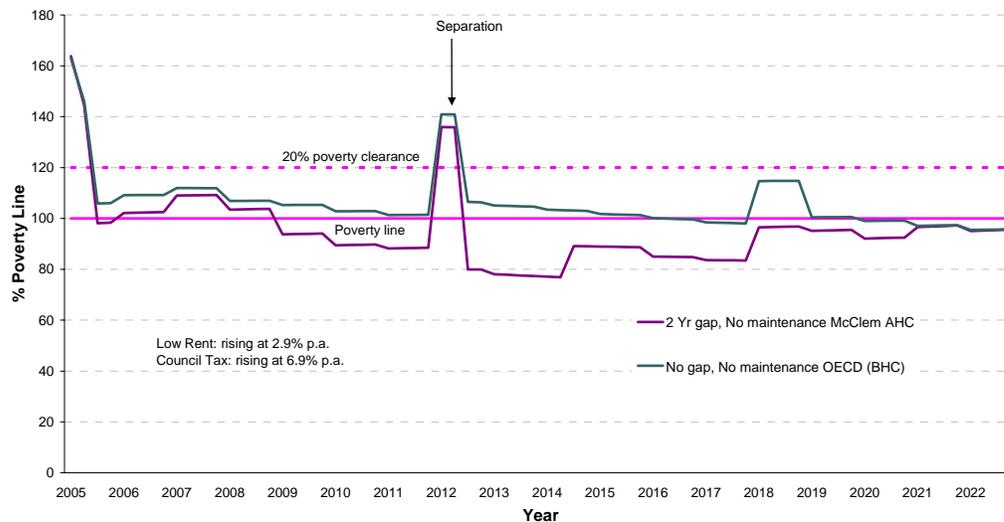
Figure 2.13 shows the child poverty profile of a new version of the Brace family where separation occurs 6 months after Marie returns to work part time (20 hours a week). Many, but not all, recently separated mothers stop work at this point, for instance to provide more intensive emotional support for their children. We return to our baseline assumptions about rent levels and childcare and show the effects of low cost families. Figure 2.14 shows both alternatives, firstly for a two-year gap in employment before her subsequent return to part-time work, and the alternative position of her continuing to work with no gap. However, we already know that the overall child poverty profile with lowest poverty incidence will result from the OECD measure and the highest incidence with the AHC McClements measure. For this reason Figure 2.14 shows only the best and worse cases – of no employment gap using the OECD measure and a two-year gap using the AHC measure, respectively. A full set of all four outcomes using these measures is given in Table 2.10.

The worst case situation confirms much of what we already know from our previous profiles – that poverty is assured if family income relies on IS. Figure 2.19 confirms this and shows again highest levels of poverty gaps, using the AHC McClements measure, and that poverty gaps grow

over time over the two years of 2013 and 2014 while Marie relies on IS and before she returns to work. The difference between this experience and the previous experience of Elona Solomon is that there are two children involved and this means that returning to work at 20 hours in late 2014 barely raises the family over the poverty line, but that subsequently the family slips back into poverty as the children age and equivalence assumptions raise the costs of older children against a constant relative income from 20 hours work a week. Returning to work full time in 2018, when the youngest child reaches secondary school age, increases income but this still leaves the family in poverty using the AHC measure. The overall effect of separation using the AHC measure is thus that there is an almost continuous experience of poverty for the remainder of childhood if Marie Brace takes a two year gap.

Figure 2.13

Brace family: separation in 2012 (six months following Marie Brace's return to part-time work)



Source: Authors' calculations from LOIS simulation programme

The effect of separation using the OECD (BHC) income measure and for the best case situation where Marie continues to work is that the combination of a single source of low earnings, eroding levels of fiscal support and inflation leads to a slow slide into poverty over time. However, returning to work full time in 2018 does bring a real boost to family income and provides one year of poverty clearance at 15 per cent. But then the eldest child reaches 14 and the OECD equivalence assumptions treat them as adult and poverty returns. When the second child turns 14 any increase in underlying scale is zero because their elder sibling turns 16 and exits from the poverty calculation.

Table 2.10 clearly shows that employment does not always make a pay-off in avoiding poverty. Using AHC measures, employment seems to reduce poverty gaps but make little impact on time spent in poverty. Using OECD (BHC) measures we see both reduced poverty duration and reduced gaps and greater clearance.

Table 2.10
Brace family: poverty profiles with separation

	No gap in employment		2 year gap in employment	
	McClem AHC	OECD BHC	McClem AHC	OECD BHC
Years above PL	4.0	13.25	4.0	11.25
Av clearance %	13.9	8.8	15.0	10.2
Years below PL	14.0	4.75	14.0	6.75
Av gap %	-7.9	-2.1	-10.3	-4.3

Source: Authors' calculations from LOIS simulation programme

2.7.3 The effect of child maintenance payments

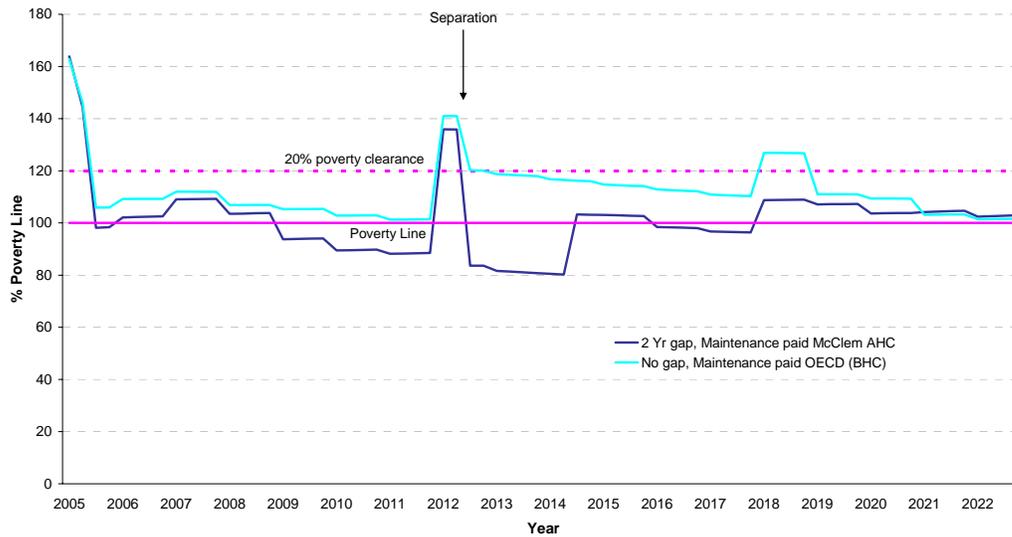
So far our assumptions about separation do not include any payment of maintenance by the father of the Brace children after his separation from Marie. How would such payments affect the poverty profiles? Figure 2.14 carries forward our earlier approach from Figure 2.13 and shows the best and worst outcomes for poverty based on an OECD (BHC) measure of income where Marie remains in work after separation, and an AHC McClements measure of income where Marie takes a two-year break from work immediately following separation. Maintenance is the average payment of £17.50 per child in 2005 prices (DWP 2005d)

Maintenance clearly has a protective poverty effect overall. However, maintenance payments make little difference to poverty gaps when the family is out of work and relies on IS – where they only gain £10 a week (in 2005 prices) due to this amount being disregarded. But combined with earnings then maintenance reduces poverty gaps and increases poverty clearance levels. In the worst case, using AHC McClements income definitions, poverty years after separation are reduced dramatically but without providing high levels of poverty clearance. The period of highest risk of poverty while in work in 2016 and 2017 and the years before moving to full-time work, see the Brace family just below the poverty line with gaps of 2 to 4 per cent, compared to 12 to 17 per cent without maintenance previously. In the best case, then poverty clearance measured using the OECD measure is maintained throughout the period in work after separation. The levels of clearance decline over time from

20 per cent immediately after separation in 2012 to 2 per cent when the youngest child is 15 in late 2022.

Figure 2.14

Brace family: separation in 2012 (six months following Marie Brace’s return to part-time work): the impact of maintenance payments



Source: Authors’ calculations from LOIS simulation programme

Table 2.11 shows that maintenance makes significant impacts on time spent in poverty when compared to Table 2.10. AHC measures show far more years of poverty clearance, however these longer periods are, on average, of lower clearance than the shorter higher periods of clearance without maintenance. This result requires some thought because it is not immediately intuitive. The high poverty clearance levels are now only for short periods – for instance the periods where there are two earners (during maternity leave and immediately prior to separation) – and hence potentially raise average clearance levels. Maintenance payments smooth out the difference between these periods and periods where Marie is a single earner, but her poverty clearance during these periods is small thus reducing the average clearance level overall.

Table 2.11
Brace family: poverty profiles with separation: effects of maintenance payments

	Maintenance paid			
	No gap in employment		2 year gap in employment	
	McClem AHC	OECD BHC	McClem AHC	OECD BHC
Years above PL	12.5	18.0	10.5	16.0
Av clearance %	8.6	12.4	8.7	12.1
Years below PL	5.5	0.0	7.5	2.0
Av gap %	-6.2	--	-9.5	-6.3

Source: Authors' calculations from LOIS simulation programme

2.7.4 Events and interruptions of earnings

These two simple profiles now show how simple interruptions of employment, through unemployment, and separation can worsen child poverty. Again, it is important to emphasise that these examples are illustrative – it is likely that unemployment periods could be shorter and more frequent for instance, and separation could occur earlier or later in childhood.

The importance of these illustrative family lifetime simulations is to show how such events can alter poverty outcomes between 2005 and 2020. For the low paid, an interruption of earnings will definitely lead to poverty – using any measure – and while it is assumed that continuing improvements to active labour market policies can return unemployed families to the labour market, these will only reduce lengths of periods of poverty and not prevent poverty unless they also ensure that there is some additional reduction of future risk of repeated unemployment. We return to this point in Part 3.

Separation leads to two potential outcomes – a loss of an earner that reduces family income or the loss of both earners if the remaining parent leaves work. The worst outcome for poverty is obviously the latter and this is partly due to factors to do with employment; primarily whether the job can adapt around the changed circumstances that arise on separation. Increased commitments to family-friendly working will hopefully help in attitudes to parents overall but these need to apply to low-paid jobs equally in both intent and outcome. Personal and family events such as relationship breakdown and separation may or may not be amenable to employers' policies on family friendliness or to government regulation of employment practices. But the profiles also show that maintenance can make significant impacts on poverty where

they supplement earnings; however, they do not lift out-of-work separated families out of poverty.

2.8 Summary and conclusions from Part 2

This section has used hypothetical family profiles to look at how the 2005/06 tax and benefit system would continue to help our two model families over the next 16 to 18 years. The assumptions used in the analysis are based on simple illustrative linear extrapolation of inflation, uprating and earnings trends identified in Part 1. However, the illustrative hypothetical families are 'aged' over the period, so that their first (and in one case, only) child is born in 2005 and reaches 16 in 2021. Changes in earnings and family composition are also used over the period to show the effects of events alongside the macro-economic and demographic trends. The purpose-built simulation programme LOIS is used in all the analysis in this section.

- The Lifetime Opportunities and Incentives Simulation (LOIS) used in analysis employs a set of assumptions that must be remembered when interpreting results. First, model lifetimes are hypothetical and illustrative and are not designed to be representative. Second, the majority of assumptions used in calculation are simple linear extrapolations of current trends in prices, earnings and uprating assumptions by policy makers. Third, the illustrative families age over the simulation period. Fourth, a range of 'events' can be incorporated into profiles, but these are usually simplified to aid illustrative analysis. Fifth, there is no probabilistic or predictive element to the simulations, neither is there any direct alteration of underlying assumptions through the input of events of lifetime trends. (This means, for instance, that poverty lines are not recomputed if rent levels rise and thus change both before and after housing cost incomes over a potentially wide population.)
- The two model families used in analysis are those used in Part 1. A consistent earnings level is used for each of the earners in the families – 1.3 times the minimum wage, which approximates to 60 per cent of median earnings as an hourly rate. Men in the model families continue to work throughout the 16 to 18 years of having children in the family. Women cease work at the birth of the first child and return to work part time when the youngest child reaches primary school age.
- Poverty profiles differ according to the income definition and equivalence scale used. AHC measures give greater poverty incidence and depth compared to BHC measures. OECD equivalence scales give greater poverty incidence and depth for younger children under 5

and for 14- to 15-year-olds but give a flatter profile over time for children as they age compared to The McClements scales that re-weight children more regularly by age bands.

- The baseline results for a couple family with two children, born in 2005 and 2007, experience no poverty using the OECD measure but five-and-a-half years of poverty using the AHC McClements measure. Poverty clearance is on average 19 per cent using OECD but only 14 per cent using The McClements AHC.
- The baseline result for a lone parent family with a single child born in 2005 is that they experience eight-and-a-half years in poverty using the OECD income measure and eleven-and-a-half years of poverty using The McClements AHC measure. The family's average poverty clearance is 15 per cent (OECD) and 12 per cent (McClements AHC) and average poverty gap 6 per cent and 9.5 per cent respectively.
- High rent liability – based on private rent levels in 2005 rising at 6.6 per cent per annum – increases AHC poverty for both the couple and lone parent family. The couple have 17.5 years (out of 18) in child poverty and the lone parent 15.25 years (out of 16) using The McClements AHC income measure. However, the OECD measure continues to measure both families as never being in poverty if they have high rents.
- Childcare costs were also found to increase poverty risk and gaps where AHC measures took into account these costs, but to decrease such risks and gaps where OECD measures were used because incomes were nominally higher due to the inclusion of tax credit assistance towards childcare costs. Interacting rent and childcare demonstrated how the combined risks of rent and childcare costs often led to long-term prolonged child poverty using AHC measures (17.5 out of 18 years for the couple and 15.25 out of 16 years for the lone parent).
- The use of OECD income definition and equivalence scales is found not to be able to reflect changing living standards that arise from the threat of high costs from rent and childcare. An after housing costs poverty measure accounts for these more accurately.
- The risk of unemployment, higher amongst low paid families, was found to increase both poverty gaps and incidence using all kinds of poverty measures. This common result across all poverty measures results from the fact that non-working families are consistently below

poverty, and that poverty gaps from out-of-work benefits will in the main grow between 2005 and 2020.

- Separation and divorce changes a couple family into a single earning lone parent family and this means that poverty clearance levels are low or non-existent for much of the subsequent years of childhood. Poverty is assured on any measure if the remaining parent takes time out of work to remain at home with the children for a period. The payment of maintenance reduces poverty incidence and improves poverty clearance and reduces poverty gaps when in poverty.

Part 3

Policy threats and opportunities

This final part of the report looks at a series of policy options that are either under discussion or put forward by lobby groups to assess their potential impact on child poverty. We use LOIS simulations, based on the same model family lifetimes of the Brace and Solomon families outlined in Part 2. However, in this last part of the report we assess policy changes.

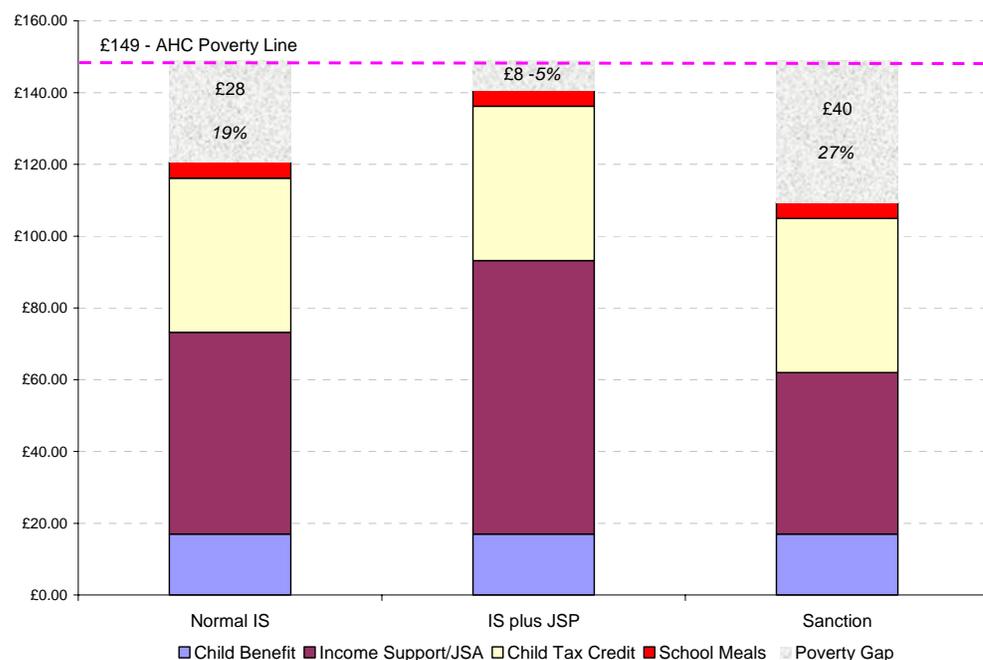
3.1 Lone parent incentives to work and Income Support

The first policy change discussed relates to out-of-work support. Should lone parents be penalised for not looking for work or should they be rewarded for doing so? There are proposals to focus additional Income Support on lone parents who undertake work-related activity, currently suggested for those with older secondary school-aged children. The proposal is to offer an additional £20 a week conditional on the lone parent undertaking job-search or some other form of activity that will increase employability and/or job entry. This additional money is termed the Work Related Activity Premium (WRAP). The exact design of this policy is under consideration by the Government at the time of writing and there is uncertainty about what will happen to those who do not want to take part but who are not exempted from taking part due to ill-health, additional caring responsibilities or other reasons.

Will these lone parents continue to receive the full rate of IS or will they be sanctioned? If the latter, this would probably lead to a 20 per cent reduction in the first instance. There would be no change to Child Tax Credit entitlement.

What would be the effect of these choices on poverty risk? Figure 3.1 shows the different levels of IS possible through the operation of the different versions of this policy. Normal IS in 2005 provides a cash weekly income level for a lone parent with a single child aged 5 of round £121, including free school meals but ignoring Housing Benefit and Council Tax Benefits. This level of income compared with the estimated poverty line of £149, using an after housing costs measure, leads to a poverty gap of around £28 or 19 per cent. Giving the additional £20 Work Related Activity Premium raises income to £141 and leaves a poverty gap of £8 or 5 per cent. A sanction of 20 per cent of adult IS rates reduces income to £109 and produces a poverty gap of £40 or 27 per cent.

Figure 3.1
Poverty gaps for a lone parent on IS with 5-year-old child: effect of Work Related Activity Premium and sanctions



Obviously the effect on any cross-sectional poverty profile of lone parents depends on how any version of the policy is operated. A tough version of the policy where access to the premium was on a strong test of entitlement being conditional on active work search and where sanction rates were potentially high could lead to a significant proportion of lone parents having incomes reduced significantly below poverty levels. A gentler policy that focused on rewards for a large range of work-related actions and had no or few sanctions would minimise the risk of increased poverty for those that do not enter work. Of course, the overall impact on poverty depends on how effectively the combination of conditionality and sanctions increases employment, but US evidence suggests that, even with raised employment rates, there is a significant proportion of those that do not enter work and are pushed deeper into poverty.

We have already seen from Part 2, that living standards for families with children claiming IS will decline relative to poverty between 2005 and 2020. What would happen to potential gaps from premiums or sanctions over time and how would this influence potential poverty gaps in the future? If IS rates continue to be uprated by ROSSI price index and CTC with earnings over the whole period, and if median income continued to rise with current trends, then the normal IS poverty gap for a lone parent in 2020 will rise to 37 per cent from the current 19 per cent. The additional premium of £20, if uprated consistently with the remaining

elements of IS, will reduce this gap in 2020 to 28 per cent. The use of a 20 per cent sanction will increase the gap to 42 per cent.

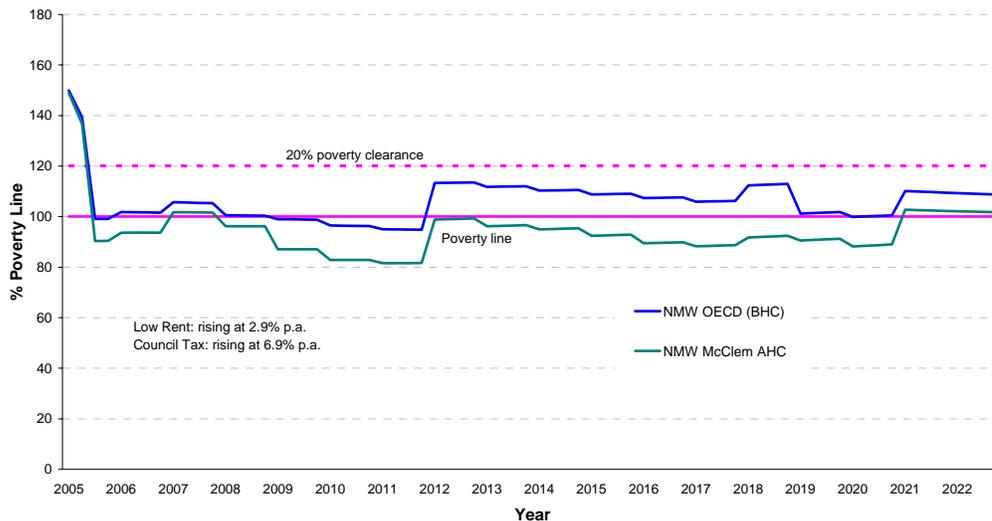
3.2 What wage levels beat poverty?

In Part 2 we have solely used a single measure of low pay, 1.3 times the national minimum wage. Additionally, we have already noted some of the problems associated with low pay, and in particular the high potential for recurring unemployment. The promotion of better quality employment and higher pay related to a workforce with higher skills is a central concern of government but in general the welfare to work policies focus on entry level jobs and thus low pay.

There is therefore a central question – how high should pay be to avoid child poverty? We return to our two model family lifetimes, the Braces and the Solomons, profiling the period from 2005 to 2020 in the same way as in Part 2 but only altering pay rates.

Figure 3.2 shows the Brace family and returns to their baseline case of low rent with no childcare cost, but profiles poverty using the national minimum wage – the lowest possible wage.

Figure 3.2
Brace family: baseline case with all earnings at minimum wage



Source: Authors' calculations from LOIS simulation programme

Figure 3.2 only shows the two poverty measures with the highest and lowest poverty profiles, the AHC McClements income definition and the OECD income definition respectively. At the minimum wage and using the OECD measure then the Braces only drift into poverty, with relatively

small but growing gaps of a maximum of 6 per cent, between 2009 and 2012 (these being the later years of the father being the sole earner) and once more shows the relative decline of in-work fiscal support over time. With two earners, even though Marie only works 20 hours a week, the family have poverty clearance of between 13 and 6 per cent until 2018 when Marie moves to full-time work as her youngest child enters secondary school. Poverty clearance then rises for a year before the eldest child reaches 14 and is treated as an adult by OECD equivalence assumptions and thus the family's income falls relative to its needs to poverty line levels. Poverty clearance then increases with the oldest child reaches the age of 16 and is excluded from child poverty assessment.

The AHC income measure for the Braces is rarely at or above poverty level and the majority of childhood is spent in poverty, despite continuous full-time earning by her partner and the return to work full time by Marie Brace. It is only when the eldest child 'leaves' the family¹⁶ and when both adult Braces are working full time at 35 and 40 hours a week respectively, that they achieve minimum poverty clearance, around 2 per cent.

Table 3.1 shows the overview child poverty profiles and shows three-and-three-quarter years of poverty with an average poverty gap of around three per cent using the OECD measure, with average poverty clearance of over eight per cent for the remaining years. The McClements AHC measure shows 14.5 years of child poverty with an average gap of nine per cent, and only three-and-a-half years of poverty clearance of around eight per cent on average.

Table 3.1
Brace family: poverty profile on national minimum wage

	OECD BHC NMW	McClem AHC NMW
Years above PL	14.25	3.50
Av clearance	8.5%	7.9%
Years below PL	3.75	14.50
Av gap	-2.7%	-9.0%

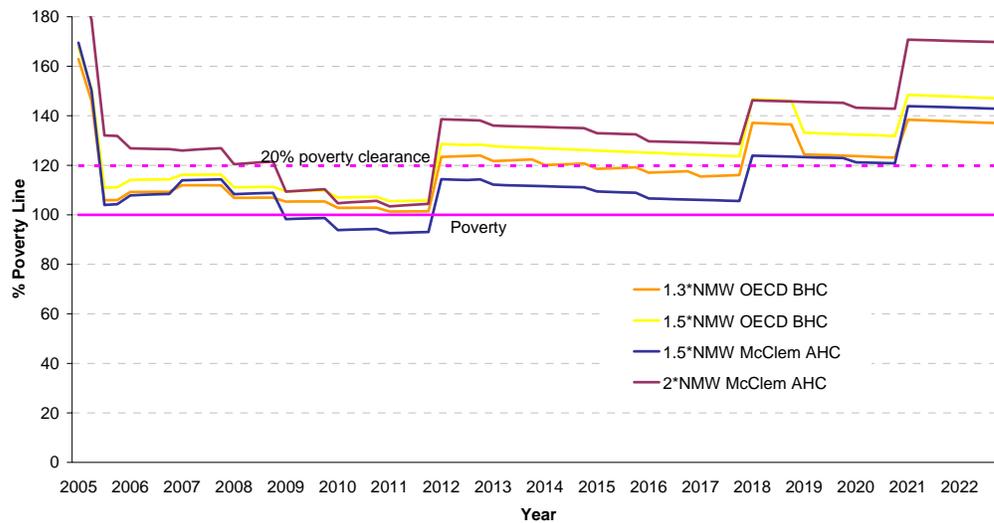
Source: Authors' calculations from LOIS simulation programme

What wage level would be needed, on the same hourly working profiles, to achieve child poverty clearance throughout?

¹⁶ At 16 the child is no longer counted as being in the family for tax and benefit purposes and we assume they are no longer counted for poverty purposes. Of course, in reality they would probably continue to live with their parents and their income would affect household poverty levels.

Figure 3.3 shows the results from a series of simulations that raised the minimum wage by increments to establish what level would be required to free the Braces from ever experiencing child poverty using the OECD and AHC McClements income measures. We must emphasise at this point that these incremental increases in earnings levels do not reflect any underlying argument about the adequacy of the current minimum wage level or the need to increase it. We solely use the minimum wage as a base wage level that can be incrementally increased until we obtain poverty clearance at all points over the 18 years where the Braces have children aged under 16, with underlying simple linear assumptions about earnings inflation. This approach gives an earnings profile that gives a variety of poverty clearance levels that depend on underlying equivalence assumptions and the ageing of the family.

Figure 3.3
Brace family: wage levels to avoid child poverty

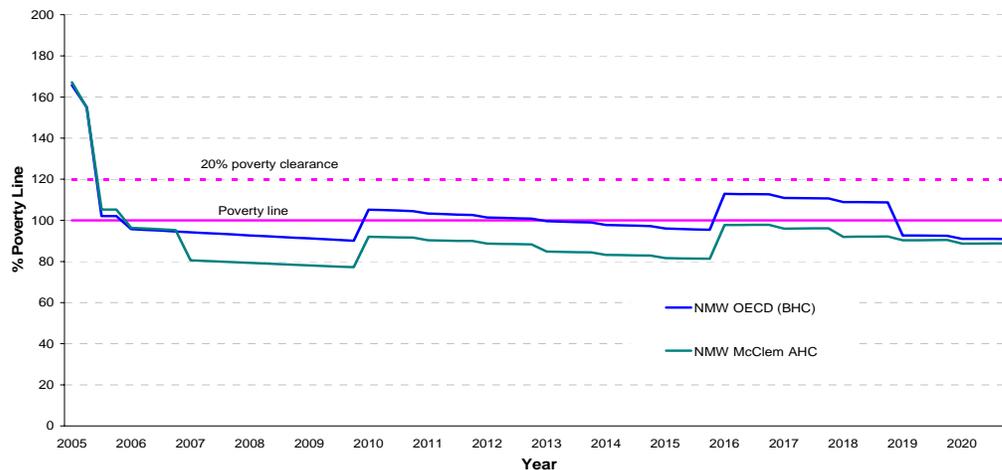


Source: Authors' calculations from LOIS simulation programme

We know from previous results that the period where the family is most at risk of poverty is the later period of single full-time earnings by Marie's partner. If we raise his wages to 1.5 times the minimum wage we can achieve poverty clearance at this point, but poverty continues under AHC McClements assumptions. The minimum wage has to be doubled, to £10.10 an hour in 2005 prices, to clear poverty at this point, and thus throughout childhood on an AHC basis. Figure 3.3 also shows the wage levels necessary to ensure a 20 per cent poverty clearance level, a level of resources that might be necessary to pay for additional charges premiums and contributions to an increasingly market-priced pension, health and education system.

We repeat this exercise for the lone parent family, once more on baseline assumptions but changing wage levels only. Figure 3.4 shows the effect of the Solomons relying solely on minimum wages for the periods when Elona works, both part time and full time. Of course, no change in wage levels will alter the periods when Elona is not working and relying on IS and Figure 3.4 shows that only under the OECD (BHC) assumptions does the national minimum wage prevent poverty in work, but only for short periods. After Elona Solomon returns to work part time when her child reaches primary school age, there is a short period of low poverty clearance that begins at 5 per cent and then declines over time to below poverty levels. Increasing her hours to 35 then raises her once more above the poverty line and then once again her income slowly erodes over time relative to the poverty line. When her child reaches 14, the OECD equivalence assumptions mean that she once again falls back into poverty. The AHC income measure never puts the Solomon family above the poverty line while on the minimum wage. They get very close to poverty, a 2 per cent gap only, when Elona increases her hours to 35 in 2016, but never quite make it.

Figure 3.4
Solomon family: baseline case: earnings at minimum wage



Source: Authors' calculations from LOIS simulation programme

Table 3.2 shows the overview child poverty profile for the Solomons and shows that using the OECD before housing costs measure the family have nine years of poverty with an average gap of six per cent, while they are on average around 10 per cent above the poverty for the remaining years. The AHC results show that only the first year (before and immediately after separation) are above poverty and that the remaining 15 years of childhood are spent in poverty with a 12 per cent gap on average.

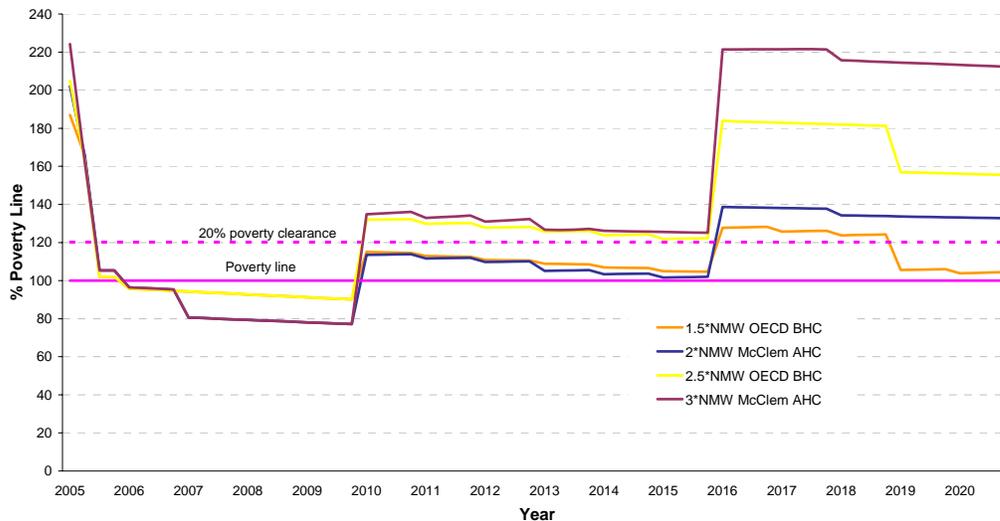
Table 3.2
Solomon family: poverty profile on national minimum wage

	OECD BHC	McCl AHC
Years above PL	7.0	1.0
Av clearance	10.4%	33.1%
Years below PL	9.0	15.0
Av gap	-5.8%	-12.2%

Source: Authors' calculations from LOIS simulation programme

How much higher would wages have to be to avoid poverty? Figure 3.5 shows the outcome of a series of simulations that raises the minimum wage by increments and compares resulting poverty profiles. The main risks of poverty occur in two places, firstly at the end of the period of part-time wages in 2016 and secondly when her child reaches the age of 14 (for the OECD measure). Figure 3.5 shows that a wage of 1.5 times the minimum wage clears poverty at these two points on the OECD measure but that a wage of twice the minimum wage is needed to clear poverty on the AHC McClements assumption. Figure 3.5 also shows the wage levels required to clear the 20 per cent poverty clearance level as an indication of potential poverty clearance needed to pay charges and premiums and contributions to a more privatised set of education, health and pension provisions that may evolve between now and 2020.

Figure 3.5
The Solomon family: wage levels to avoid child poverty



Source: Authors' calculations from LOIS simulation programme¹⁷.

¹⁷ <LOIS\New Output\OPF-CPAG Runs\Wage Increases\Singal v1 Clearing Poverty wks Wage Increase>

3.3 Investment in training

Of course, wage levels reflect underlying skill levels and so far, throughout all of our assumptions and models, we have kept the underlying wage rate constant and 'flat' even though it is rising by average earnings across the period. In the previous LOIS report (Evans and Eyre 2004) we profiled the assumed level of earnings progression necessary to equalise lifetime opportunities for the low paid. We will not repeat or refine that analysis here. Instead, we return to our discussion on unemployment in Part 2. Currently, policy aims to return an unemployed person to work without much consideration about job progression. Indeed, someone may have repeated spells of non/unemployment with little thought about overall earning trajectory. The system is essentially based on 'work first' principles, rather than on investment in skills and training. International evidence tends to suggest that work first is the most cost-effective and successful employment service strategy, but there are often hidden costs in the high likelihood of low pay earners leaving jobs and returning to benefit. Additionally, much of the evidence springs from comparing work first to human capital development approaches, a distinction that seems redundant in aggregate because there are populations for whom the lack of work experience means work first is entirely appropriate and others for whom unemployment is a part of a longer term work experience and who would therefore benefit from access to better jobs.

We therefore simulate a variation of the profiles previously seen in Part 2.7.1 on unemployment. These were based on three experienced short periods of unemployment for the woman earner in both the Brace and Solomon families and were entirely illustrative in nature and not meant to be empirically representative. We simulate an alternative where, on the experience of the second period of unemployment, the system does not merely try and put you back into the same level of job that was associated with the repeated unemployment. This approach can be called 'work first, first; human capital second'. We suggest two alternative approaches,

Better job match which allows a short period of unemployment of six months and concentrates on a better quality job match to a slightly higher earnings level than previous employment. We suggest the outcome is to raise earnings from 1.3 to 1.5 times national minimum wage.

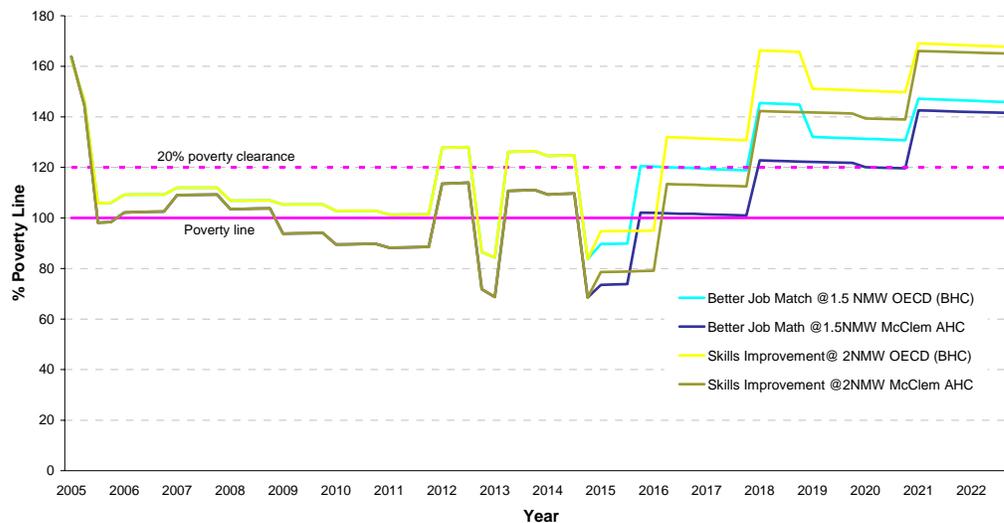
Skills development which allows a longer period out of work of a year in which there is skills development linked to actual jobs of better quality at a slightly higher wage (we use a level of 2 times minimum wage as an

illustrative wage level, but this would reflect a substantial jump in job quality in practice).

We make no assertions about the impact or effectiveness of such approaches on employment service delivery or unemployment or job outcomes. Our simulations are indicative of an alternative approach to employment and earnings histories rather than an example of a proven policy instrument.

Figure 3.6 shows the poverty profiles for the Brace family that could result from these alternative earnings and employment profiles. The better job match profile (BJM) raises earnings levels and prevents the third period of unemployment and these together lead to an escape from poverty or higher level of poverty clearance after the second period of unemployment under AHC and OECD measures respectively.

Figure 3.6
Brace family: impact of alternative approaches to periodic unemployment



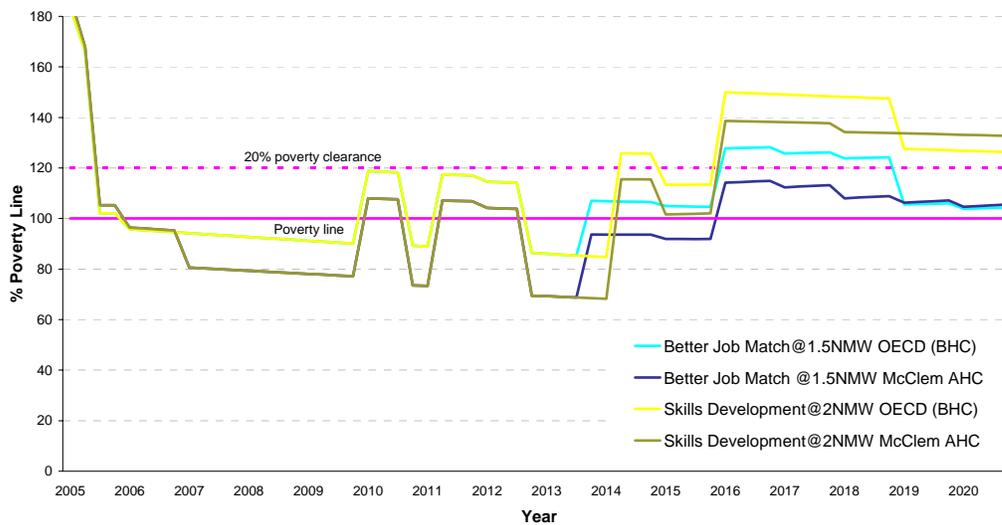
Source: Authors' calculations from LOIS simulation programme

The skills development (SD) approach leads to significant levels of poverty clearance under both OECD and AHC measures after the return to work following the second period of unemployment. Even raising earnings to a level equal to one-and-a-half times the minimum wage can be illustrated as preventing poverty, and if this earnings increase happens later in childhood it helps to counter the downward trend in poverty clearance that occurs with teenage children whose needs are greater under all equivalence assumptions. However, both the BJM and SD approaches may additionally do more to reduce the future risk of

poverty if they prevent people leaving jobs by moving to a better quality of job with higher skills.

We repeat this exercise for the Solomon family and Figure 3.7 shows the potential changes in poverty profile from the earnings and employment histories that match the two alternative approaches to second period of unemployment. The better job match approach helps the Solomons avoid subsequent poverty on the OECD measure but not using the AHC measure – wages of 1.5 times minimum wage are not sufficient to avoid subsequent poverty. However, the earnings profiles that could result from a skills development approach helps avoid poverty using either OECD or AHC measures.

Figure 3.7
Solomon family: impact of alternative approaches to periodic unemployment



Source: Authors' calculations from LOIS simulation programme

3.4 Uprating policy

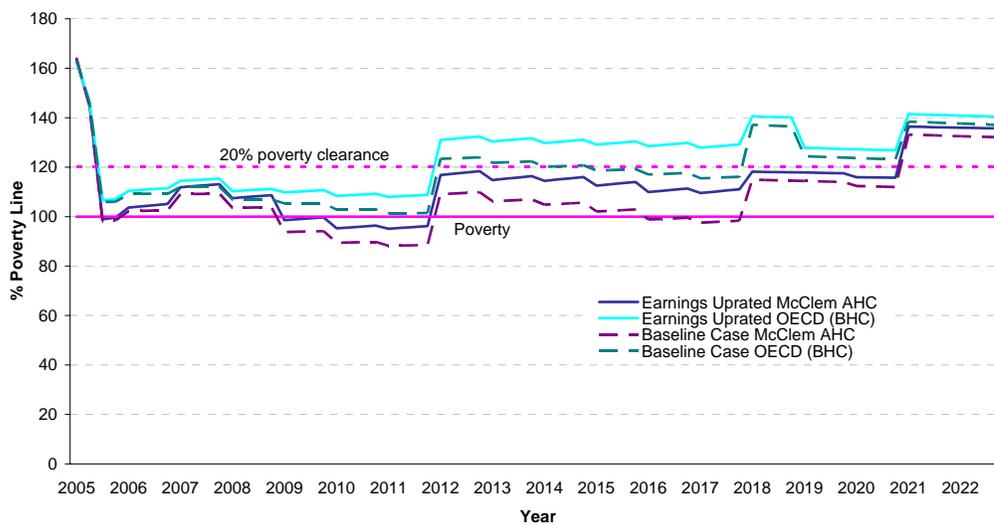
Our results so far show a consistent problem of fiscal in-work help for families with children declining relative to the poverty line over time. One way to solve this would be to consistently uprate tax credit elements by earnings, especially at the lower earnings thresholds, and additionally uprate child benefit with earnings. Compared to our baseline simulations in Part 2, how would these changes in policy on uprating assist avoiding child poverty from 2005 to 2020?

Figure 3.8 shows the baseline profile of the Brace family alongside a re-simulated version with all elements of tax credits and child benefits rising

with earnings. There is much less decline overall in incomes over time relative to the poverty line.

However, earnings uprating on its own will not prevent poverty using the AHC McClements measure. There is both a narrower poverty gap when earnings uprating occurs and far less decline. Poverty gaps in the baseline range from 7 per cent in 2009 to 12 per cent 2012 at the point of highest risk of poverty, but earnings uprating shortens and narrows these to 4 per cent from 2010 to 2012. Poverty using the OECD measure was narrowly avoided over the same three-year period, a 5 per cent clearance in 2009 and a 1 per cent clearance in 2012. Earnings uprating raises these clearance levels to a consistent 9 per cent.

Figure 3.8
Brace family: the effect of uprating tax credits and child benefit by earnings – baseline case



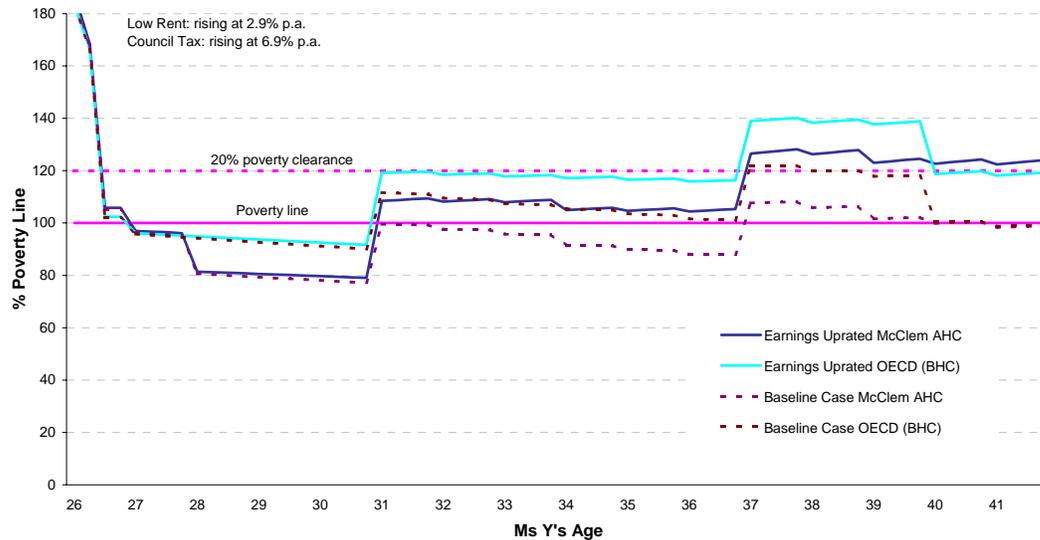
Source: Authors' calculations from LOIS simulation programme

The obvious conclusion from these findings is that earnings uprating of tax credits and child benefits will not in themselves solve the high cost issues discussed in Parts 1 and 2. If we look at the risk of high rent and rent inflation rising faster than earnings, then it is axiomatic that mere earnings-relation of general in-work support will not cover the additional liability of yet higher relative rents. To ensure no AHC poverty then either HB thresholds would have to also rise with earnings (but HB thresholds are effectively IS thresholds and thus stuck with price uprating at present) or rent prices would have to be controlled or subsidised.

We repeat the exercise for the lone parent Solomon family, and Figure 3.9 shows the baseline case and the re-simulated version that uses

earning uprating of child benefit and tax credits. The basic story is that earning uprating helps a single child lone parent family with a low paid earner to avoid poverty – on both OECD and AHC assumptions. This is because the higher per capita help in the underlying structures of fiscal support is not eroded over time as it is under current uprating assumptions. Figure 3.9 clearly shows that the trends we previously saw for the Solomons, of beating poverty only to be slowly sucked down over time, no longer apply. The main changes in relative position to the poverty line are now solely those that come about in step-changes in earnings levels and from changes in the ages of the child and underlying equivalence assumptions.

Figure 3.9
Solomon family: the effect of uprating tax credits and child benefit by earnings – baseline case



Source: Authors' calculations from LOIS simulation programme

3.5 Summary and conclusions from Part 3

This section has employed the LOIS model to look at a small number of potential policy interventions or changes – in improved wage levels, either directly or through increased use of skills development and improved job-matching or changes in uprating policy.

- Imposing sanctions on lone parents' benefit entitlement when out of work could make poverty gaps larger – increasing them from 19 per cent to 27 per cent in 2005 prices. However, positive reinforcement of job-seeking through additional award of benefit could reduce poverty gaps to 5 per cent. Getting the balance right is thus crucial for future

policy for employment and reductions in child poverty. A sanction-heavy regime is likely to have many people who are sanctioned and do not move into work and who recycle back on to benefit because of poorer quality job matching.

- Finding a wage level that ensures elimination of child poverty is a difficult task. Firstly, because of measurement differences for poverty, but also because of changes in needs over time and dual earnings profiles and the potential, or not, of earnings progression. A couple family, using the baseline produced in Part 1 and merely changing the level of earnings of the 'continuous earner' over the whole period of childhood would have to have 1.5 times the minimum wage to clear OECD poverty definitions throughout childhood and twice minimum wage using McClements AHC definitions. However, the majority of the period this moves the family out of poverty for relates to the period of reliance on single earnings while the mother is out of work while the children are of pre-school age.
- A wage level to eliminate child poverty for the lone parent will have most effect when she works part time – prior to her child moving into secondary school. The levels of wages needed to beat poverty are 1.5 times the minimum wage using the OECD definition and twice minimum wage using McClements AHC definition.
- Instead of raising parental wage levels throughout childhood, an alternative approach was tested that looked at raising skills and earning capacity or of matching to a better paid job when parental unemployment occurred. For the sake of argument, this intervention was demonstrated on the second repeated incidence of unemployment. The effectiveness of this approach in preventing poverty depends on when it occurs – i.e. on the age of the children and on the circumstances of the other earner (in a couple). However, raising earnings to 1.5 times or twice the level of minimum wage was shown to reduce subsequent child poverty.
- A systematic uprating of tax credits and child benefits by earnings will help the couple family to avoid poverty during the period when they rely on a single earner – the period when the children are of pre-school age. However, poverty clearance over this whole period is only obtained using OECD definitions and the family would still fall into poverty over time using McClements AHC definitions. However, earnings uprating works better for the lone parent family, where on both OECD and McClements definitions there is no child poverty during periods of parental employment, even during part-time employment. However, such earnings uprating does not prevent

poverty when the lone parent is not working, due to the fact that underlying IS remains only updated with prices.

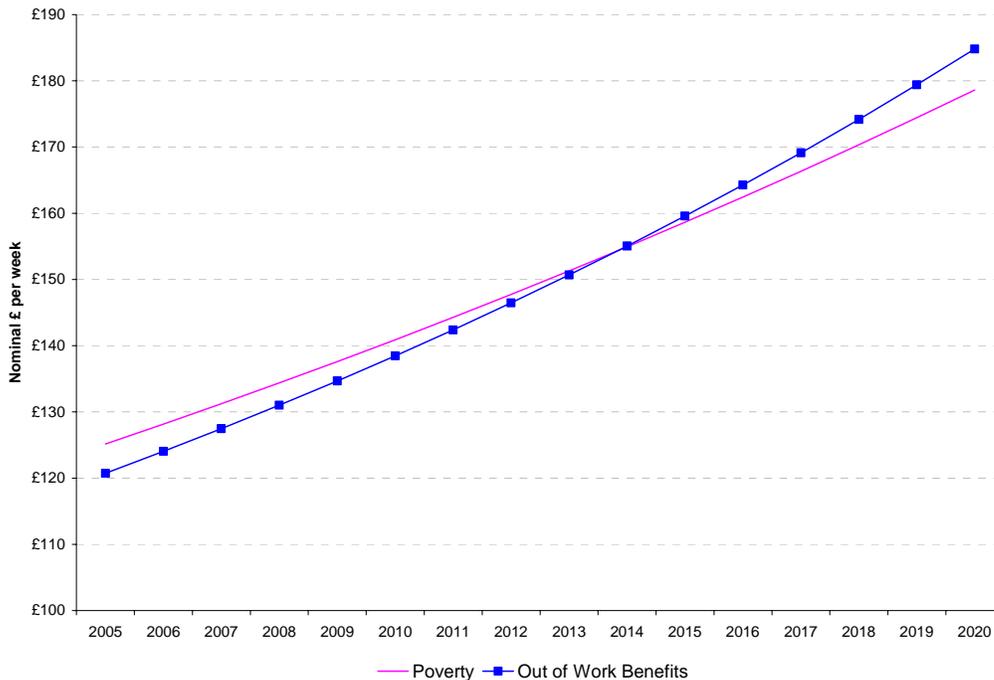
Conclusions

Only the relative target

This report has drawn together the current policy approaches to poverty and work incentives and then projected how the current set of policies will continue to prevent child poverty over the next 16 to 18 years. In doing so we have concentrated purely on only one of the Government measurements of poverty: based on 60 per cent of contemporary median equivalised income. This obviously raises one question about how far our analysis would compare if we used the other measures. The material deprivation measure is still being developed for future use but how would the other measure, absolute low income, perform? This measure is defined as 60 per cent of median income in 1998/9 prices and then adjusted over time by price inflation. From our analysis in Part 1 we know that current attitudes to uprating mean that those families with children we have shown most at risk of poverty, those relying on out of work means-tested support, will benefit from continued uprating of child tax credit by earnings even though their underlying out-of-work benefit will only rise with prices. But the combination of this differential uprating means that out-of-work incomes for families with children will tend to rise ahead of prices, and thus over time the absolute poverty gap will close, with no change of policy.

Figure 4.1 shows these likely trends in price-adjusted poverty line, using the after housing cost McClements poverty line, and out of work support for a lone parent family. The cash poverty line for a lone parent family with a single child was £106 in 1998/9 prices, which when uprated by trend price inflation is around £125 in 2005. The income package of IS, CTC, Child Benefit and in-kind benefits in 2005 was around £121 and thus Figure 4.1 shows that nothing new has to happen to solve child poverty for some of the most disadvantaged families. The current policy of uprating only the child element of CTC will abolish child poverty on these assumptions in around 2014 to 2015. But this means that moving such families into work will have no influence on beating poverty at the lowest absolute measure. This is clearly contrary to current Government thinking and the whole rationale of welfare reform.

Figure 4.1
Absolute poverty and out-of-work support for a lone parent family with one child 2005-2020



Source: Authors' calculations from HBAI and DWP Abstract of Statistics

The reason our analysis did not use this measure is that it is a soft target – indeed, it could even be called a ‘something for nothing’ target – where the Government is able to meet its lowest level of target by failing to make any further policy change and thus failing further to equalise opportunities and reduce fundamental inequalities in resources. If the Government is as good as its word and wants to join together a strategy based on employment opportunities and poverty reduction, then the contemporary relative median poverty line is the only game in town, at least until the material deprivation poverty measure is up and running.

Poverty measurement, living standards and inflation

Returning to discuss relative poverty, our analysis in Parts 1 and 2 has thrown some uncomfortable questions about two fundamental issues of current measurement and approach.

First, there appears to be a fundamental conceptual divide within the Government between the way that poverty is measured and the way that work incentives are considered. There are small detailed problems of consistency and coherence with the different definitions of incomes used within DWP for tax benefit modelling and poverty, but the most fundamental problem is the adoption of different measures to capture the

main driving force of policy, work incentives, and its desired policy outcome – the ending of child poverty. Work incentives, quite appropriately, look at the marginal gains to income from work and take into account the changes to disposable income that arise from changes in fiscal support. When Jobcentre Plus advisers talk to customers about whether they are better off in work they show the effect of potential wages on all elements of income – housing benefits and rent costs, childcare costs and tax credit coverage. This is the heart of current strategy of increasing employment – making work pay. This is the everyday language of an after housing cost approach to income measurement and living standards in the delivery of our employment and tax benefit system. Moving to adopt a before housing costs measure for poverty measurement is thus not only inconsistent with this approach but potentially misleading for domestic policy analysis. Making work pay only beats poverty if we do a conceptual somersault and measure outcomes differently to the way that the employment advisers and their clients see things by using a before housing cost approach. Our results from Parts 1, 2 and 3 clearly show this.

Second, there is a good argument for using before housing cost measurement and for moving to the modified OECD scale; because it is required in order to know whether we are catching up with our European peers on low child poverty rates. But once again, we have to be very careful about confusing outcome measures with underlying important differences in causes of poverty and how they link to measurement. We may well be able to catch up with our peers by adopting a measure that actually simultaneously hides potentially widening differences between us. Let's say that we are able to equal Swedish and Danish child poverty rates through raising more means-tested assistance to pay for more private provision of childcare, housing and other social services. Our parents will be paying more but receiving more means-tested help that is withdrawn as income rises; Danish and Swedish parents will be paying less because more is socially provided and paid for through a more overall progressive taxation approach. This is not to argue that one model is better or worse, but merely to point out that the individuals in each country face very different budget constraints and work incentives and ignoring these misses fundamental differences in actual standards of living, the real heart of any poverty comparison. The fact that a Danish parent receives services as income in kind and a British parent doesn't isn't solved by adopting a common measure that misses fundamental causal differences.

If we return to our analysis we can see how important these differences in underlying provision can be in comparing poverty over time within the UK as well as with other countries. We have shown in Part 1 and Part 2

that rents and other costs are crucial to work incentives and crucial to poverty outcomes. If I am poor and receive £20 to lift me out of poverty, I may not escape poverty if I have to pay the majority of that additional money to my landlord, the childminder and the council tax office. This means that current changes in underlying fiscal, economic and social policy that change rent, childcare and other essential costs to low income families are leading to these costs rising faster than prices and sometimes faster than earnings. Such changes are not accidental but are an outcome of decisions made (or not made) elsewhere by Government, that directly affect the living standards of low income families with children but which are not adequately compensated for in the fiscal approach to reducing child poverty. While tax credits have increased incomes in work and reduced child poverty, they are only a part of the story.

Policy deliberations

There is firstly a problem with per capita levels of support for families. The larger the family the less in equivalised terms it received to help it against child poverty. Underlying this problem of relative generosity for family size is a more fundamental problem for all families with children: the current assumptions about both the uprating of fiscal support for families and allowing fiscal drag to continue to rise. While the policy spotlight is trained on Tax Credits making work pay today, surrounding the spotlight policy is a more regressive darkness that slowly eclipses them and which by 2020 will mean the curtain coming down on only shadows. The ability to supplement low earnings with tax credits to combat relative poverty will not last over time nor do enough to abolish child poverty. However, there is an even more worrying cumulative effect for those who are low-earning parents because the costs of rents, childcare and other items are rising faster, and potentially completely wipe out the gains against the poverty line that tax credits make over time. We showed the effect of these differential price trends in Part 2.

In Part 3 we showed how far a more consistent uprating of fiscal support for children and low-paid earners may help maintain anti-poverty impact. But even so, if rents increase above inflation then they lose their anti-poverty effect because low income families have to spend more of the help they are given to pay the rent and will fall ever towards poverty.

The problem with using the OECD before housing costs measure is thus not only that it obscures and confuses a consistent analysis of poverty and work incentives but also that it hides fundamental issues about the costs and consequences of larger areas of social policy on child poverty.

This means not only joining up definitions and strategy within the DWP, but also across Government.

Responding to poverty and attacking the causes of poverty have to be done simultaneously. It is commendable to tackle child poverty because it will have long-term beneficial outcomes on inter-generational risk of poverty. But today's parents have to work harder or work smarter to ensure their incomes rise sufficiently to keep their poverty clearance levels. Working harder is a problem because the current system has developed a cumulative set of tax and benefit withdrawal rates that cumulate to very high effective marginal tax rates. In Part 1, we showed how these were highest – 96 per cent in the pound – for those who received housing and council tax benefits alongside tax credits. Working harder while rents and council taxes are rising means that not only are the rewards for work limited but that the rewards for future work are blighted. High effective marginal tax rates are not just a problem of rewarding work at the time of writing but could continue for the next 16 years and could be continuous for those who pay high rents.

The alternative to working harder is working smarter – or up-skilling. The problem is that low pay and low skills are reflections of each other and low pay brings with it other risks, particularly of unemployment and repeated future poverty. If working harder is difficult because of marginal tax rates then what are the opportunities to up-skill? This should be a cornerstone of any policy with 'equality of opportunity' as its stated aim. Moving from long-term unemployment to employment is to move towards more equality of opportunity, but repeatedly moving between low pay and unemployment is not because there is no equalisation of the risk of unemployment. We illustrated potential gains to earnings profiles from better job matching and a more skill-based employment service strategy. The next 16 years are as much a trajectory for *parents'* lives as for their children. This means that improving parental opportunities is important and moving away from a solely short-term transition-based system of welfare to work towards a more earnings-progression based approach, and career development, could help. The effects of resulting higher earnings on potential child poverty have been shown in Part 3.

On the other hand, the potential of policy to be both more mandatory in its approach to job entry and to be more punitive in sanctions could lead to larger poverty gaps when out of work. In Part 3 we illustrated the effects of sanctions and of positive rewards for job search on out-of-work incomes and their potential for worsening child poverty. Such changes may also promote worse job-matching, worsen employment retention and advancement and lead to higher levels of cycling between work and benefits.'

The risk of child poverty after separation is acute, especially for low earners. The ability to retain employment is important and was illustrated in Part 2. Employment retention on separation should be an integral part of family-friendly employment practice across all sectors and earnings levels. Maintenance too makes a potentially significant impact on child poverty for low paid families and making any child support system viable and workable must be a central plank of policy.

This report has sought to unpick the current policy commitment to abolish child poverty by 2020 and to show, through relatively simple extrapolations of current policy, where the threats and opportunities to succeed are. Policy now is a lot better placed to achieve this aim than it was five or ten years ago but there are still things that have to be seriously considered to make sure that fiscal support through taxes and benefits can support and be supported by other areas of policy. Our analysis has been extremely limited in technical scope; we have merely portrayed today's policy for a set of simple model families over the next 16 to 18 years. Other analysis is needed, that joins up the problems we have outlined in costs and work incentives and shows their potential behavioural effects on the population, on the aggregate effects on the whole population of families rather than on just our simple model family lifetimes from 2005 to 2020, and on measurement too.

To conclude, the current system appears not to have 2020 vision but to be myopic. 2020 vision only seems to be possible if we measure poverty in absolute terms, where even on the current partial earnings uprating approach the out-of-work benefits package will rise above poverty for small families or, alternatively, when using a before housing costs approach to measuring poverty. However, such an approach to measurement is analogous to the optometrist moving the test screen forwards rather than attempting to solve the underlying real problem. Everyone knows that you can 'solve' myopia by changing the distance between you and your newspaper. What policy makers with a vision of abolishing child poverty require is a more structured and long-term approach that ensures that the poor living standards that blight children's and adults' lives are fundamentally addressed and not simply redefined in soft focus.

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