

The impact of benefit and tax uprating on incomes and poverty



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The impact of benefit and tax uprating on incomes and poverty

**Holly Sutherland, Martin Evans, Ruth Hancock,
John Hills and Francesca Zantomio**



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List of abbreviations

AHC	after housing costs
ASHE	Annual Survey of Hours and Earnings
BHC	before housing costs
BSP	Basic State Pension
CPI	Consumer Prices Index
CTB	Council Tax Benefit
CTC	Child Tax Credit
DWP	Department for Work and Pensions
FIS	Family Income Supplement
FRS	Family Resources Survey
GC	Guarantee Credit
GDP	gross domestic product
HB	Housing Benefit
HBAI	Households Below Average Income
HMRC	HM Revenue & Customs
HRT	Higher Rate Threshold
IS	Income Support
JSA	Jobseeker's Allowance
LOIS	Lifetime Opportunities and Incentives Simulation model
METR	marginal effective tax rate
MTAWE	male total average weekly earnings
MTB	Means-tested benefit
NES	New Earnings Survey
NICs	National Insurance contributions
PC	Pension Credit
RPI	Retail Prices Index
S2P	State Second Pension
SC	Savings Credit
SERPS	State Earnings Related Pension
TBMT	Tax Benefit Model Tables
UB	Unemployment Benefit
UEL	Upper Earnings/Profits Limits
WTC	Working Tax Credit

1 Introduction

Each year in the UK, around 330,000 people reach the age of 80. They then – if entitled to a Basic State Pension in their own right – are told that they will receive an addition of up to 25 pence per week in their state pension. This is often the cause of hilarity about whether to spend the increase on a stamp for a letter of thanks to a munificent government – and possibly also a cause of resentment at such a derisory amount if the Government really thinks that those over 80 have additional needs compared to younger pensioners.

This addition has been 25 pence per week in cash ever since it was introduced in September 1971. Had its value been increased each year in line with the growth of average earnings, it would have been worth nearly £5 per week in April 2007 – not a large sum, but still significant by comparison with the basic pension of £87.30 per week.

Famously, of course, the previous link between the basic pension itself and earnings was broken in 1981, and since then annual adjustments ('upratings') have been mostly in line with the slower increase in prices. Had the basic pension risen in line with average earnings growth since 1980, it would have been £137 per week in April 2007 – more than half as high again as its actual value.

Or, to take another example, the single personal tax threshold was set at £595 per year when the income tax system was unified in 1973. Had that value also kept up with average earnings growth, it would have reached £8,780 per year in 2006–07. The difference between this and the actual threshold of £5,035 is worth £825 per year to a basic rate taxpayer in terms of the higher income tax being paid.

As these examples illustrate, what happens over time to the way in which benefits and taxes are uprated can have large implications for the ways in which different people are treated. It also has major implications for public spending. The social security budget in Great Britain was £118 billion in 2006–07. A decision to increase all of its parameters in line with earnings growth in 2007–08 would have meant a cash increase of about £4 billion. If it had all been increased in line with prices, the cash increase in spending would have been only £2.8 billion (with increases in inflation measured by the Retail Prices Index). To put it the other way round, a decision to freeze all the cash values of the system would have meant 2007–08 spending around £4 billion less than a decision to preserve the value of all benefits relative to earnings.

Arguably, by the far the most important social security decision of the Conservative Governments under Mrs Thatcher was to break the earnings links that they inherited in 1979. In the long term, the failure of benefit incomes generally to keep pace with other incomes has been one of the biggest influences on the widening of living standards (Bradshaw and Lynes, 1995; Hills, 2004, pp. 90–3).

Such adjustments – and their feasibility if not made regularly or automatically – can also lead to structural changes in policy. By the time the dog licence was abolished in 1987, it was still set (bar the odd halfpenny) at the 37 pence equivalent of its pre-decimalisation value of 7s 6d, presumably making it more expensive to collect than the revenue brought in. More seriously, the Government abolished the old taxation of the annual value of owner-occupied property under ‘Schedule A’ of income tax in 1963, rather than face the consequences of trebling the amounts subject to tax from their 1936 cash values. The system of domestic rates in Great Britain was replaced by the Poll Tax in the 1980s following the political impact of a long-delayed rating revaluation in Scotland. Again, a large part of the recent debate around pension reform has centred on the long-term consequences of the default policies under which the basic state pension was assumed to be uprated each year in line with price inflation, while the means-tested minimum for pensioners (currently the ‘Guarantee Credit’) would be increased in line with earnings growth.

Uprating rules also have particular relevance at present for the prospects for meeting the current Government’s child poverty targets in 2010 and 2020, especially those targets that are set as the proportion of children with household income less than 60 per cent of the contemporary median. If median income rises faster than benefit incomes, then headway towards the targets will be virtually impossible to achieve (Sutherland *et al.*, 2003; Glennerster *et al.*, 2004; Evans and Scarborough, 2006; Hirsch, 2006; Brewer *et al.*, 2007).

What happens each year to the levels of benefits and tax allowances thus has major implications for the standards of living of different groups, for the rate and depth of poverty, and for the public finances. And yet many of the adjustments are made – or not made in cases such as the 25 pence extra pension at 80 – by default and with little debate. Even when the breaking of the earnings link was announced in 1979, the Secretary of State, Patrick Jenkin, said that beneficiaries could still look forward to ‘sharing in the increased living standards of the country as a whole’ (Bradshaw and Lynes, 1995, p. 15), rather than this being debated as a long-term change in policy towards price uprating. Adjustments also follow a widely varying set of rules (see Chapter 3 of this report). While, as the next chapter discusses, there may be good reasons for following different rules where the objectives of parts of the tax and benefit system vary, it is by no means clear that either the public or politicians understand the long-run implications of these rules.

This report is intended to stimulate debate around these issues. The next chapter discusses the range of principles around the ways benefits, tax credit rates, tax allowances and tax thresholds are set, and the implications of different objectives for how their values might be adjusted from year to year. Chapter 3 discusses the principles used in other countries, while Chapter 4 describes recent practice in the UK. Chapter 5 sets out how the UK system would evolve in coming years if recent conventions continued to be followed, taking account of the structural reforms to the direct tax and tax credit systems announced up to the 2007 Budget. Chapter 6 examines the implications of recent conventions and stated policy regarding uprating (which we term the 'base case'), looking over the short term (six years) and medium term (20 years). The gradual effects of changes over several years are modelled as if they had taken place all at once for a series of hypothetical individuals and for the population as a whole. After considering the effects on income distribution and poverty in Chapter 6, Chapter 7 describes the effect of base case uprating on work incentives and Chapter 8 explores how much of the base case is due to effects on benefits and how much on taxes. As will be seen, the implications of this would be, other things being equal, a very substantial boost to the public finances, with tax revenues rising and benefit spending falling as shares of national income, as well as substantially rising relative poverty. Chapter 9 therefore looks at the implications of alternative scenarios that would involve less of a gain to the public finances and less of an increase in poverty.

In Chapter 10, we look at levels of income for the older population, in particular examining the implications of the reforms introduced by the 2007 Pensions Act by comparison with previous indexation conventions for state pensions. It takes some different perspectives, examining the effects on a cohort of older people as they age through six and 20 years, and following hypothetical individuals through retirement. Chapter 11 concludes.

Although in many ways invisible, and often seen as technical, the manner in which benefit and tax credit levels as well as tax thresholds are adjusted from year to year is one of the biggest decisions in British politics. One can draw a parallel with climate change, albeit on a more parochial level. The effects are only gradual and seem imperceptible on a year-to-year basis. But how we respond to them has immense implications for the future. The aim of this report is not to set out any particular prescription for future decisions, but to make more visible the scale and implications for the income distribution, poverty rates, incentives and public finances of current conventions and of some alternatives.

2 Issues of principle

In the UK, most of the rules determining the ways in which the benefit and tax credit systems are run are set in cash amounts, as are important aspects of the direct tax system. Without adjustment, if there is inflation and real income growth, these amounts will steadily lose value both in terms of what people could purchase and relative to other income sources. This contrasts with the most important parts of the social security systems of some other countries, where, for instance, contributory benefit levels are set as a proportion of past earnings and so are – at initial payment at least – automatically buoyant with those earnings. Making adjustments from year to year – sometimes known as ‘bracket indexation’ in the context of taxes – is the focus of this report. This is often referred to as ‘uprating policy’.¹

Under the heading of ‘uprating policy’, we might classify the following procedures:

- a formula fixed in advance by law, requiring government intervention to suspend or vary the rule;
- a formula promised in advance but not legally binding;
- a formula that is applied as a convention but is not an advance commitment;
- an ad hoc change in benefit level without reference to a formula.

In this report we consider all but the last of these to be ‘uprating’.

In assessing current uprating practice and alternatives, it is helpful to distinguish why particular approaches might be appropriate in different circumstances. These are summarised later in this chapter in Table 1.²

First, if the tax and benefit system is constructed with aims of affecting *inequality in living standards*, then adjustment in line with a measure of mean net (after tax) income growth would be appropriate as a starting point. If this is not done, and benefits are of greater importance for some (usually those with lower incomes) than others, their incomes will fall behind – what we describe below as ‘benefit erosion’. Equally, if the brackets or thresholds of the taxes on income (income tax and National Insurance contributions) are not adjusted with income growth, the shares of different people’s income taken in tax will change, and with them the shape of the income distribution. Such ‘fiscal drag’ has implications for both the distribution of the tax burden and the amount of tax revenue collected (Hills and Sutherland, 2004). By

contrast, if all incomes grow by the same proportion, and with them benefit rates and tax brackets, the relationship between net and gross incomes will stay the same, as would direct tax revenues as a share of aggregate income.

Related, but distinct from aims connected with the overall shape of the net income distribution, are aims connected with a specific part of it. In particular, if benefits and tax credits are designed to achieve reductions in *relative poverty*, their values need to rise *at least* with the benchmark of income (or other measure of resources) used to set a poverty standard. In the UK at present, this would mean keeping up with a measure of *typical incomes* (specifically, median household disposable income adjusted for household size). The motivation behind the concept of relative poverty – that resources should be judged relative to the prevailing typical level – could be applied more generally across the income distribution, not simply in relation to the poor.

As a variant of this, some argue that the benefit rates that set society's minimum should be set explicitly to allow those dependent on them to achieve a *minimum living standard* set in relation to contemporary views. Adjusting benefits in line with such 'minimum income standards' requires a three-stage process: periodic recalibration of just what it is that is required for a minimum living standard, finding out what this budget costs to achieve given contemporary prices and, finally, establishing what income is necessary to deliver it. Adjustments to taxes and benefits then follow a combination of the changing minimum (consumption) standards and changes in prices such that disposable incomes keep track with the evolution of the cost of the minimum budget.

By contrast, if benefits are designed to guarantee a particular *real*, but unchanging, standard of living, adjustment would need to be by prices – potentially by a *price index* specific to the group receiving the benefit. For instance, the aim may be to allow a pensioner to continue to purchase the same basket of goods, in which case the relevant price index is for that basket – or for a proxy, such as the 'pensioner prices index'. In the UK case, a special price index – the Rossi index – which excludes changes in housing costs is used to adjust certain social security benefits that are assumed to cover non-housing costs (housing costs being assumed to be covered by the Housing Benefit system). In other cases in the UK, the Retail Prices Index (RPI) for all items is used. An alternative, the Consumer Prices Index (CPI), is commonly used in other countries, although there are also examples of special price indices, such as the Belgian 'health' price index that excludes tobacco and alcohol prices, to which all the main components of the benefit system are linked.³

Fifth, if benefits are seen in some way as a *return on contributions*, as is loosely embodied in the UK national insurance system (but more firmly applied in some other continental European countries), then their values may be linked to what people have paid in or the 'contribution base'. This might suggest a link with, for instance, *gross earnings* (as opposed to net incomes or prices).

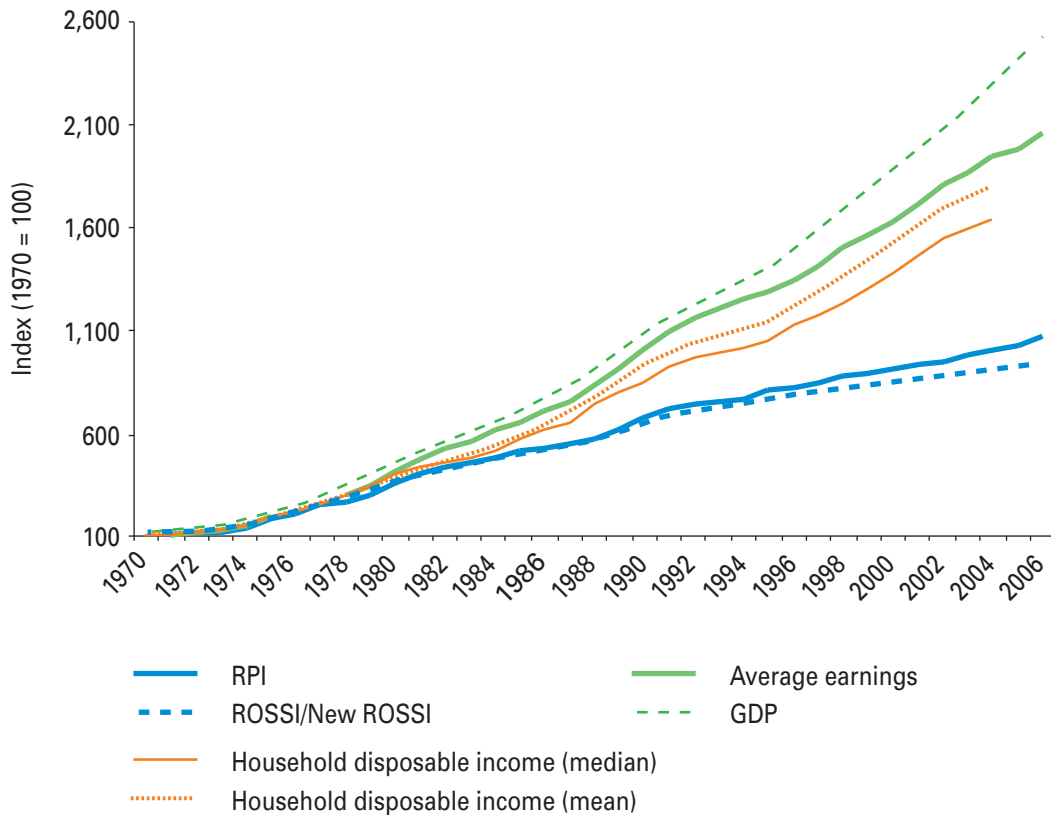
Sixth, however, policy may be most driven by questions of *affordability* in terms of the public finances, rather than by what might ideally be achieved. In this case, it may be growth in the economy or *potential tax base* that is most relevant – for instance, gross domestic product (GDP) growth. At times of high growth, benefit levels would rise such that recipients had some share in the country's increasing prosperity. Interestingly, the UK Treasury's long-term fiscal projections assume no fiscal drag and a constant tax to GDP ratio, although benefits are generally assumed to be linked to prices (HM Treasury, 2007a, Annex A).⁴

These aims may be relevant for different aspects of the tax and benefit system, so it is not necessarily illogical for its components to be adjusted in different ways. One instrument may also be contributing to more than one objective, leaving a difficult balance if the relevant reference indices change at different rates. As discussed in the next chapter, some countries use weighted averages of different indices to uprate certain benefits, to some extent reflecting a compromise between multiple goals.

Figure 1 compares how some of the measures discussed here have moved since the early 1970s, showing how the implications of the effects of uprating are very different depending on the index used and the underlying principle guiding its choice. Earnings have grown by nearly twice as much as prices (measured using RPI) over the 36 years shown. Median household disposable income (equivalised as for poverty measurement) has grown at a rate between that of prices and earnings – at 85 per cent of earnings, but 62 per cent more than prices.

Components of the system not only contribute in a number of ways, they also interact. Differential uprating, widely applied in other countries, will alter the nature of the interaction and the people affected by it. For example, a major issue in the recent debate around UK pension reform was the relativity between the Basic State Pension and the means-tested minimum income for pensioners (the Guarantee Credit level). If the former had remained price linked indefinitely, but the latter earnings linked (as in recent policy and assumed by long-term Treasury projections), the proportion of pensioners potentially affected by means testing would have grown substantially over time (Pensions Commission, 2006). Such developments may or may not be in line with the objectives lying behind the differential uprating. So a further principle might be *coherence*. Following this, regardless of the size of the annual adjustment,

Figure 1 Prices, incomes and earnings, 1970–2006 (1970 = 100)



Sources: Retail Prices Index (RPI), Rossi/New Rossi index and Average Earnings Index (DWP, 2006a).

Gross domestic product at market prices YBHA: ONS, www.statistics.gov.uk/STATBASE/tsdataset.asp?vlnk=574&More=Y.

Household disposable income (equivalised) mean and median: IFS inequality and poverty spreadsheet accompanying IFS Commentary No. 101, *Poverty and Inequality in Britain: 2006*, downloadable from www.ifs.org.uk/projects_research.php?project_id=127.

it should be common across all parts of the system. As Chapter 3 discusses, some countries use multiples of a common amount (such as the ‘guaranteed wage’ case in Slovenia or the ‘base amount’ in Sweden) to specify different parts of their systems, so that adjustment of that common amount affects each of them in proportion.

While one or more principled objectives may underlie uprating policy, what can be done in practice may be constrained by other policy objectives. In particular, concern about work incentives may have the effect of dampening enthusiasm for uprating by more than some minimum. For some objectives, securing a widening gap between incomes in and out of work, or at least not narrowing it, might operate as a constraint on what is feasible in terms of increasing benefits. If benefits rise any less

fast than the earnings that benefit recipients might receive, then, other things being equal, the incentive to work may improve. However, as will become clear, and as we explore further in Chapter 7 of this report, what happens to the indexation of in-work benefits and tax credits matters as well as what happens to out-of work benefits. The implications for work incentives of slow rates of indexation of the whole system are not necessarily obvious.

As well as the choice of index, there is a number of technical issues related to the timing of benefit increases and the way they are calculated and rounded that affect the actual benefit payments received. These issues are important, and are discussed further in Box 1, but are not the focus of this report. In our modelling work discussed below, we do not apply rounding and apply constant rates of inflation and earnings growth beyond the immediate future.

The starting point

Setting out such principles takes for granted, however, that the starting levels are what are in fact desired and the only issue is adjustment to keep them in line with the appropriate benchmark for the objective. However, policy-makers are often faced with the challenge of reforming a system from what is, from their point of view, an unsatisfactory starting point. One way of dealing with this is, of course, immediate reform to reach the desired level at once. Often this would mean immediate 'cash losers', as those now seen as overgenerously treated have their weekly benefits cut. It might also mean immediate jumps in tax bills and cuts in take-home pay, as the tax burdens for different groups are rebalanced. While those gaining from such changes would receive their gains at once as well, conventional wisdom is that the political costs from visible losers are usually greater than the political benefits of visible gainers (even if the two groups are evenly matched in size). Either as a way of exploiting 'money illusion' to disguise the losses that are occurring for some, or as a way of slowly phasing in structural changes in a way that minimises disruption to household budgets, transitions to a new system are often made by using more or less generous uprating than implied by the underlying principle, until the intended structure is reached.

For instance, the behaviour of governments since 1971 suggests that they do not, in fact, believe that there is any reason for the basic pension for those aged 80 to be any higher than that for those aged 79. However, rather than risk the opprobrium of simply abolishing the addition one day, they have been content to let it 'wither on the vine' – a tactic that was important, for instance, in the eventual abolition of mortgage

interest tax relief, achieved only when what had originally been a high limit in relation to house prices had fallen far behind them, so the relief had a relatively small impact on people's mortgage payments. In the other direction, desired rates can be achieved from below, perhaps minimising their costs when introduced (and possibly maximising the occasions on which gainers might feel cheerful) – the way in which the National Minimum Wage has increased *faster* than average earnings since it first came in might be an example of this kind.

The difficulty of such adjustment from 'policy disequilibrium' is that what is happening is seldom made explicit – indeed, sometimes the objective is precisely to disguise from some of those affected what is going on. So a final principle that might guide uprating practice might be that of *flexibility* – to minimise the extent of uprating, leaving the Government free to make the adjustments that follow from their political priorities and the economic circumstances, and permitting it to claim credit for increases that in fact maintain only the status quo. Having no rule at all *could* be quite consistent with desirable outcomes if there was full public understanding of the issues at stake and *if* changes in benefits and taxes, as well as redistribution of incomes, were a major item of public discussion and democratic debate.

Indeed, the period since 1997 has seen the Labour Government's goal to reduce child poverty reflected in increases in maximum payments for children through the benefit and tax credit systems that amount to more than they would have with regular uprating by earnings. For example, in 1997, the amount paid for a first child aged under 11 and living with two parents through Income Support was £27.70 per week. If this had been increased in line with earnings, it would have been £41.79 in 2006–07. Following ten years of reform, the combined value of Child Benefit and maximum Child Tax Credit in 2006–07 was in fact £61.87 per week for a first child (if aged over 1) – worth nearly 50 per cent more than uprating by earnings. This restructuring of child payments should not be seen in isolation, however. Not only is the effect of restructuring different for children in one-parent families, by family size and by age of child, the effect on household income and hence the risk of being in poverty depends on other parts of the benefit and tax systems supporting other household members, as well as other factors. For an analysis of the overall effects of the reforms on poverty and inequality since 1997, see Sutherland *et al.* (2003) and Brewer *et al.* (2007). The effects relative to the growth in incomes as well as in relative price terms are considered by Hills (2004, Figure 9.5) and Hills and Sutherland (2004).

Table 1 summarises the discussion of this chapter in terms of the links between aims and uprating systems. However, as becomes clear in the review of practice in other countries in the next chapter, it is often not straightforward to distinguish between different objectives, or between uprating and phased structural reform.

Table 1 Indexation: summary of aims and implications

Aim	Implication for choice of uprating factor
1. Unchanging inequality	Average income (e.g. mean after tax income)
2. Unchanging relative poverty	Typical incomes (e.g. median equivalised household disposable income)
3. Keeping track with a Minimum Income Standard	Change in income necessary to achieve a contemporary budget standard
4. Unchanging real standard of living	Relevant price index (e.g. Retail Prices Index, Rossi Index or Consumer Price Index)
5. Constant return on contributions	Gross earnings
6. Public finance affordability	National income (GDP)
7. Coherence	Common factor across elements of the tax-benefit system
8. Government flexibility	None

Box 1 Rounding and timing issues

Applying exact adjustments in line with percentage amounts of price or income growth could mean amounts that were previously easily expressed amounts – so many pounds per week or hundreds of pounds per year – would become amounts with odd numbers of pence, or even fractions of pence. To ease administration, the results of such calculations are usually rounded (and sometimes the rounding rule is set in the law, as in the Australian case) – in the case of benefit levels in the UK to the nearest 5 pence per week and tax credit levels to the nearest £5 a year. In the case of tax thresholds and allowances, the convention is to round *up* to the nearest £10 per year except in the case of the basic rate limit and the age allowance income threshold, which are rounded up to the nearest £100 per year. Over time, such rounding can have cumulative effects that create significant changes in values, particularly if the convention involves systematically rounding up or down. For example, over 20 years of uprating by the RPI (as given in Appendix 2), the effect of the rounding convention on the 2006–07 tax allowance would be to increase it by 1.5 per cent more in nominal terms than uprating without rounding would do. In the case of the basic rate income tax threshold, rounding gives rise to a 2.5 per cent higher level over 20 years than from exact uprating alone. However, in the case of Child Benefit, rounding would result in almost no difference in the value after 20 years.

These examples assume a constant inflation rate after the initial period. Fluctuating rates of inflation and growth can create possibly unintended effects.

For instance, at the current time, the Basic State Pension is increased in line with changes in the Retail Prices Index, or by 2.5 per cent at a minimum, if inflation is low. Over time, with fluctuating inflation rates, this would be expected to lead to growth in the real value of the pension. Another example is the policy of the 1970s that the pension should increase with the *faster* of prices or earnings. In (unusual) periods when earnings grew more slowly than prices (as in the early 1980s),⁵ this had a ‘ratchet’ effect, which meant that, over time, the basic pension could have grown faster than earnings.

If inflation and income growth were constant over time, the reference period of the updating index would not be an issue. But in reality they fluctuate over time. This leaves policy-makers with a dilemma. ‘Forward-looking’ adjustment, applied for example in Hungary and in the UK in the late 1970s and early 1980s, based on *expected* changes, might do better in keeping benefit and tax amounts in line with the intended objective. However, if the forecasts turned out to be wrong, later adjustment might be required (but would be hard to explain). Alternatively, ‘backward-looking’ adjustment, used in most countries, including the UK today, based on known past changes, would be more robust, but might leave values varying from their intended level – for instance, if inflation sharply accelerated, the purchasing power of those benefits based on past price changes would fall behind.

3 International practice¹

To illustrate the wide range of potential approaches to indexation, this chapter examines current and recent approaches in a number of contrasting countries. Benefit systems in different countries can be extremely diverse in a number of dimensions: the nature and magnitude of different programmes, the tax mix used to finance social support, the relative role of local and central governments in setting the rules and therefore the degree of within-country variation, the incidence of means-testing mechanisms, sensitivity to ‘poverty trap’ concerns, private pension expansion and so on (Adema, 2006). In countries such as UK, Australia, and Canada, welfare systems are financed mainly through general taxation and characterised by an extensive use of means testing aimed at providing social support only to those deemed in need. Scandinavian countries take a more universal approach, providing support based on citizenship rather than on need. In continental Europe, most programmes are contributory based, therefore eligibility and often the level of entitlements depend on the past contribution history. Also, while in most OECD countries payments levels are defined centrally, as is the case in the UK, there are systems where payments can vary across local areas, as in the USA, Canada, Norway and Switzerland. Moreover, indexation practices may vary for different benefits and single components of benefits within a single country. However, similar types of system are not necessarily characterised by the same types of uprating.

All these reasons make it hard to classify benefit types for comparison purposes (Gutierrez *et al.*, 2005), so that we cannot simply categorise benefits and compare adjustments for each category across countries. The way the benefit is funded, the eligibility restrictions to particular population groups and the base amount to which its level is set could justify different uprating practices, even in the light of the same equity principle (Cantillon and Van Mechelen, 2004).

Adjustment mechanisms across the world

Benefit uprating procedures differ across countries along several dimensions, as summarised in Table 2. Indexation might be required by the law and therefore be applied automatically (as happens in Slovenia, Denmark, Belgium, Australia), or left instead to government or parliamentary discretion (as is the case in Ireland).

Table 2 Dimensions of international uprating policy differences

Dimensions	Possibilities	Example
Legal requirements	Legal: automatic indexation (timing and formula) Discretionary (government initiative) Combined: Government/Parliament has statutory right to uprate	Denmark Ireland New Zealand
Legal coverage	Overall tax-benefit system Single tax-benefit components	Denmark EU new member states
Role for political process	Statutory provision can be de facto suspended No legal provision but regular de facto adjustment	Belgium Ireland
Adjustment base	Prices – CPI Ad hoc price indices Average wages (net or gross) Social contribution revenues Weighted averages of above measures Ad hoc adjustments (structural reforms)	USA Belgium Netherlands Latvia Czech Republic Estonia
Base measurement timing	Past increase Predicted increase	Australia Hungary
Adjustment timing	Fixed occurrence Trigger mechanisms	Australia Belgium
Extent of differential uprating	Unified system Different rules for different tax-benefit components	Denmark EU new member states

In some cases, the law prescribes both the timing for periodic uprating and the formula to be applied (e.g. under the Australian Social Security Act). Some countries have adopted a combined approach, so that the law requires uprating without specifying the formula or rather gives to the Government the statutory right arbitrarily to modify benefit amounts (as happens for New Zealand benefits, with the exception of pension payments, which are fully regulated). Also, the law might cover the overall benefit system (as in Denmark and Belgium) or just specific parts of it, as happens in most countries. In any case, the existence of a legal requirement for uprating interacts with the political process in such a way that de facto uprating choices might deviate from statutory provisions. On the one side, statutory adjustment might be suspended (as happened in 1999 for Hungarian pensions, or in Belgium in the 1990s) or only partially applied. On the other side, regular adjustments might be applied in countries where there is no statutory provision for automatic indexation, as part of the budget process (in Ireland, Germany and New Zealand, for example). The existence of a legal provision for uprating can, however, contribute to the transparency of political choices, as deviations from the law will need to be discussed explicitly and justified in the public arena.

In addition, different countries adopt various indices as the basis for their adjustments – mostly general price indices, such as the CPI (Canada, USA) or alternative indices excluding particular types of goods (for example, the Belgian ‘smoothed health index’ excludes tobacco and alcohol); but also average wages (Denmark and Netherlands), social contribution revenues (Estonia, Latvia) or weighted averages of different measures (mostly a combination of prices and wages as for pension payments in Hungary, Czech Republic, Finland, Poland, Slovak Republic, Switzerland). Their development is usually measured over some past period of time, typically the previous year. Occasionally the official predicted increase is used instead (as is the case in Hungary). In the case of wages, the measure can be either gross or net. In practice, net wages are expected to increase more slowly than gross wages on the assumption that, with ageing populations, the tax burden on the working-age group will have to rise (Disney and Johnson, 2001).

The point in time when adjustment occurs is mostly fixed once or twice a year; alternatively, indexation can be triggered automatically when some threshold of change in the index is reached any time during the year (as in Belgium and for the New Zealand pension adjustment).

The extent to which differential uprating is applied varies across countries. Apart from a few examples of unified systems, as in Denmark and Belgium, most countries adjust different components of the system according to different rules. For example, besides a general inflation indexation for benefits, pension payments are adjusted for accounting only, or also for average wage change (e.g. in Australia, New Zealand and Slovenia). Finally, budgetary constraints, standard of living concerns, political acceptance of benefit support and local government discretion play roles to some extent in any country.

Some countries adopt the same indexation rule for all parts of the public pension system (Belgium, Canada, Hungary, Ireland, Norway, USA); other countries use differential uprating for different components (Finland, France, Iceland, Sweden). In some the wage link is used for the targeted scheme (Australia, Iceland, France), according to the principle that real economic growth should be shared partly by those in need, rather than by those who contributed to it. An opposite approach in other countries is to use the price link for the means-tested or minimum pension and the wage link for the earnings-related pension (Sweden), the underlying principle being that only those who contributed to past economic growth should be entitled to share the benefits of current growth.

To clarify how the interaction of all of these dimensions shapes each country’s uprating regime we consider three groups of countries as case studies. The first

group covers Denmark, Finland and Sweden, since Scandinavian countries are generally regarded as 'best practice' examples in terms of welfare provision. The second group covers countries such as Canada, Australia and New Zealand whose welfare and political institutions resemble relatively closely those of the UK, allowing us to draw lessons from comparable settings. The third group includes Hungary, Slovenia, Estonia and Latvia, new members in the EU, where new tax-benefit systems and methods of uprating have had to be established recently, and where the relatively high levels of inflation they have experienced have made tax and benefits adjustment a more visible and pressing issue to consider in the design of the overall system. For such reasons, these countries have had the opportunity to adopt 'modern' adjustment practices, unconstrained by rules established in the past but still compatible with public budget requirements.

Nordic countries

Denmark has a unified and comprehensive uprating system where, by law, all benefits and tax parameters are systematically indexed on 1 January to average earnings development (with a lag and small deduction). The indexation is applied to family benefits, invalidity and old age social pensions, employment injuries, unemployment and social assistance benefits.²

In *Finland*, the basic means-tested pension amounts and the parameters of the means test are uprated annually according to prices as expressed by a 'cost of living' index, and the same rule applies to family benefits and to the minimum income non-contributory scheme. In contrast, earnings-related old age pension and employment injuries benefits are uprated by a different index, prescribed by the law to correspond to the weighted average of price and wage changes, where a 20 per cent weight is assigned to wages and an 80 per cent weight to prices (before 2005, a 50–50 per cent mix was in place). Central income tax parameters can be adjusted on a discretionary basis and have been de facto adjusted yearly in recent years.

Similarly to Finland, in *Sweden*, the means-tested guarantee pension amounts are adjusted annually according to prices, while the earnings-related pension payments are uprated according to average earnings growth, less a norm of 1.6 percentage points, in such a way that pension might fall over time in relation to earnings, but grow in real terms. Also, in order to keep the balance between contribution assets and future pension payment liabilities, the uprating index may be reduced to restore balance. Other benefits are either uprated by prices (minimum and maximum amounts for invalidity and employment injuries benefits and sickness and maternity

benefits), or according to a discretionary annual parliamentary decision on an ad hoc basis (minimum and maximum amount for family and unemployment benefits, minimum income, income tax parameters).

Australia, Canada and New Zealand

The 1991 *Australian Social Security Act* generally requires periodic adjustment of all benefits according to the CPI. Although price increases are measured quarterly, payment adjustments are legislated to occur twice or once a year, depending on benefit type. Occasional adjustments to amounts also happen and further provisions can be part of the annual budget process.³ Income tax thresholds are updated in a discretionary way through the annual budget. For example, tax thresholds were unchanged from 2000 to 2002, but subsequently thresholds for the higher income brackets were increased each year from 2003 to 2005. The main departure from the general CPI indexation for benefits is represented by the means-tested old age pension. While statutory provision requires automatic indexation by the CPI, keeping the single person's pension level with at least 25 per cent of male total average weekly earnings (MTAWE) has, since 1999, provided a lower legal limit at the March and September indexation points.

In *New Zealand*, according to the law, benefit amounts and parameters are increased at the discretion of Government, which can also decide the adjustment timing. In practice, amounts of most benefits are uprated annually according to the previous year's increase in CPI, but these increases are claimed politically as budget reforms. In-work benefits are reviewed periodically and adjusted at the discretion of the Government. Another exception is temporary disability benefit, which is increased annually according to a labour cost index. The main exception to the general de facto CPI indexation is the pension, known as the New Zealand Superannuation. According to the law, uprating follows CPI until either a ceiling of 72.5 per cent of average earnings or a 65 per cent floor is triggered. In the first case, with CPI rising more than wages, indexation follows wages when the ceiling is reached; in the opposite case of wages growing faster than prices, again indexation follows wages if the 65 per cent floor is triggered.⁴ Income tax thresholds are not indexed routinely and were not increased between 2000 and 2005.

In *Canada*, adjustment decisions involve both the federal and the provincial governments. Provincial administrations have discretion over the level of social assistance payments, which vary across the ten provinces. External factors such as political acceptance, public finance and concerns over work incentives have

tended to dominate criteria related to standards of living. Non-indexation was used in the 1990s to reduce real benefit payments, bringing the average social assistance payment from 40 per cent of the official poverty line in 1985 to 30 per cent in 2000. The federal government is mainly responsible for pension payments – both the basic and the targeted pensions have been indexed quarterly to the CPI by law since 1973.

New member states of the European Union

In *Hungary*, while different types of pension are uprated regularly according to the law, for the other components of welfare provision there is no statutory requirement for annual adjustment, nor are they regularly adjusted on an ad hoc basis. However, the Hungarian pension offers an interesting example of how general principles, economic contingencies, budget requirements and political acceptance can interact in shaping adjustment practices. From 1991 to 1997, pension uprating was based on expected nominal wages but, when real wages started to increase in 1997, the World Bank suggested the introduction of price indexation. Political concerns led Hungary to opt for an index combining a price and wage adjustment so that pensions would increase more than prices but less than wages. This formula was suspended in favour of projected inflation alone in 1999, but since then Hungary has returned to combined price-earnings indexation, adopting a 50–50 per cent mix.

All benefit uprating mechanisms in *Slovenia* are regulated by law, based mostly on inflation, with some exceptions. An important element of the Slovenian uprating system is known as the ‘guarantee wage’, used in the means-testing calculations and for the minimum payment in some contributory benefits. Originally, it was the lowest possible pay for a full-time job and currently it amounts to approximately 20 per cent of the average gross wage. It is adjusted each year by 85 per cent of the expected rise in the CPI. The CPI is also used for uprating income tax thresholds, allowances and tax credits. Exceptions to price indexation are found in the case of disability and attendance supplements, calculated as a percentage of the average net wage.⁵ Pensions are uprated twice a year in February and November, according to the average gross wage growth, with 0.5 percentage points subtracted from the rate so that pension growth lags behind wage growth.⁶

There is no general provision in *Estonian* law requiring regular uprating of benefit levels,⁷ but the amounts have been raised recently through discretionary reforms, the main motivation being the phasing in of more generous benefits. While employee social security contributions are calculated as a percentage of gross earnings, the law requires the maximum limit to self-employed social security contributions

to be indexed to the minimum wage. This is set annually after discussion with the Social Partners. A legal act of 2002 requires pensions to be uprated in April of each calendar year by a factor that is the arithmetic average of inflation and the growth of social tax revenue (which in turn depends on economic growth and on the number of people in employment). In recent years, inflation has been much lower than the social tax revenue growth and, while it was argued that this would penalise pensioners through the uprating mechanism, it has also provided politicians with opportunities to award 'extra' pension increases.

Similarly to Estonia, in *Latvia* there is no statutory requirement for uprating family and social assistance benefits; minimum income is adjusted by the Cabinet according to the annual budget. Nevertheless this country offers an interesting example of an uprating formula for old age and invalidity pensions. The annual adjustment depends on the amount of the pension, being more favourable to lower amounts. For amounts lower than three times the state social security benefit, indexation is based on inflation and social insurance earnings (50 per cent of real growth of aggregate wages); prices-only indexation applies if the pension amount exceeds this threshold; and no indexation is applied if the pension amount exceeds five times the state social security benefit. Again, it is difficult to distinguish this regime from an attempt to phase in a more desirable pension structure.

Summary

- There is great variety in uprating practices in the countries we have considered: different countries adopt different approaches; hybrid rules and differential uprating are widespread; and de facto adjustments often replace legal provision and are also used to implement concealed structural reforms.
- Besides a very few examples of automatic and unified earnings uprating, the most common practice remains adjustment linked to prices.
- Most of the uprating policy debate is focused on pension payments.
- When uprating is to some extent linked to earnings, this is limited to pension payments, while the rest of the tax-benefit system parameters are linked to price movements, one way or another.

- Some countries adopt the same indexation rule for all parts of the public pension system; other countries use differential uprating for different components. In some, the wage link is used for the targeted scheme and the prices link for the contributory scheme; in others, the reverse is the case.
- Overall, there does not seem to be a single obvious solution to the choice of most effective uprating approach. Nevertheless, the presence of a legal provision for adjustment appears to contribute to the transparency of political and spending choices, and provides a clear default by which actual practice may be judged.

4 Recent practice in the UK

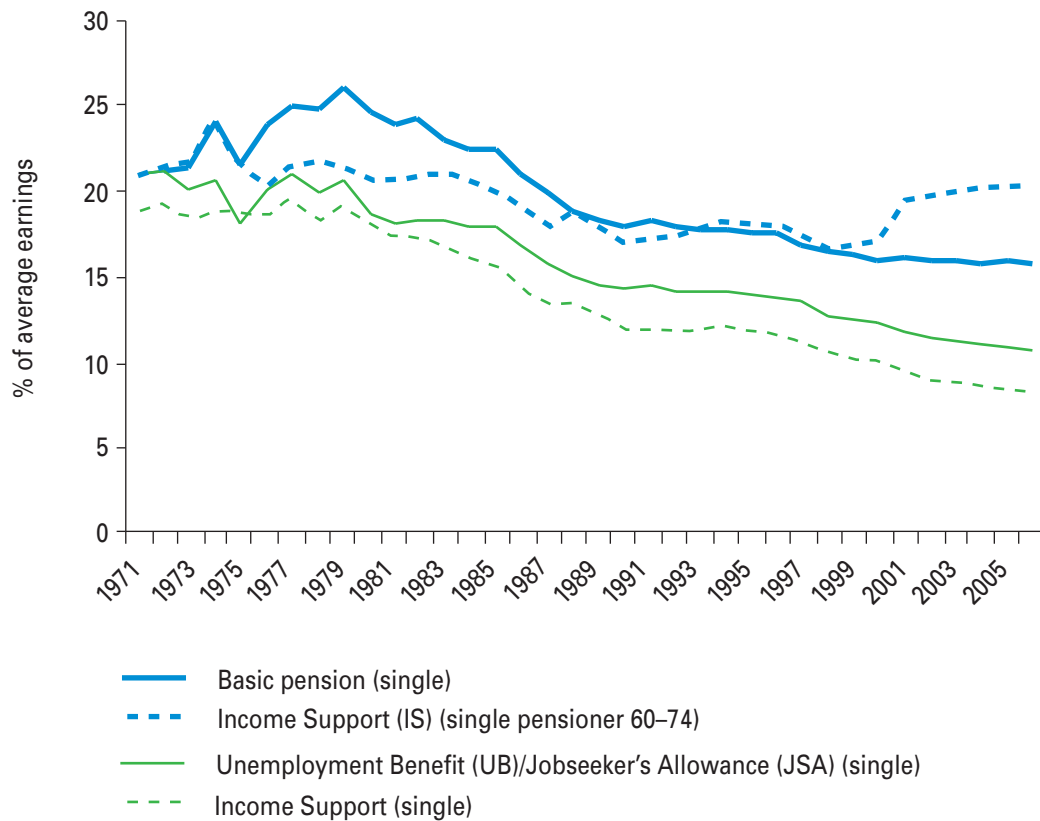
As already indicated, there is a number of different criteria used in uprating different parts of the UK benefit and tax systems (see Appendix 1 for rules on social security benefits). Since the 1980s, most benefit levels have been uprated annually for inflation, by the Retail Prices Index (RPI), measured looking backwards. Means-tested benefits are uprated by the Rossi index, which excludes housing costs and local taxes on the basis that these costs are supported directly. However, a few – such as the Guarantee Credit for pensioners and the child rates within the Child Tax Credit – are currently adjusted by average earnings.

The legal requirements, as well as actual practice, for uprating also vary both across and within benefit types. There are statutory requirements to uprate some elements annually by prices, while, for other aspects of the same benefit, uprating is discretionary, sometimes leaving parts of the system – such as capital limits and earnings disregards in Income Support – at the same nominal value for years.

The consequences of these differences in uprating practice can be very large, as can be seen in Figure 2, which shows the value of particular benefits as a percentage of average earnings since the 1970s.

Back in the 1970s, a single person received Supplementary Benefit (now Income Support) or flat rate Unemployment Benefit (now Jobseeker's Allowance) worth around 20 per cent of average earnings. By 2004, the equivalent was worth only 11 per cent of average earnings. In the early 1980s, the basic pension was worth a quarter of average earnings. Now its (generally) price-linked value has fallen below 16 per cent of average earnings. Of those benefits shown, only Income Support for younger pensioners (now the Guarantee Credit) has (nearly) regained, and recently held, its relative value of the late 1970s.

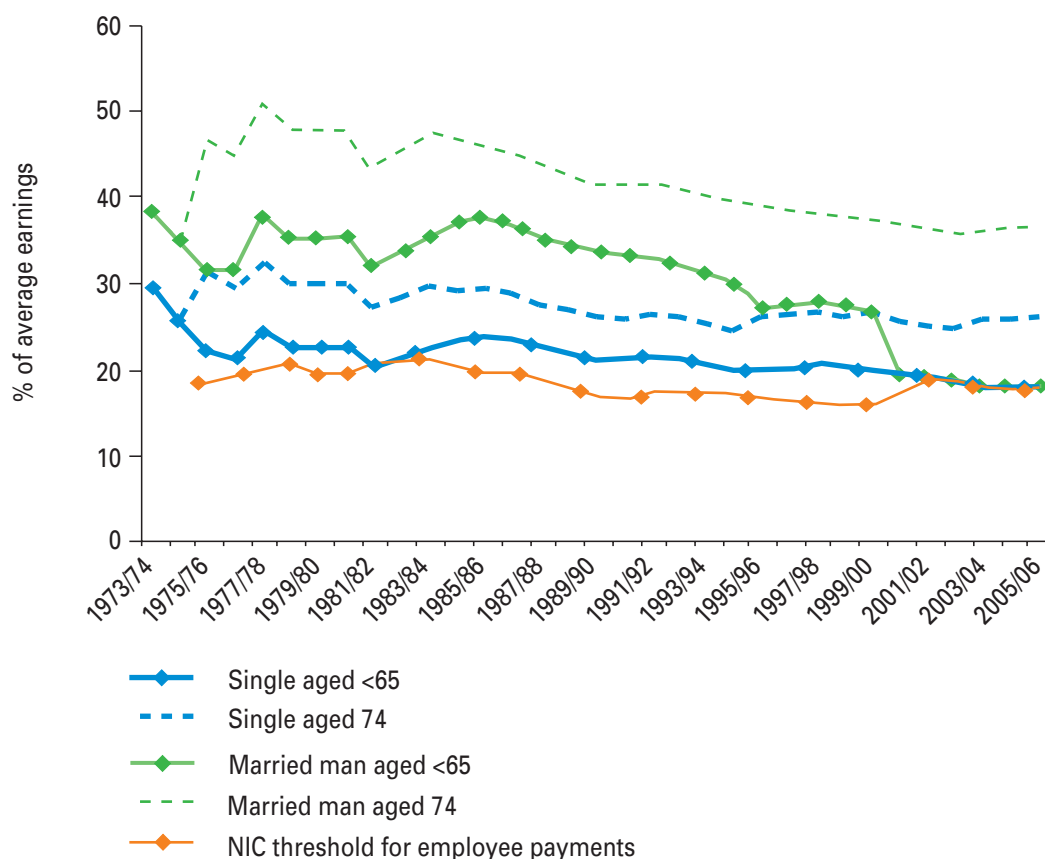
Equally, the tax structure has changed over time, as some thresholds have been increased more or less generously than others. Figure 3 shows the points at which different kinds of people would start to pay income tax or make National Insurance contributions, expressed as a percentage of average earnings since 1973. The gradual reduction in value of the thresholds relative to earnings over time is evident. The main single personal income tax allowance has generally been increased in line with price inflation,¹ while the tax thresholds for single pensioners (benefiting from the 'age allowance') have tended to retain their values better in relation to earnings since the early 1990s. In recent years, tax allowances for pensioners have been linked to the value of the Guarantee Credit in order to exempt recipients from income tax and are therefore de facto earnings indexed.

Figure 2 Benefit values as percentage of average earnings, 1971–2006

Source: DWP (2006a).

The former Married Couple's Allowance in income tax was reduced in value even in relation to prices in the 1990s. The married allowance for working-age couples was finally abolished in 2000–01, although many of its recipients were compensated the following year by the introduction of the Children's Tax Credit, which is not shown. This illustrates the difficulty in recording the history of uprating practice, since structural changes to the system ('reforms') occur alongside regular uprating. Another example of this is shown by the increase in the threshold for actually paying National Insurance contributions in 2000–01. This was also an explicit policy change, deliberately bringing the threshold for payments by employees in line with the tax threshold by 2001–02. Indeed, the downward trend in the value of thresholds compared with average earnings should not be taken to imply that tax burdens have risen. Other changes within the income tax structure – notably reductions in tax rates – have more than compensated for fiscal drag, at least on average. For example, the proportion of income taken in income tax of a single childless person on average (mean) earnings (and no other income) fell from 19.7 per cent in 1990–91 to 16.8 per cent in 2001–02, rising again to 17.2 per cent by 2004–05.²

Figure 3 Income tax and National Insurance contribution effective thresholds in relation to average earnings, 1973/74–2005/06



Between 1994–95 and 1999–00 for all married people, and until 2005–06 for those over pension age, calculations show the effective threshold, taking account of the fact that married allowances were/are allowed at a restricted rate.

No account is taken of tax credits or other concessions for children.

Sources: HM Revenue & Customs (HMRC) information on income tax allowances, reliefs and rates, www.hmrc.gov.uk/stats/tax_structure/menu.htm.

Average earnings for full-time adult employees from DWP Annual Abstract Table 3.2, based on New Earnings Survey (NES)/Annual Survey of Hours and Earnings (ASHE).

While most elements of the Child and Working Tax Credits are currently uprated by prices (with some exceptions as discussed below), the history of the uprating of in-work support for parents since the introduction of the Family Income Supplement (FIS) in 1971 cannot be distinguished from the reforms to the structure and generosity of the benefits and credits, and to the conditions under which families may be entitled. For example, the maximum tax credit payment for a lone parent in work for 24 hours a week with two children (both at least 1 year of age) and without qualifying childcare costs in 2005–06 was £137.11 per week, which was

26.0 per cent of average earnings. An equivalent family would have received a maximum of £8 in FIS in 1975–76, which was 13.6 per cent of contemporary average earnings. Clearly, maximum in-work support for this type of family has become much more generous, even in relation to earnings. However, if the family had other characteristics, it might not have been entitled at all in 1975 or the difference in relative generosity at the two points in time might have been different. Here uprating policy for FIS or the tax credits (or Family Credit or Working Families Tax Credit, which came in between) is not the critical issue. In this case, it was the major structural reforms that channelled increasing proportions of the government budget to low-income working families that had the impact.

So, in setting out principles that might underlie the uprating of benefits, credits and tax thresholds, and in drawing out the implications for alternative practices, it is not straightforward to compare actual benefit and tax systems at different points in historical time, or across countries. Rather, we can consider what would have happened or might happen under alternative uprating regimes – including current stated policy – for a particular policy scenario, on the basis that everything else stays the same. This is what we do in Chapters 6 to 9 of this report.

5 Policy in the future, as it looks now

To examine the long-run implications of current indexation conventions, parts of the analysis that follows compare outcomes under the ‘current’ system (incorporating reforms announced up to the 2007 Budget) with the systems that would emerge if those conventions were continued in the short term (for six years) and in the medium term (for 20 years). In Chapters 6 to 9, *we look at the impacts of the future systems as if they had been in force in the base year, 2006–07. In reality, of course, as time goes by, many features of the population and of the income distribution will change, so our results do not represent a forecast of the future, but rather a way of isolating the medium-term implications of different indexation rules, abstracting from such population and other possible changes.* Chapter 10 takes a different perspective. It looks at how current incomes of people over 65 are likely to evolve in practice as they age and also draws comparisons between now, six and 20 years’ time in the projected incomes of different age groups within the older population.

Both these approaches require the levels of benefits and other parameters of the tax and benefit system to be projected forward. As Chapter 4 of this report makes clear, there are aspects of current uprating practice that are explicit, with clear government commitments to one approach or another. There are others where reforms have been announced for the future. But, in many cases, actual policy is decided from year to year. For many of these, recent practice has followed implicit rules, which it is reasonable to assume will continue unless an explicit reform is announced. But, for some aspects of the system, it is less clear what ‘business as usual’ would entail and a judgement has to be made. This chapter summarises the assumptions we have made on which our ‘base case’ projections in later chapters are based. Details are given in Appendix 2, which also explains the assumptions used in constructing the indices. In summary we have assumed the following.

- *Price indexed (with Retail Prices Index)*: the default assumption for all social security benefit and tax credit amounts and thresholds unless specified below; income tax and National Insurance contribution thresholds.
- *Price indexed (with Rossi index)*: Income Support; Housing Benefit and Council Tax Benefit applicable amounts (except for pensioners and children).
- *Earnings indexed (using an Average Earnings Index)*: child elements of the Child Tax Credit (until 2009–10); Guarantee Credit threshold for pensioners; basic pension (from 2012–13); Savings Credit threshold (from 2009–10 to 2014–15).

- *Fixed in nominal terms*: the family and baby elements of Child Tax Credit; the Child Tax Credit and Working Tax Credit income threshold; capital limits for receipt of means-tested benefits; additional basic pension at 80; winter fuel payments to pensioners; earnings and other disregards in Income Support, Housing Benefit and Council Tax Benefit.

These assumptions take account of the reforms to state pensions announced in the May 2006 White Paper (DWP, 2006b) and enacted in the 2007 Pensions Act, making the assumption that the basic pension is relinked to earnings in 2012 (although this date is not yet a firm government commitment). In extrapolating uprating policies up to 20 years ahead, we have had to make some judgements about how stated policies will apply over time – in particular, the following.

- Income tax age allowance uprating is assumed to be on the same basis as Pension Credit guarantee uprating (i.e. with earnings).
- Elements of benefits that have not been uprated regularly in the past are assumed to be frozen throughout the six and 20 years considered here.
- As implemented in the 2007 Pensions Act, the Pension Credit Savings Credit lower threshold is uprated by earnings from 2008 until 2014. From then on, it is worked out as a function of the maximum payment and the Guarantee Credit level.
- There is a commitment to earnings uprate the Child Tax Credit child amounts until 2009–10. After that time we assume a return to price (RPI) uprating¹. While there is some expectation in policy circles that earnings uprating will be extended for a longer period, there is no stated policy on this, so we retain price uprating as the default.

Aside from these specific assumptions, where there is no stated policy for as long as 20 years ahead, we assume the continuation of whatever is the latest policy.

Further structural reforms to the income tax and National Insurance contribution systems, and to benefits and credits were announced in the 2007 Budget. Our main results incorporate these reforms into both our starting point and the future structures that follow from different indexation regimes. This allows us to isolate the implications of indexation rules as they would unfold within the tax and benefit structures that have already been announced. The main features of this reform are:

- abolition of the initial 10 per cent income tax band (in 2008);²

The impact of benefit and tax uprating on incomes and poverty ---

- reduction in the basic rate of income tax from 22 to 20 per cent (in 2008);
- an increase in the Upper Earnings Limit for National Insurance contributions to equal the threshold for payment of income tax at 40 per cent (by 2009), with the latter threshold increased by more than inflation (in 2009);³
- above-inflation increases in values of tax credit thresholds (in 2008) and maximum Child Tax Credit child element (in 2008),⁴ and in the age allowances for income tax (in 2008 and 2011);
- increase in the tax credit taper from 37 to 39 per cent (in 2008);
- a slightly greater increase in Child Benefit for the first child than implied by price indexation alone (by 2010).⁵

More details are given in Appendix 3 and Box 3 in the following chapter provides an analysis of the distributional effects of the structural changes announced in the 2007 Budget. The modelling does not take into account the increases in Child Tax Credit and Child Benefit announced for the first time in the 2008 Budget. Our starting point is illustrated in the case of a hypothetical lone parent in Box 2 at the end of this chapter.

Interpreting the values of components of people's future incomes is complex – for all the reasons that indexation and uprating can be the subject of different principles. One way of presenting results would be in *cash terms*. But the meaning of so many pounds or millions of pounds in 2026 is of limited value – amounts may look very large by comparison with today's incomes, but so will everything else. In the analysis that follows, we present results in three different ways that give more meaningful comparisons with current values.

- We present some results in *real terms*, that is using future cash amounts adjusted back to 2006–07 prices by expected future inflation rates, using the Retail Prices Index. For years from 2009–10, we assume that this inflation rate will be 2.75 per cent annually, but 3.5 per cent in 2007–08 and 2008–09. See Appendix 2, table A2.2.
- Other results are given in *earnings terms*, that is using future cash amounts adjusted back to 2006–07 values by expected future growth in average earnings. For years from 2009–10, we assume that average (cash) earnings will grow by 4.805 per cent annually (i.e. by 2 per cent in real terms). See Appendix 2, table A2.2.

- Some of the projections in the following chapter are shown in relation to *relative poverty lines*. These are assumed to move in line with the growth of median net incomes, as modelled for the base case in Chapter 6. These grow somewhat more slowly than average earnings as a result of the way in which components of median incomes – essentially many benefits – do so, and as a result of the effects of fiscal drag when tax thresholds increase more slowly than gross incomes.
- Some of the discussion of the impacts on the Government’s finances looks at these in terms of changes in the *percentages of national income* (GDP) that taxes and spending would represent.

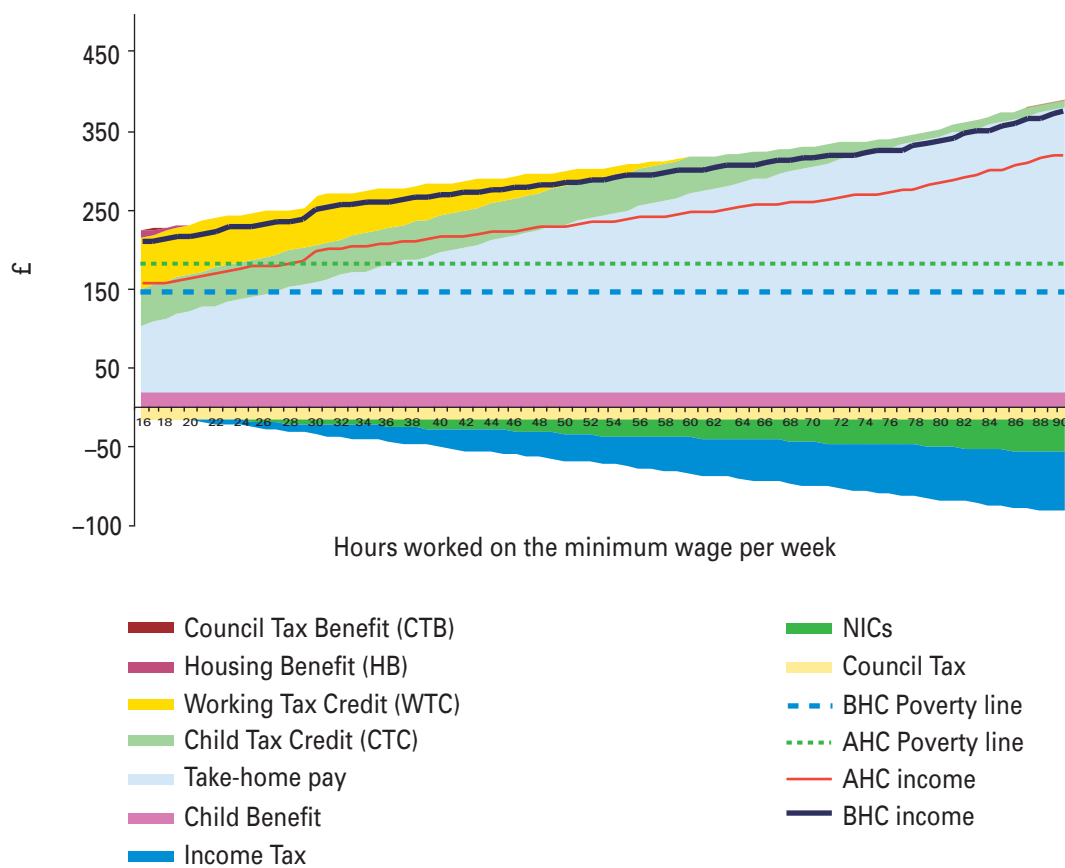
The main modelling results in Chapters 6 to 9 are essentially in earnings terms. They are calculated by taking the parameters of tax and benefit systems projected under different rules in 2012–13 and 2026–07, adjusted back to 2006–07 values by expected earnings growth, and then applying them to the population distribution of other gross incomes as they actually were in 2006–07. They show what future tax and benefit systems would ‘feel like’ if applied to current incomes. This allows us to concentrate on the long-run impact of indexation rules, abstracting from other factors that will affect the actual distribution of incomes in the future – such as the ageing population or the maturing of pension rights. It is equivalent to making the assumption that all components of gross income *other than* those set by the State through tax and benefit rules grow in line with earnings growth, and then expressing the results in 2006–07 earnings terms (and abstracting from changes in population composition).

Box 2 The effects of the post-Budget 2007 tax-benefit system on the income of a lone parent with one child

Figure 4 illustrates how the post-Budget 2007 tax and benefit system would affect a hypothetical lone parent with one child if they were working different numbers of hours in 2006–07 at the minimum wage. Their gross earnings would rise from £85 if they worked 16 hours per week to £440 if they worked 80 hours per week at the minimum wage (or equivalently for fewer hours at a higher wage). Working for 30 hours at the minimum wage (£160.50 at 2006–07 earnings levels) corresponds to earnings of around 30 per cent of average full-time earnings). But, as their gross earnings grew, so would their income tax and NIC liabilities, shown in the bottom part of the figure. As a result, their take-home pay, shown in the upper part of the figure, would only grow from £85 to £325. At

the same time, higher net earnings would mean reduced benefits (Council Tax Benefit and Housing Benefit) and reduced tax credits. Allowing for their Child Benefit receipt, but also rent (£53.92 per week) and council tax (£14.70), their net income after housing costs (AHC) rises from £165 per week on 16 hours to £215 on 40 hours and £285 per week on 80 hours, shown by the red line. This line corresponds to the 'AHC 2006' line shown in Figure 7 in the next chapter.

Figure 4 Taxes and benefits for a lone parent with a single child by hours of work at minimum wage under the post-2007 Budget system



Source: own calculations, adapted from DWP's (2006c) *Tax Benefit Model Tables* and using DWP assumptions about rent and Council Tax.

6 Implications of current indexation rules for incomes and poverty

In this chapter, we consider the ways in which current indexation rules – the ‘base case’ described in Chapter 5 – would change the impact of the benefit and tax systems if continued over the short term (over six years to 2012–13) and the medium term (over 20 years to 2026–27). Our starting point is the ‘post-reform’ system after the structural changes announced in the 2007 Budget, as described in the previous chapter. The effects of the structural changes themselves are set out in Box 3 providing, with a single year’s worth of reform announcements, a yardstick against which to compare the effects of base case uprating. We start by showing the impact of base case uprating on a selection of illustrative families. This is followed by analysis of the effects on the population as a whole – on the income distribution and on poverty rates. As explained in the previous chapter, the main analysis is in relative earnings terms and poverty is considered relative to contemporary median incomes. We also consider the implications of base case uprating for poverty measured in absolute terms and for incomes relative to prices (see Box 4 at the end of this chapter).

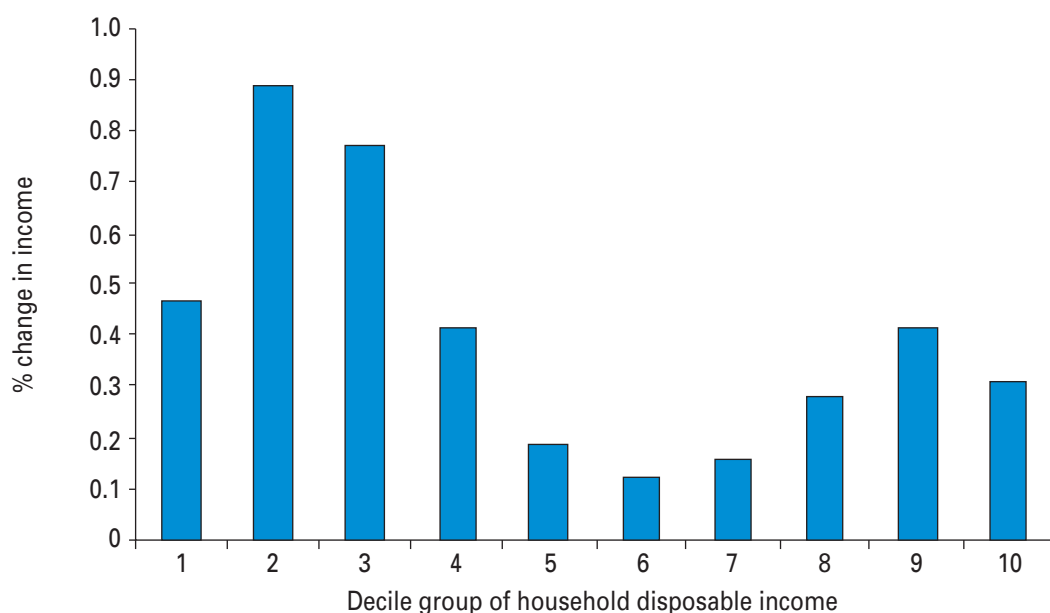
Box 3 The effects of the 2007 Budget structural change announcements

The 2007 Budget changes (described in Chapter 5) themselves have distributional and budgetary consequences that provide a yardstick against which to compare the effects of uprating, as well as providing the base structures from which we measure change. Using POLIMOD (see Appendix 4), we estimate the budgetary cost of the reforms as £2.11 billion in 2006–07 prices, with households paying £780 million less in income tax and National Insurance contributions (NICs) and receiving £1.26 billion more in tax credits and means-tested benefits. The extra cost of Child Benefit is £75 million.¹ This compares reasonably well with the 2007 Budget Report estimates, which show a cost of £2.43 billion against an indexed base in 2009 (excluding the cost of the Child Benefit increase).²

The distributional impact of the reforms is illustrated in Figure 5, showing the average net gain for each tenth of the income distribution (in order of pre-reform incomes). On average, each tenth (or decile group) gains, with the largest gains as a percentage of starting income in the second and third tenths

of the distribution, amounting to 0.75 per cent of income or more, reflecting the increased generosity of the tax credits. Gains are a smaller percentage of income for higher-income groups, making their overall impact progressive, although the ninth decile group gains more than 0.4 per cent of income, reflecting the gain from the cut in the basic rate of income tax. However, as the discussion above suggests, not all individuals gain from the reforms – overall around a quarter lose from them, as shown in Figure 6.

Figure 5 Distributional impact of the 2007 Budget structural reforms



Decile groups are defined according to the before housing costs household disposable income of individuals before the reforms, equivalised using the modified OECD scale.

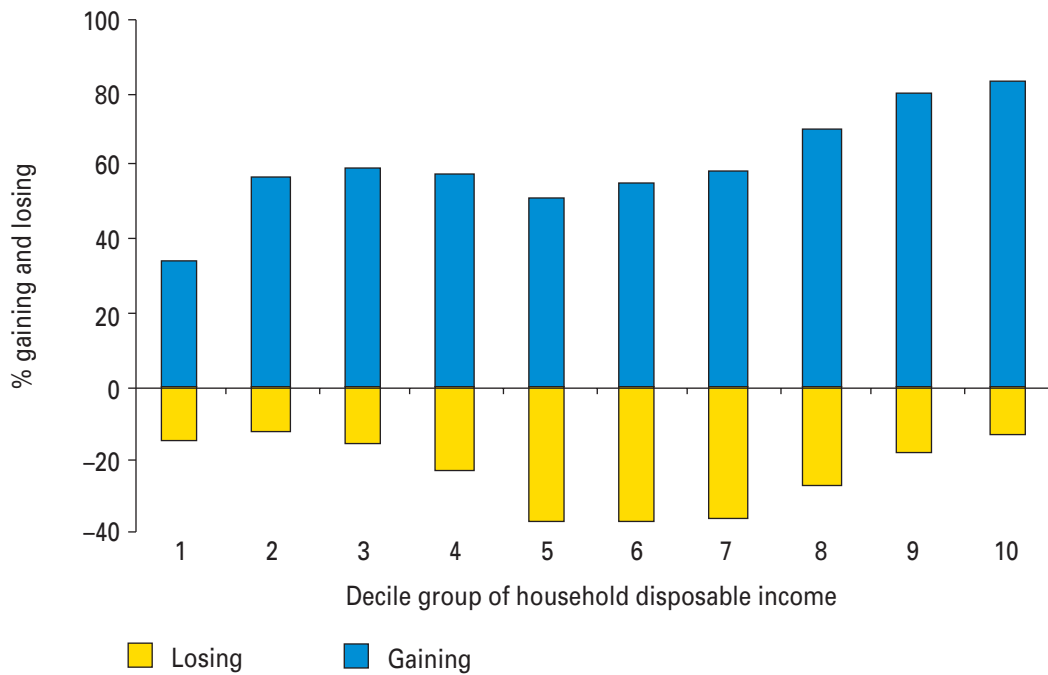
Source: POLIMOD using Family Resources Survey (FRS) 2003–04.

These are predominantly people in households who either are not entitled to tax credits (for instance childless, working-age households working less than 16 hours per week), who lose more from the ending of the 10 per cent band than they gain from the cut in the basic rate, or who fail to claim the tax credits to which they are entitled.

Table 3 shows the effect of the reforms on the number of people with incomes below poverty lines measured as 60 per cent of median income either before or after housing costs. The first thing to note is that the reforms have a net cost to the Exchequer and so generate a gain to households on average. Median incomes are therefore slightly higher – by 60p per week before housing costs

after the reforms and 40p per week after them – so the post-reform poverty lines are slightly increased. The impact of the reform – if it is implemented all at once – is to cut the overall poverty rate by 0.6–0.7 percentage points, including by around 2 percentage points for children. The pensioner poverty rate is unaffected.

Figure 6 Gainers and losers by income decile group from the 2007 Budget structural reforms



Decile groups are defined according to the before housing costs household disposable income of individuals before the reforms, equivalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Table 3 Relative poverty rates in the UK before and after the 2007 Budget reforms

%	2006–07		After 2007 Budget reforms		Difference	
	BHC	AHC	BHC	AHC	BHC	AHC
Median (£ per week)	363.3	310.7	363.9	311.1	0.6	0.4
All	17.2	21.3	16.6	20.6	-0.6	-0.7
Children	19.3	28.8	17.5	26.7	-1.8	-2.1
Pensioners	22.9	16.0	22.9	16.0	0.0	0.0
Working age	15.0	20.1	14.4	19.8	-0.3	-0.3

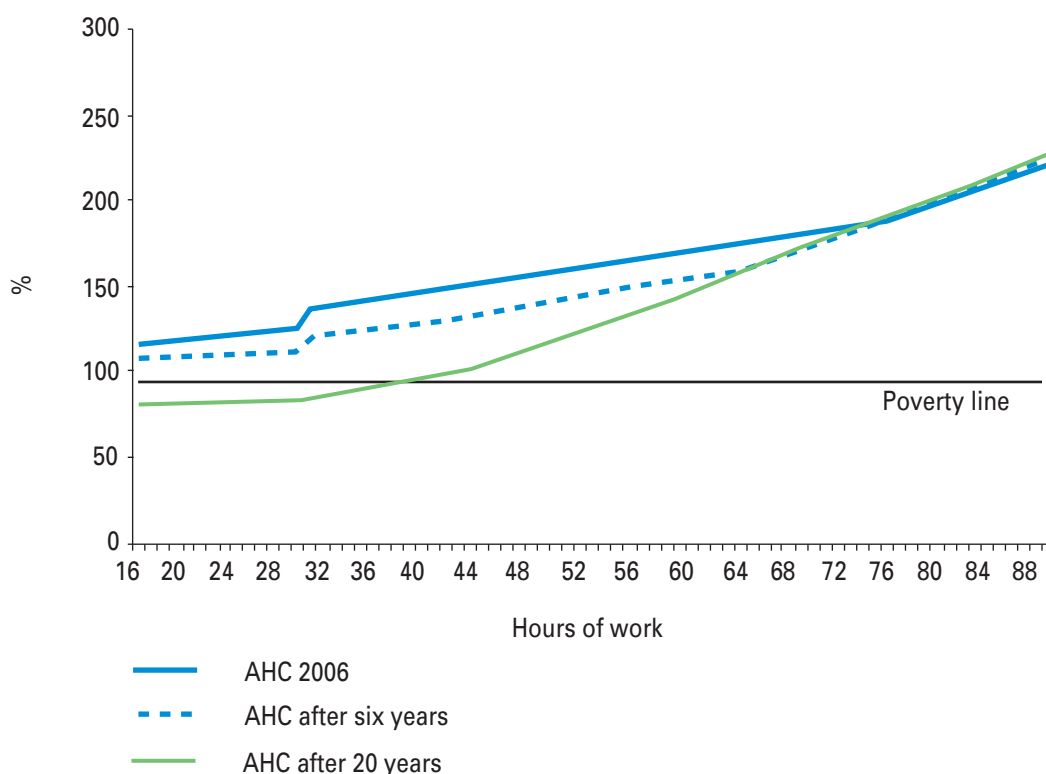
Poverty rates are calculated as the percentage of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the ‘companion’ scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

The implications of future indexation for a lone parent

The effect of six and 20 years of base case uprating of the tax and benefit system on the income of a hypothetical lone parent with one child (see Box 2) is illustrated in Figure 7. This shows what the relationship between hours worked at the minimum wage and the resultant net income after housing costs would look like, measured in relation to a relative poverty line, compared with the starting point of the ‘post-reform’ system.³

Figure 7 Income (AHC) for a lone parent by hours of work at minimum wage: post-reform 2006–07 system, and after six and 20 years of base case uprating (incomes as percentage of relative poverty line)



The poverty lines are derived from median incomes reported in Table 4 later in this chapter. Working for 30 hours at the minimum wage (£160.50 in 2006–07 earnings levels) corresponds to earnings of around 30 per cent of average full-time earnings.

Source: own calculations.

Figure 7 shows that net income for any given number of hours in 2012–13 is lower, and lower again in 2026–27. The base case indexation rules mean that this lone parent would over time receive progressively less help from benefits and tax credits, and would pay more tax, measured in relation to contemporary income levels, and hence in relation to the relative poverty line.⁴ While, at the starting point, working

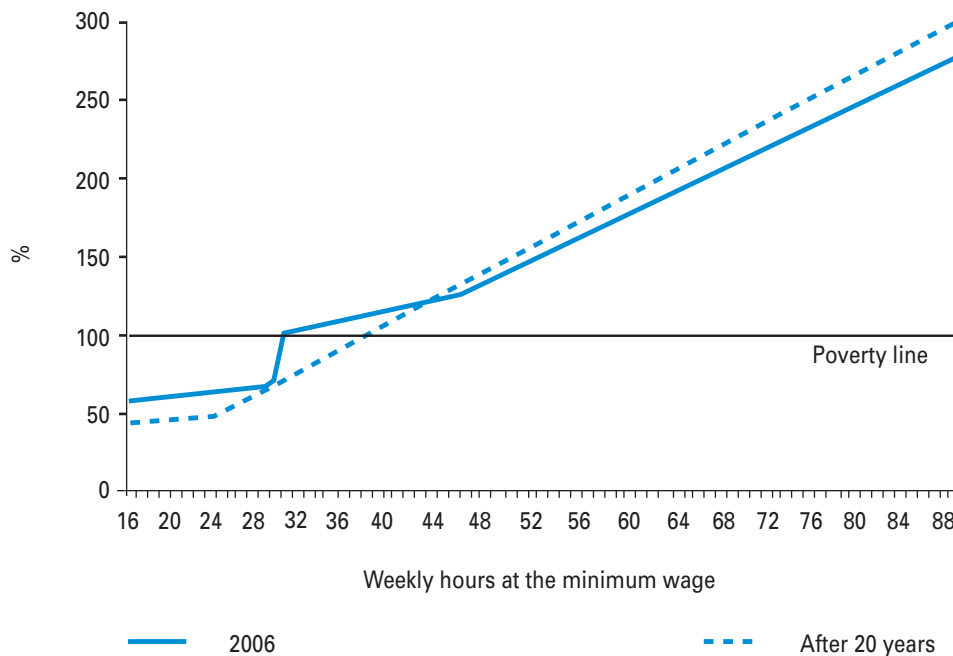
16 hours at the minimum wage would generate a net income 17 per cent above the poverty line, after six years of base case indexation, this would fall to 7 per cent above and, after 20 years, it would be 19 per cent below the poverty line. If current indexation conventions continued for 20 years, this lone parent would need to work for 42 hours per week at the minimum wage for their income to reach the poverty line – compared with a net income nearly 50 per cent above the line for those hours in the starting point. As the figure illustrates, base case indexation implies a system that declines very substantially in its effectiveness in helping to keep a working family of this kind out of poverty.

Implications for other family types

Figures 8, 9 and 10 show incomes in relation to the relative poverty line at the starting point (the post-reform 2006–07 system) and after 20 years of base case indexation for three other family types (equivalent to Figure 7 for the lone parent case). In the initial system, net benefits achieve income for a couple with two children that is close to the poverty line for hours of work between 16 and 48 but, unlike the lone parent, not sufficient to carry them out of poverty. However, after 20 years of base case indexation, they are well below the poverty line unless earnings exceed the equivalent of more than 70 hours per week at the minimum wage. The other two family types – a single person and a couple without dependent children – are further below the poverty line if they have low earnings in the initial case, and even further below after 20 years.

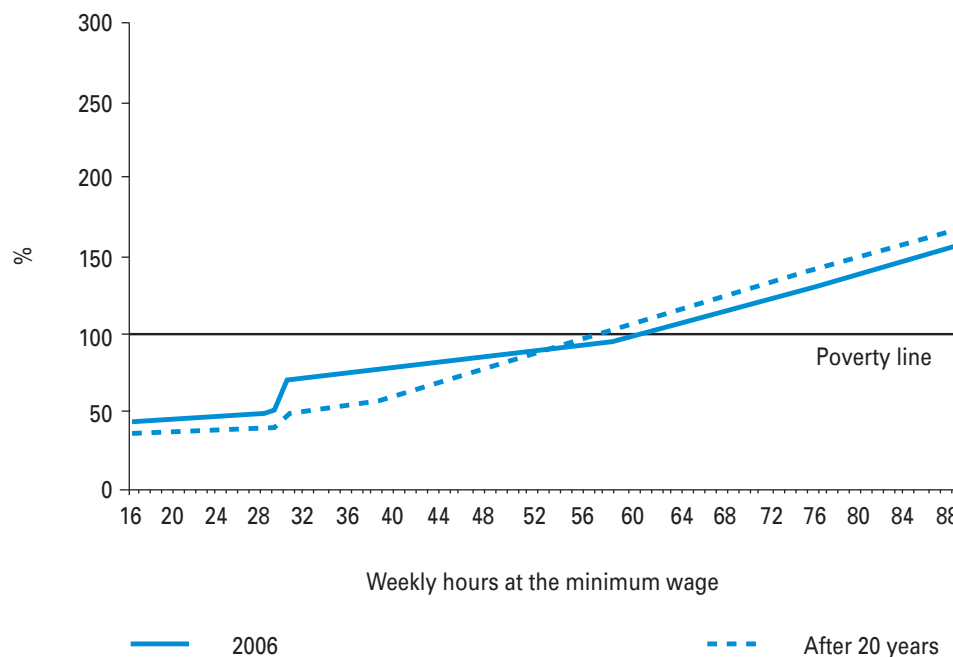
However, Figures 8 to 10 show the interesting phenomenon that, at somewhat higher levels of earnings/hours, net incomes are eventually *higher* in relation to the poverty line (i.e. in relation to median net income) after 20 years than in the initial system. This happens around the point where in-work support is withdrawn in the system at the starting point, for single people corresponding to earnings around 42 per cent of the average full-time earnings and for couples around 55 per cent. Such families at or above those levels of earnings would be paying somewhat more tax in relation to earnings as a result of indexation below the rate of earnings growth and so their net incomes would rise over the 20 years rather more slowly than gross earnings. However, other families would be losing much *more* as a result of benefit erosion, slowing down the growth of *median* net incomes even more. The net incomes of higher-earning childless families who do not qualify for benefits or credits at the starting point therefore rise a little in relation to the relative poverty line.

Figure 8 Income (AHC) for a single person by hours of work at minimum wage: post-reform 2006–07 system, and after six and 20 years of base case uprating (incomes as percentage of relative poverty line)



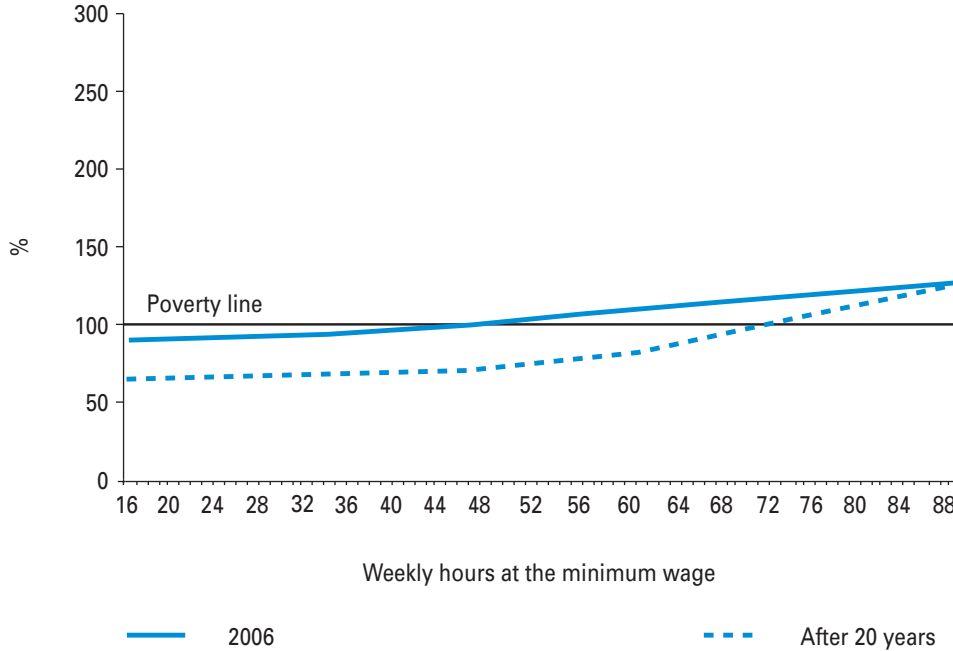
The poverty lines are derived from median incomes reported in Table 4 later in this chapter. Source: own calculations.

Figure 9 Income (AHC) for a couple with no children by hours of work at minimum wage: post-reform 2006–07 system, and after six and 20 years of base case uprating (incomes as percentage of relative poverty line)



The poverty lines are derived from median incomes reported in Table 4 later in this chapter. Source: own calculations.

Figure 10 Income (AHC) for a couple with two children by hours of work at minimum wage: post-reform 2006–07 system, and after six and 20 years of base case uprating (incomes as percentage of relative poverty line)



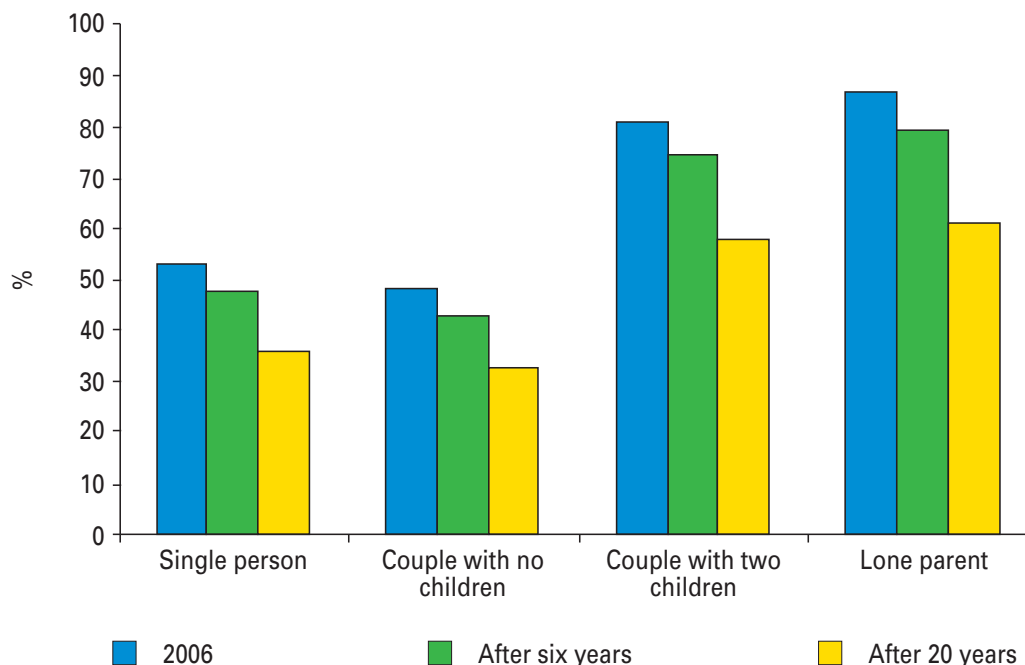
The poverty lines are derived from median incomes reported in Table 4 later in this chapter. Source: own calculations.

For those out of work entirely, Figure 11 shows the value of combined Income Support, maximum Child Tax Credit and Child Benefit as a percentage of the (after housing costs) relative poverty line for the same lone parent with one child and the three other family types.

In the post-reform 2006–07 system, these out-of-work benefits would leave the lone parent with an income equivalent to 87 per cent of the poverty line after allowing for housing costs. Under the base case indexation assumptions, this proportion would fall over time so that, by 2026–27, they would only be receiving incomes corresponding to 61 per cent of the poverty line.

For the other family types, out-of-work incomes start further below the poverty line in each case and decline even more rapidly over time, especially for those without children. After 20 years of base case indexation – in this case simply price linking (using the Rossi index) – out-of-work income (Income Support) for a childless couple would be less than a third of the poverty line, compared with just under half at the start. In each case, these show a large deterioration in the ability of the tax and benefit system to protect people from relative poverty.

Figure 11 Incomes after housing costs for out-of-work families of different types: post-reform 2006–07 system, and after six and 20 years of base case indexation (incomes as percentage of relative poverty line)



The poverty lines are derived from median incomes reported in Table 4 later in this chapter.

Source: own calculations.

Impact on the whole population

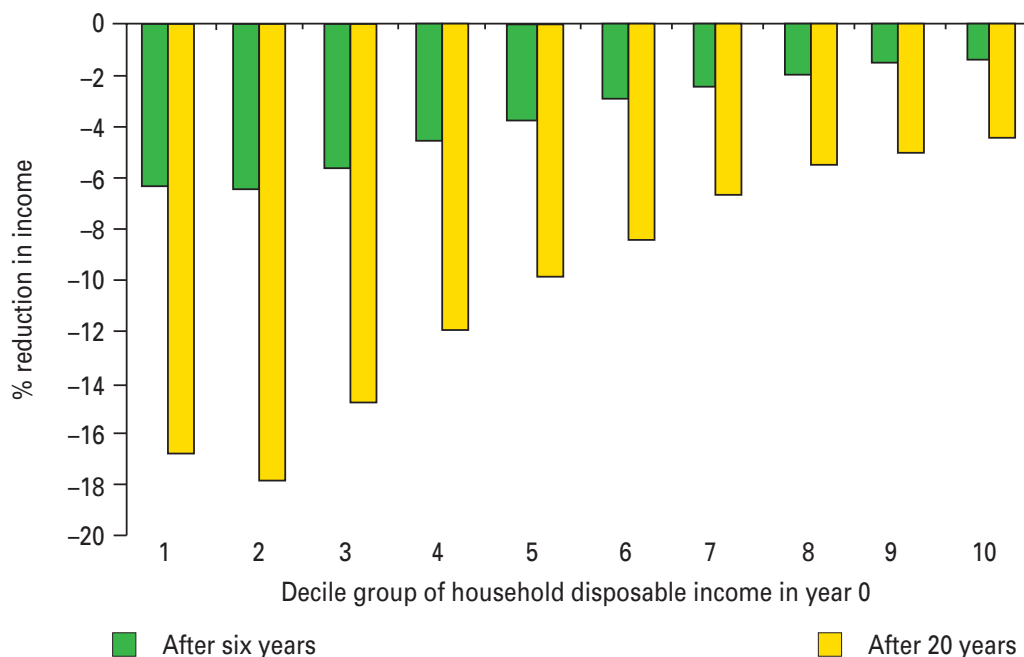
The net impact of the falling relative value of benefits and rising tax burdens varies between different family types. The aggregate effect across the whole population therefore depends on the balance of different kinds of family and on the shape of the income distribution. We now examine the implications of the base case indexation assumptions for the population as a whole, driven by the kinds of effect that have been illustrated for particular family types. This analysis uses the tax-benefit model POLIMOD by applying the equivalents of the future systems to the population as modelled for 2006–07 – treating the gradual effects of indexation changes over six or 20 years as if they were implemented as an immediate reform in a single year.

Remember that, in the analysis that follows, it is the *post-2007 Budget* system that is used as a base for looking at the long-run implications of indexation conventions. So, for instance, their impact on poverty rates is measured starting from the post-reform base of 16.6 per cent of the population being poor (before housing costs) shown in Box 3.

The distributional effect of current uprating policy compared with what would happen under earnings uprating is displayed in Figure 12, showing the proportionate change in before housing costs income in relative earnings terms for each tenth (or decile group) of the income distribution. The effect of 20 years of current indexation conventions for individuals in the bottom two tenths of the distribution is a fall in income of around a sixth in relative earnings terms. The poorest tenth, for instance, who are largely dependent on cash benefits, see their incomes fall by 17 per cent. The further up the income distribution one looks, however, the more closely net incomes keep up with gross earnings – despite the falling relative value of benefits and, most relevant in this context, the effects of falling relative values of tax thresholds, or fiscal drag. To make another comparison, the gain from the 2007 Budget reforms (illustrated in Box 3) for the poorest parts of the income distribution taken as a whole is barely enough to offset the effects of a single year's worth of erosion of benefit amounts in relative earnings terms.

Continuing to uprate according to current indexation conventions would result in median net incomes falling relative to earnings. As shown in Table 4, median (BHC) income falls by 3.2 per cent over six years and 9.2 per cent over 20 years, relative to earnings. Poverty lines measured in relation to median net incomes therefore also fall slowly in relative earnings terms. However, the implication of the distributional patterns shown in Figure 12 is that the numbers below relative poverty lines would increase. Measured before housing costs, the overall poverty rate would rise from 17 to 19 per cent after six years and to 23 per cent after 20 years, and the trajectory is similar for poverty measured after housing costs. Table 4 shows that the impact on pensioner households is comparatively modest (indeed, after housing costs, the pensioner poverty rate would be slightly lower after 20 years). This reflects the way in which important parts of the benefit and tax system for pensioners are – or will be during the period considered – earnings linked. However, the rise in child poverty is steep and dramatic. On an after housing costs basis, it rises from 27 per cent at the starting point to 31 per cent after six years and 39 per cent after 20 years. The increase in the BHC rate is even more dramatic, rising from 18 per cent at the starting point to 33 per cent after 20 years. Instead of eradicating child poverty, the effect of continuing current uprating policies would be almost to double it.

Figure 12 Distributional effects of current uprating policies after six and 20 years in relative earnings terms



Decile groups are defined according to the household disposable income of individuals at the starting point, equalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Table 4 Relative poverty in the UK after six and 20 years of base case uprating in relative earnings terms

%	2006–07 starting point		After six years		After 20 years	
	BHC	AHC	BHC	AHC	BHC	AHC
Median (£ per week)	363.9	311.1	352.5	299.6	333.8	279.6
Poverty rates: all	16.6	20.6	18.9	22.6	23.4	25.4
Children	17.5	26.7	22.1	31.0	32.8	39.0
Pensioners	22.9	16.0	24.3	17.3	24.0	14.3
Working age	14.4	19.8	16.0	21.1	19.6	23.7
Poverty gap (median) %	18.6	22.9	17.8	25.4	22.1	35.3

Poverty rates are calculated as the percentage of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the ‘companion’ scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

The median 'poverty gap' as a measure of the depth of poverty shows that those who are poor after 20 years of base case uprating are further below the poverty line than the typical person in poverty is at the start of the process.⁵ After housing costs, 20 years of current indexation would mean the typical poverty gap rising from 23 to 35 per cent of the poverty line.⁶ Not only would the numbers in relative poverty have risen substantially, but so would the depth of their poverty.

Again, to compare with the impact of the 2007 Budget reforms illustrated in Box 3, those reforms would be enough to offset only about two years' worth of the increase in relative poverty implied by current indexation conventions.

As explained above, these are not *predictions* of what will happen to child poverty by 2011–12 or 2026–27. They are estimates of the implications of continuing to uprate according to current policy and conventions, *other things being equal*. Other studies have attempted to predict the effects of changing demographic and employment factors (among others) on child poverty. For example, Brewer *et al.*, (2006a) suggest that in the most favourable case demographic and employment changes could almost compensate for the adverse effects of uprating policy, while Buck *et al.*, (2007, Table 11) estimate much smaller compensating effects. By its nature, predicting changes in population characteristics that are important to child poverty, such as household composition or parental employment, is not an exact science. While it is clear that at least some of the adverse effects of base case uprating on child poverty could be mitigated by other changes, this does not mean that the implications of base case uprating should be of lesser concern. Possible beneficial changes in the population and in employment rates provide an opportunity to reduce child poverty rather than a justification for complacency about the situation possibly not getting much worse.

Considering the effects of uprating relative to income growth, as we have done above, is consistent with the current policy commitment to reduce poverty in relative terms (for families with children and pensioners, at least). This involves comparing the evolution of incomes after taxes and benefits with what happens to incomes at the median. However, an alternative approach, which is consistent with a focus on poverty measured against a fixed threshold, or 'absolute' poverty⁷ is to consider changes in relative prices (or 'real') terms rather than relative earnings terms. The implications of base case uprating for this approach are drawn out in Box 4 at the end of this chapter.

Budgetary effects

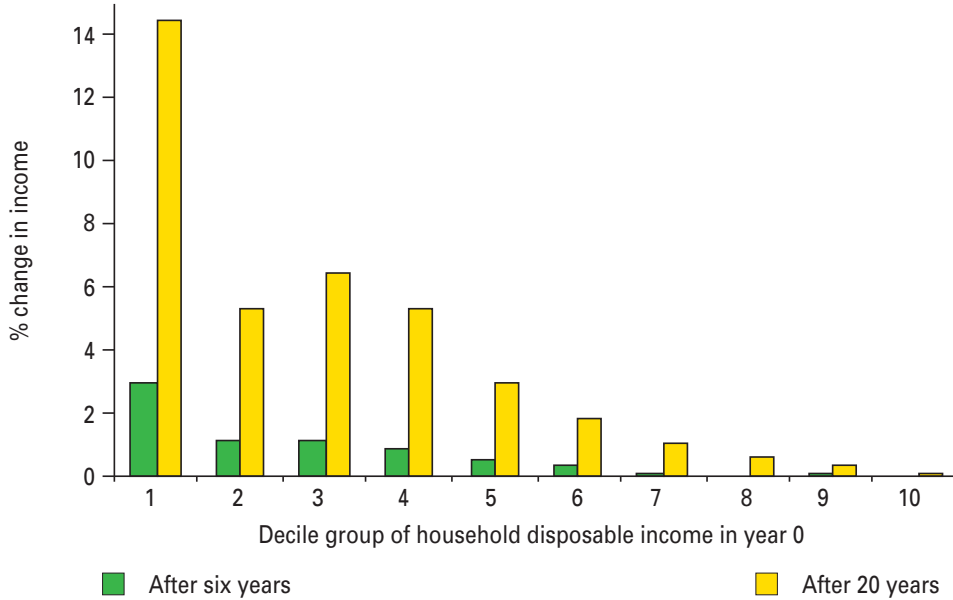
Corresponding to households being worse off on average relative to earnings under base case uprating, there would be a gain to the public finances in relative terms. Indeed, by comparison with the starting point of the post-reform 2006–07 tax-benefit system, continuing with prevailing uprating policy for six and 20 years would generate substantial benefits to the government budget compared with comprehensive uprating in line with earnings. Overall, the budgetary effect is a government saving in 2006–07 terms of £17 billion after six years and £47.4 billion after 20 years, or around 1.3 per cent of GDP after six years and 3.6 per cent after 20 years.⁸ This gives a measure of the very substantial extent to which eroding benefit levels and rising tax burdens would ease the pressures on the government budget, other things being equal. Other factors – such as the effect of an ageing population on the demands on the NHS – might, of course, be expected to push in the other direction at the same time.

Box 4 Impact in real terms of current indexation conventions

Often, when comparing the effects of different tax-benefit systems over time, it is assumed that the counterfactual would be to uprate all elements of the tax-benefit system by prices, and changes are therefore considered in real terms. Figure 13 shows the distributional impact in real terms of six and 20 years of uprating using the base case uprating described in Chapter 5, and applied from the starting point of the post-reform 2006–07 system. In these terms, each decile group gains on average, although the size of the gain is very small in the upper decile groups (e.g. after 20 years, £2.68 per week on average in the top decile group). The gain in income in real terms for the bottom income group averages 16 per cent by the end of the 20 years.

The proportions of people gaining and losing from 20 years of base case indexation when measured in this way are shown in Figure 14. It is perhaps striking that there are substantial numbers of losers even in real terms. In particular, in the lower half of the income distribution, around 30 per cent of individuals gain in these terms, but more – over half in the second and third decile groups – lose. The gainers are those affected by factors such as the earnings linking of the Guarantee Credit or the child element of Child Tax Credit. The losers are those affected by elements of the system that are frozen in real terms, or that increase less rapidly than the RPI, for instance because they are linked to the Rossi index, which excludes housing costs.

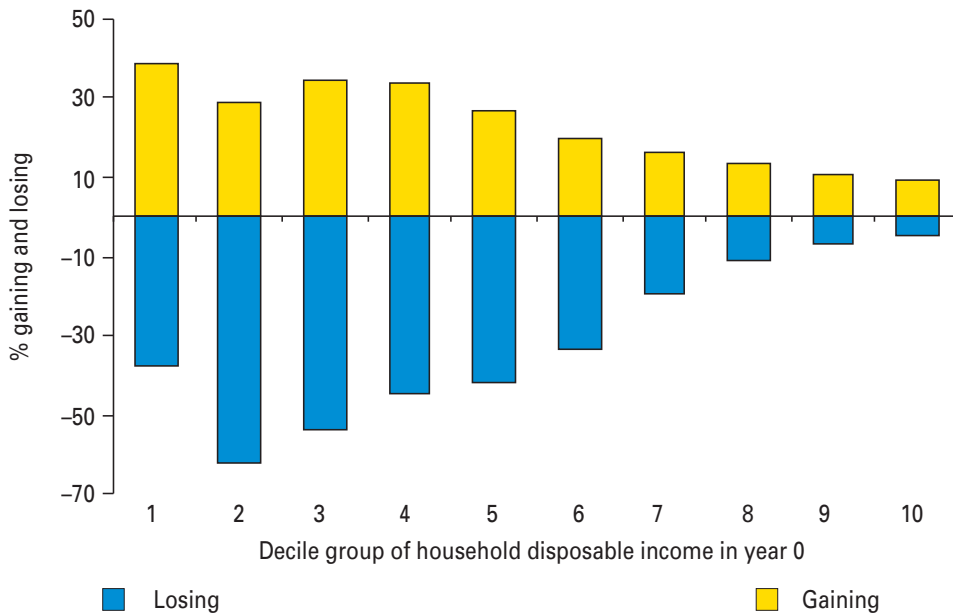
Figure 13 Distributional effects of current uprating policies after six and 20 years in real terms



Decile groups are defined according to the before housing costs household disposable income of individuals at the starting point, equivalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Figure 14 Gainers and losers in real terms from current uprating policies after 20 years

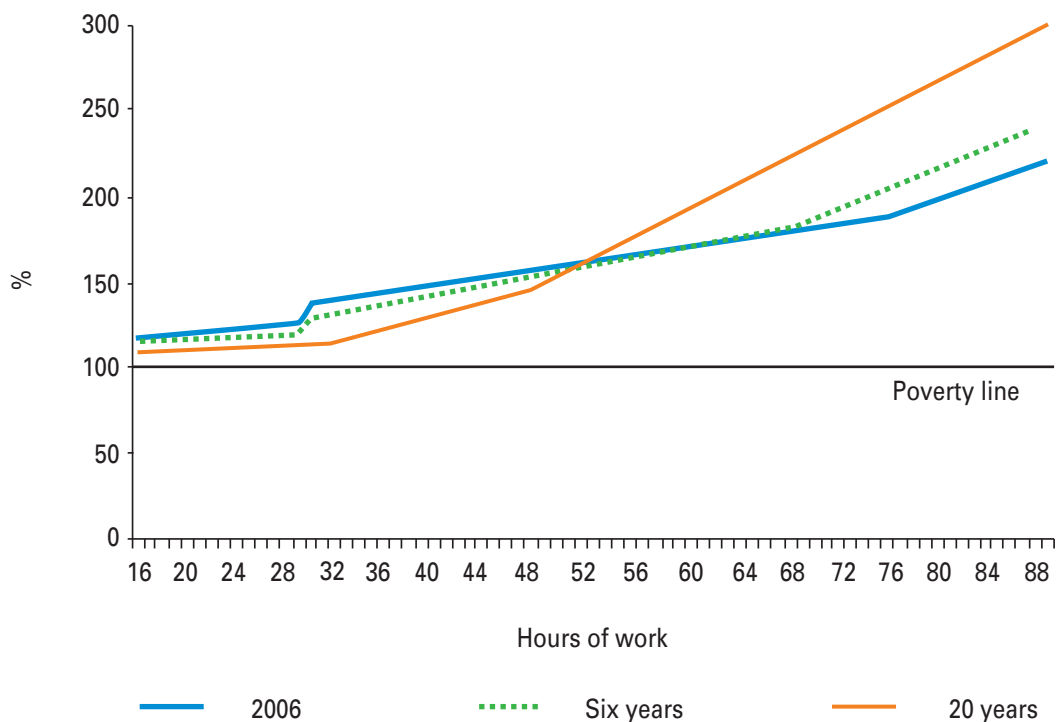


Decile groups are defined according to the before housing costs household disposable income of individuals at the starting point, equivalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

The effects in real terms on the income of our illustrative lone parent are shown in Figure 15. At high numbers of working hours, their net real income would be higher in 2012–13 than at the starting point and higher again in 2026–27. This is welcome, but hardly surprising given that real hourly gross earnings, reflected in the lone parent’s minimum wages, would be rising by nearly 50 per cent over the 20 years. However, for earnings up to the equivalent of 50 hours of work at the minimum wage, they would actually be worse off in real terms after the accumulated effects of uprating over 20 years. This is because the tax credits start to be tapered away at lower levels of real income as the threshold is not indexed at all.⁹ The income of this lone parent remains clear of the absolute poverty line, but the margin against even this unambitious standard is squeezed significantly after 20 years.

Figure 15 Income (AHC) for a lone parent on the minimum wage by hours of work: post-reform 2006-07 system, and after six and 20 years of base case uprating (incomes as percentage of absolute poverty line)



Incomes in real terms at 2006–07 prices. Poverty lines after six and 20 years are calculated by indexing the starting point poverty lines by the assumed change in the RPI.

Source: own calculations.

In parallel with this analysis of income changes in real terms, we can also look at changes in poverty rates measured against a constant real poverty standard (i.e. against the kind of ‘absolute’ poverty line used by the US Government, as opposed to the relative poverty line more generally used in Europe). In this case, two factors push down the poverty rate: real increases in earnings and other components of original income; and changes in the tax and social security systems that are more generous than price indexation. Table 5 shows the significant reductions in numbers below poverty lines measured in this way. Overall, the absolute poverty rate (before housing costs) would fall from 17 per cent in the post-reform 2006–07 system to 13 per cent after six years and only 7 per cent after 20 years. For children, the fall is from 18 to 7 per cent and, for pensioners, from 23 to just 4 per cent. If we thought of ‘poverty’ only in such absolute terms, growing real earnings and indexation of just some elements of the system more generously than with prices is enough to achieve quite substantial cuts in poverty. However, neither current government policy (recently endorsed by the main opposition party) in terms of child poverty objectives, nor public opinion measured in various ways (Hills, 2004, section 3.5) currently takes such an austere view of the objective.

Table 5 Poverty rates after six and 20 years of base case uprating measured against constant real poverty lines

%	2006–07 starting point		After six years		After 20 years	
	BHC	AHC	BHC	AHC	BHC	AHC
All	16.6	20.6	13.1	17.4	7.4	13.7
Children	17.5	26.7	13.0	23.5	8.8	19.7
Pensioners	22.9	16.0	17.4	9.3	4.3	3.5
Working age	14.4	19.8	11.8	17.6	7.8	14.6

See Table 3 in Box 3. Poverty lines after six and 20 years are calculated by indexing the starting point poverty lines by the assumed change in the RPI.

Source: POLIMOD using FRS 2003–04.

Summary

While we have been discussing this in dispassionate technical terms, the main conclusion of this chapter is the strikingly large impact of such changes – in particular, the following.

- Ad hoc changes can have significant impacts. For instance, the 2007 Budget reforms imply income gains of half a per cent or more for those at the bottom of the income distribution and, other things being equal, would cut overall poverty rates by 0.6–0.7 percentage points and the child poverty rate by around 2 percentage points.
- However, the accumulated effects of indexation decisions can be far larger. Reforms of the scale of those announced in the 2007 Budget are barely enough to offset the effects of a *single year's* worth of erosion of the value of benefits on the relative income of the poorest income groups.
- Accumulated over a number of years the effects magnify. For the poorest tenth of the population, who are largely dependent on cash benefits, incomes would fall by an average of 17 per cent in relative earnings terms after 20 years.
- Measured on a before housing costs basis, the child poverty rate would rise from 18 per cent at the starting point to 33 per cent after 20 years of base case uprating. Instead of eradicating child poverty, the effect of continuing current uprating policies would be almost to double it. Structural reforms of the scale of the 2007 Budget changes would be required every two to three years just to offset this rise in child poverty.
- After housing costs, 20 years of current indexation of both benefits and taxes would mean the typical poverty gap rising from 23 to 35 per cent of the poverty line. Not only would the *numbers* in relative poverty have risen substantially, but so would the *depth* of their poverty.
- The further up the income distribution one looks, however, the more closely net incomes keep up with gross earnings – despite the falling relative value of benefits and, most relevant in this context, the effects of fiscal drag. A single childless person earning at least 42 per cent of full-time average earnings would be further above the poverty line after 20 years of base case uprating than at the starting point.
- At lower levels of income, and for families qualifying for benefits or tax credits at the starting point, incomes fall relative to the poverty line. For example, a couple with two children and one parent working for 40 hours on the minimum wage would see their income fall from 96 to 67 per cent of the poverty line after 20 years of base case uprating.

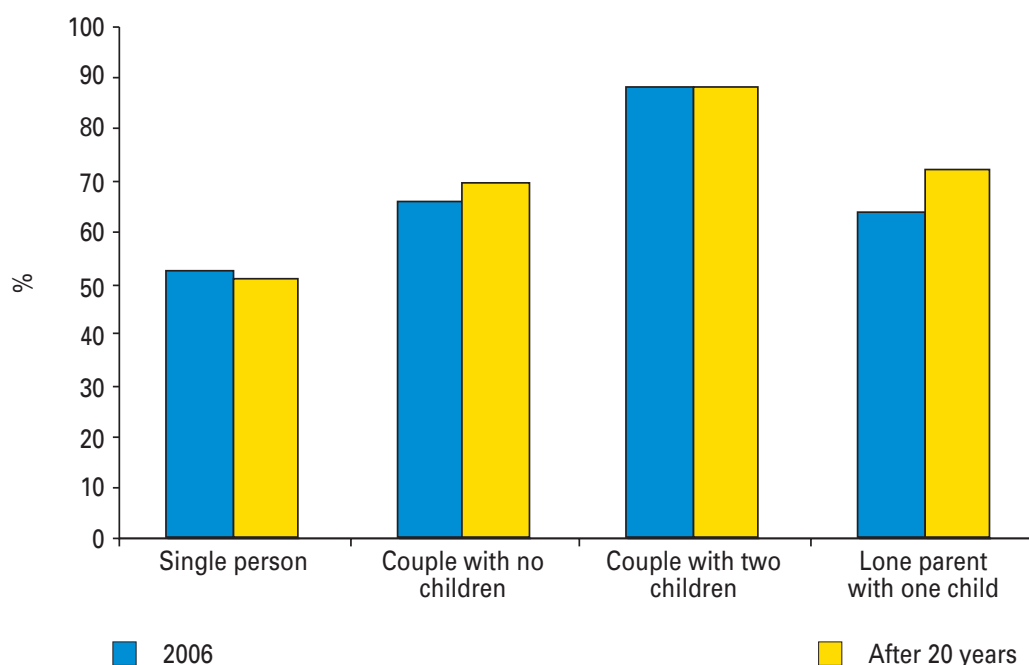
- Overall, the budgetary effect is a substantial gain to the public finances, compared to what would happen if the system was adjusted in line with earnings growth (which is what, other things being equal, would mean unchanged revenue and spending in relation to national income). In 2006–07 earnings terms, this amounts to £17 billion after six years and £47.4 billion after 20 years, or around 1.3 per cent of GDP after six years and 3.6 per cent after 20 years.

7 Implications of current indexation rules: work incentives and reliance on means-tested benefits

As a corollary of making the future benefit systems relatively less generous to those with low incomes, we might expect that aspects of work incentives inherent in the system would improve. We consider two aspects of work incentives, the incentive to work at all and the incentive to work more, for those already in work.

First, the incentive to work at all will be improved if the income earnings and in-work benefit/tax credit package of the people concerned is growing faster than out-of-work benefit incomes. Figure 16 shows the ratio of (AHC) household income out of work to that in work (termed the replacement rate) for the four illustrative families considered in the previous chapter. In each case, it is assumed there is one person in work for 30 hours per week and that they are paid the minimum wage.

Figure 16 Replacement rates for illustrative family types at the 2006–07 starting point and after 20 years of base case uprating



The poverty lines are derived from median incomes reported in Table 4 in Chapter 6.

Source: own calculations based on in-work earnings corresponding to 30 hours at the National Minimum Wage.

The comparison shows the replacement rate at the starting point and after 20 years of base case uprating. In every case, the illustrative families are better off with a person in work – the replacement rate is less than 100 per cent. The extent to which this is so increases slightly after 20 years of base case uprating for the single childless person (the replacement rate falls from 52 to 50 per cent) and it remains unchanged for the couple with two children. However, it rises a little for the childless couple (from 66 to 69 per cent) and quite substantially for the lone parent (from 64 per cent at the starting point to 72 per cent after 20 years). The reason for this is that in-work benefits and credits are falling in value relative to earnings. Out-of-work benefits are falling in value too, but the freezing of the tax credit threshold, as well as earnings disregards and capital limits, means that in some cases in-work incomes fall faster. Unless this issue is addressed, such measures of work incentives suggest that, other things being equal, lone parents would be *less* likely to take minimum wage paid work after 20 years of base case uprating than they are currently.

Second, the erosion of means-tested benefits and credit thresholds and amounts, along with the lowering of tax thresholds, will have an effect on the extent to which marginal increases in earned income are reduced through taxation and withdrawal of benefits or credits. Marginal effective tax rates (METRs), or the proportion of any additional earnings lost in this way, indicate the incentive to work a little more. Table 6 shows the distribution of METRs on an additional hour worked per week at the starting point, and then after six and 20 years of base case uprating. On the one hand, the effect of 20 years of base case uprating is to increase METRs on average by 1 percentage point (from 32 to 33 per cent) and by a substantial amount (5 percentage points or more) for a much larger group (23 per cent) than those who see their METR fall by at least the same amount (9 per cent). However, this is not driven by increases in the numbers with very high METRs because of benefit withdrawal. The proportions on METRs above 50 per cent fall from 9.5 to 6.5 per cent, and it is falling relative tax thresholds that have the main effect. The proportions of people facing low rates (below 20 per cent) fall from 17 to 13 per cent after 20 years, as more people cross the threshold to pay basic rate tax. The proportion of people in paid work facing marginal rates of 40 to 50 per cent, indicating in most cases a move into paying higher rate tax at the margin, more than doubles from 11 to 24 per cent.

This is reflected in the change in the marginal rate faced by people in work at different points in the household income distribution, shown in Figure 17. At the starting point, this is highest for workers in the bottom decile group (49 per cent on average). After 20 years of base case uprating, the disincentive to work more, as indicated by the METR, remains highest in the bottom decile at 39 per cent on average, but nevertheless falls considerably. The reduction in the average METR is due to fewer people facing combined high rates of benefit withdrawal. In the middle of the distribution, the effects of less benefit withdrawal are mitigated to some extent

by the effects of fiscal drag, the combination resulting in small reductions in METRs on average. At the top of the distribution, the average METR is higher than under the starting point, with the effect of the falling relative value of the tax threshold outweighing the effect of the falling upper limit on National Insurance contributions.

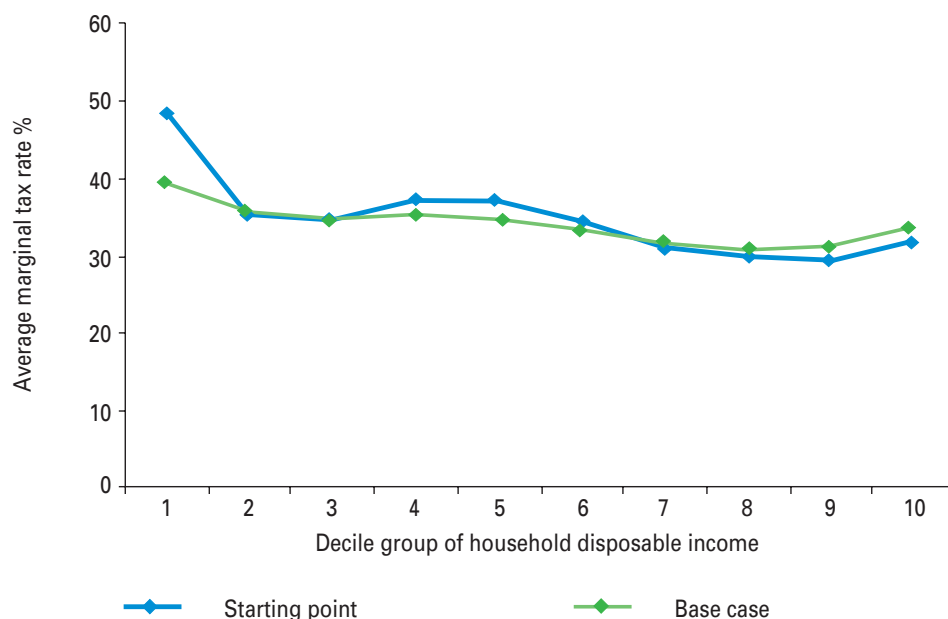
Table 6 Distribution of individual marginal effective tax rates (METRs) under the 2006–07 starting point, and after six and 20 years of base case uprating: percentage of people in work

Range of METR (%)	Base case uprating		
	Starting point	After six years	After 20 years
0 to 19.99	16.7	15.4	12.7
20 to 29.99	30.7	29.3	25.4
30 to 39.99	31.9	32.6	31.0
40 to 49.99	11.2	14.4	24.4
50 to 69.99	5.5	4.6	3.2
70 to 89.99	3.3	3.0	2.5
90+	0.7	0.7	0.8
All	100.0	100.0	100.0
Mean METR %	31.8	32.0	32.7
Median METR %	31.0	31.0	31.0

Source: POLIMOD using FRS 2003–04.

Marginal effective tax rates are calculated for each individual in paid work for a one hour per week increase in gross earnings, taking account of all effects on household disposable income.

Figure 17 Marginal effective tax rates for individuals in paid work by household income decile group: at the 2006–07 starting point and after 20 years of base case uprating



Marginal effective tax rates are calculated for each individual in paid work for a one hour per week increase in gross earnings, taking account of all effects on household disposable income. Decile groups are defined according to the household disposable income of individuals at the starting point, equivalised using the modified OECD scale.

Source: POLIMOD.

We also consider the associated issue of the extent of dependence on means-tested benefits. On the one hand, means testing is seen as problematic over and above its contribution to high METRs through benefit withdrawal as income rises. Not only may recipients feel stigmatised but also, particularly in the case of pensioners, there is a view – reflected in the provisions of the Pensions Act (DWP, 2006b) – that high levels of dependency on means-tested payments reduce the incentive to provide for one’s own support, in this case in retirement. On the other hand, if the alternative to receipt of such benefits is simply lower income, then rates of receipt can also be indicative of the extent to which income is underwritten by the means-tested system. Thus receipt of a means-tested benefit or credit is viewed here neither as purely a positive nor a negative feature, simply as an indication of how the system as a whole is working.

Over all types of means-tested benefit and tax credit,¹ the proportion of people in receipt falls from 43 per cent at the starting point to 30 per cent after 20 years of base case uprating (Table 7). This reduction is not because there are fewer pensioners in receipt of Pension Credit (PC). The proportion remains roughly constant, reflecting the indexation of the Guarantee Credit within PC by earnings over the whole period.² Nor is it due to reductions in the number on Income Support (IS), shown in Table 7 in terms of the number of children affected. While base case uprating reduces the relative size of IS payments, this has only a small effect on the number of recipients, as most working-age IS recipients do not have substantial other incomes to fall back on. The main change is due to the numbers on in-work means-tested supplements being dramatically reduced as the size of payments on average, as well as the income threshold for tapering payments, falls relative to family income. The proportion of children in families receiving tax credits would be reduced to less than half within 20 years of base case uprating.

Table 7 Proportion of people in families in receipt of means-tested benefits or tax credits at the 2006–07 starting point, and after six and 20 years of base case uprating (%)

	Starting point	Base case uprating	
		After six years	After 20 years
All on any benefit or credit*	43	39	30
Children on CTC with IS	17	16	16
Children on CTC alone or with WTC**	49	40	23
Pensioners on PC***	32	34	33
Pensioners on any benefit	45	46	45
All on HB/CTB	21	21	21

* Income Support (IS), Housing Benefit (HB), Council Tax Benefit (CTB), Pension Credit (PC), Child Tax Credit (CTC), Working Tax Credit (WTC).

** Not including cases receiving the CTC family element only.

*** Either Guarantee Credit or Savings Credit, or both.

Source: POLIMOD using FRS 2003–04.

It should be noted that the proportions on Housing Benefit and Council Tax Benefit do not fall at all. For pensioners, entitlement to these benefits is aligned with Pension Credit. For others, while income thresholds may be falling in relative earnings terms, we assume in our modelling that maximum amounts – corresponding to rent and Council Tax respectively – remain buoyant with earnings. Although some beneficiaries would find their entitlements dwindling as their incomes rose relative to the thresholds, which are kept constant in real terms only, others would find these benefits filled the gap left by Child and Working Tax Credits, the thresholds of which would be falling in value relative to prices.

Summary

- To the extent that base case uprating represents a reduction in the relative value of benefits, we might expect improvements in work incentives after the effects have accumulated as measured by effective marginal tax rates and replacement rates. This is only partly the case.
- Incentives to take work at all do not necessarily improve because, while out-of-work benefits fall in relative earnings terms, in-work benefits fall faster due to the freezing of the tax credit thresholds. For example, a lone parent would have an income out of work that is 64 per cent of that while working for 30 hours on the minimum wage at the starting point, but this proportion – or ‘replacement rate’ – rises to 72 per cent after 20 years.
- Incentives to earn more improve at the bottom of the income distribution and the number on high METRs (50 per cent or more) due to benefit withdrawal would fall from 9.5 per cent to 6.5 per cent of the working population.
- For the rest of the population, the erosion of tax thresholds has the major effect. In particular, the proportion of people in work paying income tax at the highest marginal rate (40 per cent) rises from 11 to 24 per cent. Marginal rates rise overall in the top income groups and a much larger group of the working population (23 per cent) would find their marginal rates rising noticeably (by more than 5 percentage points) than see them fall by this much (9 per cent).
- The proportion of the population reliant on any means-tested benefit (or tax credit) falls from 43 per cent to 30 per cent after 20 years. Much of this effect is because of reductions in the numbers receiving tax credits. While this may contribute to improving the incentives of some to work more, this is at the cost of increasing child poverty rates, as described in the previous chapter.

8 Implications of current indexation rules: fiscal drag and benefit erosion

Part of the effects described above result from failure to uprate some benefits and tax credits in line with earnings or median income growth, part is due to the indexation of most income tax and NIC thresholds to prices rather than earnings. We have termed the effect of the indexation regime leading to rising tax burdens ‘fiscal drag’ and the corresponding reduction in the relative value of benefits ‘benefit erosion’. In this chapter, we consider the separate contribution of each. We also establish the extent to which the effects of the current indexation regime are driven by failure to index some elements at all (rather than being indexed to prices) and examine how much of a difference is made by indexation of some elements by earnings over some or all of the periods considered.

The contributions of fiscal drag and benefit erosion

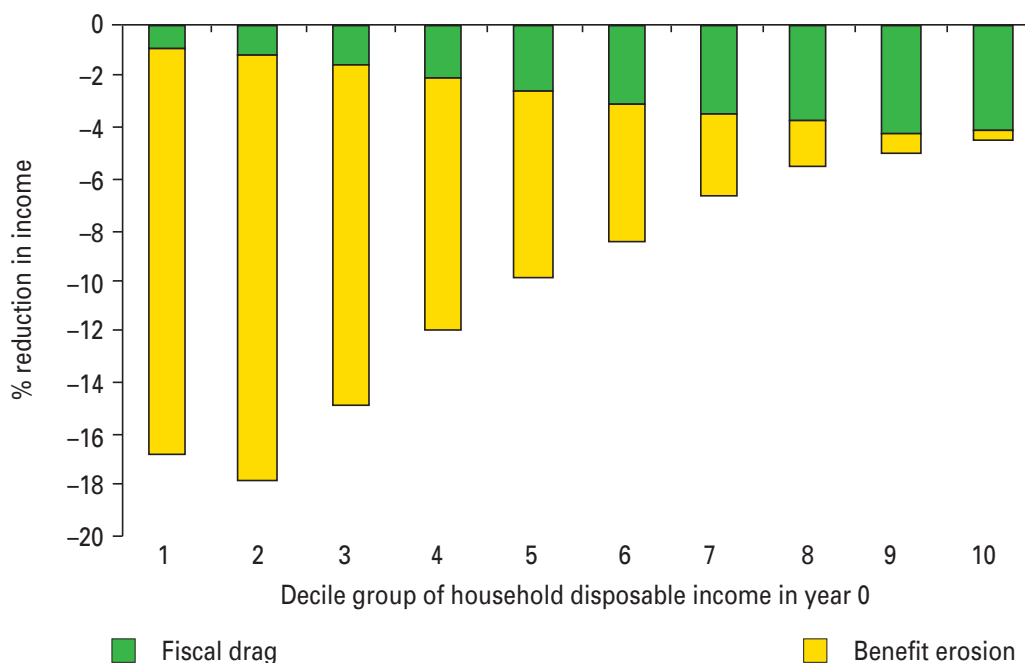
Twenty years of current indexation conventions for tax thresholds and allowances (fiscal drag) as applied to the 2006–07 income distribution, while assuming that benefits and tax credits remain constant in relation to earnings, would have the effect of raising £20.2 billion per year after 20 years (measured in earnings terms). This is two-fifths of the government revenue gain from the combined effects. Not surprisingly, this bears much more heavily on higher- than lower-income households, as shown in Figure 18. Indeed, nearly all of the negative effects in the top decile groups are due to fiscal drag rather than the loss in the relative value of benefits.

We can also consider the mirror image situation where tax and contribution thresholds keep pace with earnings but benefits and tax credits remain uprated as in the base case. The distributional effects of this ‘benefit erosion’ are also shown in Figure 18. Here it is the lower-income households that are most affected – the 16 per cent losses due to benefit erosion shown here for the bottom two tenths accounting for nearly all of the losses from the combined change.

Not only does benefit erosion play a much bigger role than fiscal drag at the bottom of the distribution (and the reverse at the top), but also the aggregate size of the benefit erosion effect is larger. While fiscal drag would be raising £20.2 billion in additional government revenue per year by 2026–27 relative to earnings indexation, benefit erosion would be reducing spending by £27.2 billion per year, or 57 per cent

of the total gain to the public finances. Combined, they have a proportional effect on incomes that is four times the size for the bottom 20 per cent of the population as it is for the top 20 per cent. Moreover, it is clear that reducing or eradicating fiscal drag would do very little to lessen the effect at the bottom. Addressing benefit erosion, one way or another, is necessary if this effect is to be avoided.

Figure 18 The distributional impact of fiscal drag and benefit erosion after 20 years of base case uprating



Decile groups are defined according to the household disposable income of individuals at the starting point, equalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Contributions to poverty rates and poverty gaps

These distributional effects have implications for poverty measures, as shown in Table 8. Looking at the two effects separately, fiscal drag for 20 years causes relative poverty rates to be slightly *lower* than they would be otherwise (if all benefits, credits and tax and NIC thresholds were indexed with earnings). It has little effect on the incomes of the poor or those on the margins of poverty, but reduces median incomes, and hence depresses the relative poverty line slightly compared to the base case. By contrast, if there were no fiscal drag, but benefits and tax credits were

updated under current conventions, relative poverty rates would be slightly higher than from the two effects combined. As Figure 18 suggests, it is benefit erosion that is most important in thinking about the impact of policy choices on poverty rates. Without any benefit erosion (but with tax thresholds continuing to be updated as in the base case), poverty rates would actually be somewhat lower than they are at the starting point.

Table 8 Relative poverty in the UK after 20 years of base case uprating, and under fiscal drag and benefit erosion alone

	Starting point	Base case	Fiscal drag only	Benefit erosion only
BHC median (£)	363.9	333.8	353.1	344.1
Poverty rates: all	16.6	23.4	15.7	23.9
Children	17.5	32.8	15.9	33.1
Pensioners	22.9	24.0	21.5	26.1
Working age	14.4	19.6	13.9	19.8
Poverty gap (median) (%)	18.6	22.1	17.9	22.9
AHC median (£)	311.1	279.6	299.7	291.2
Poverty rates: all	20.6	25.4	19.6	26.4
Children	26.7	39.0	25.2	39.1
Pensioners	16.0	14.3	13.6	19.1
Working age	19.8	23.7	19.3	23.9
Poverty gap (median) (%)	22.9	35.3	23.4	35.2

Poverty rates are calculated as the percentage of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the 'companion' scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

Contributions to changes in marginal tax rates

The view that benefit erosion needs to be tackled if its unequal effects are to be avoided might, from some perspectives, be tempered if benefit erosion were to have dramatically positive effects on work incentives. The effect of the two components on marginal effective tax rates, and hence incentives to work more intensively, is clearly shown in Table 9. Fiscal drag has the effect of increasing marginal rates on average. The mean would rise from 32 per cent at the starting point to 35 per cent after 20 years. Benefit erosion does have the opposite effect. As entitlements fall relative to income, fewer people are entitled and face high effective marginal rates due to withdrawal of benefit. Compared with the starting point, the average marginal rate would be about 2 percentage points lower after 20 years. The proportion of the workforce with marginal rates above 50 per cent would fall from 9.5 to 5.8 per cent. This is a significant improvement, but it is questionable whether it could bring about increases in work effort that would compensate for the loss in income through benefit erosion and, if not, whether it could justify the huge increase in poverty rates.

Table 9 Distribution of individual marginal effective tax rates (METRs) after 20 years of base case uprating, and under fiscal drag and benefit erosion alone: percentage of people in work

Range of METR (%)	Starting point	Base case uprating after 20 years		
		Combined	Fiscal drag	Benefit erosion
0 to 19.99	16.7	12.7	11.8	17.7
20 to 29.99	30.7	25.4	23.9	32.5
30 to 39.99	31.9	31.0	29.2	33.4
40 to 49.99	11.2	24.4	24.8	10.6
50 to 69.99	5.5	3.2	5.7	3.0
70 to 89.99	3.3	2.5	3.8	2.3
90+	0.7	0.8	0.8	0.5
All	100.0	100.0	100.0	100.0
Mean METR (%)	31.8	32.7	34.7	29.7
Median METR (%)	31.0	31.0	31.0	29.5

Marginal effective tax rates are calculated for each individual in paid work for a one hour per week increase in gross earnings, taking account of all effects on household disposable income.

Source: POLIMOD using FRS 2003–04.

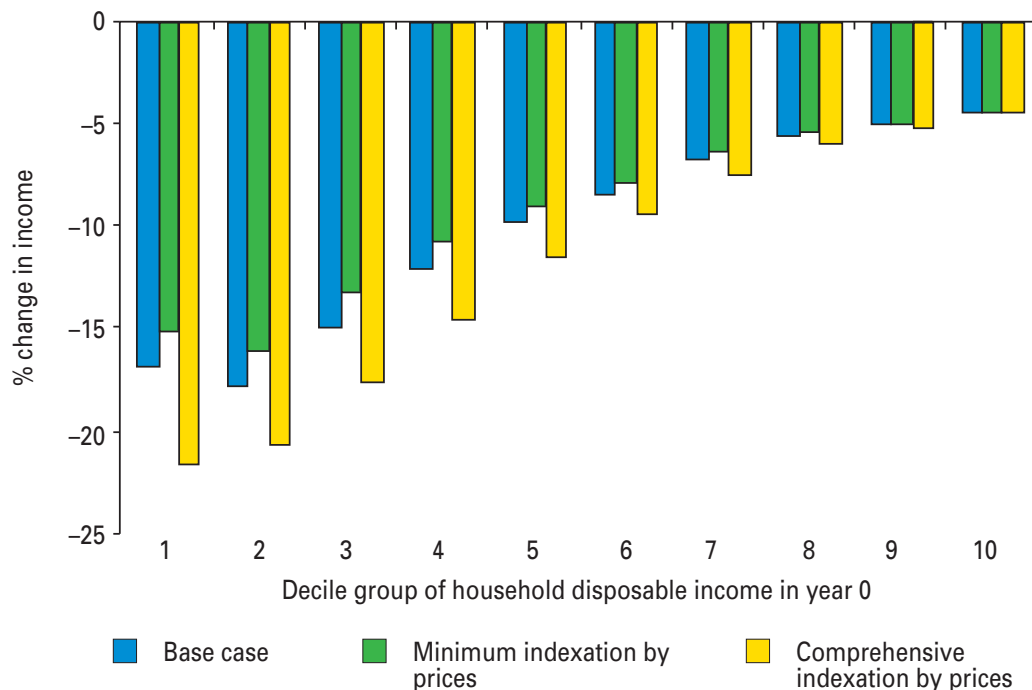
The effects of ‘pure’ price indexation

Some of the potentially adverse effects of the current uprating regime on poverty, as well as some of the implications for marginal tax rates and the numbers affected by means testing, may be due to the fact that some elements of the system are frozen in value in nominal terms. It is of interest to know how much of the effects of fiscal drag or benefit erosion identified above would be reduced if these elements were uprated using the RPI. We term this ‘minimum price indexation’.

At the same time, some elements *are* uprated by earnings and it is equally of interest to know the extent to which this prevents the picture looking worse. We explore this by modelling the uprating of all elements (including those currently frozen) by the RPI.¹ We term this ‘comprehensive price indexation’.

Minimum price indexation raises 6 per cent *less* revenue than the base case after 20 years, while the net effect of the comprehensive price uprating scenario is to raise 12 per cent more net revenue than the base case. The distributional effect of these two scenarios after 20 years is shown in Figure 19. Minimum indexation by prices has the effect of reducing the loss relative to earnings, but comprehensive price indexation increases the loss, particularly in the lower decile groups where beneficiaries of the Pension Credit are located.

Figure 19 Relative earnings effects of price indexation after 20 years



Decile groups are defined according to the household disposable income of individuals at the starting point, equivalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Not surprisingly, pensioner poverty rates would rise dramatically after 20 years of comprehensive price indexation, compared with the base case scenario (Table 10). On an after housing costs basis, the pensioner poverty rate would almost double to 29 per cent. Comprehensive price indexation has a marked effect on lowering the median. So the poverty rates of all other groups are lower by 1 or 2 percentage points than under the base case. Minimum price indexation has a modest effect, lowering all poverty rates a little, and by 1 percentage point for children and pensioners on an after housing costs basis.

Allowing all elements of the system to be indexed by prices at least is of particular relevance when considering the effect of base case uprating on Child Tax Credit (CTC) and Working Tax Credit (WTC). The income threshold at which these credits start to be tapered away is frozen in our analysis (as in current policy) and one plausible explanation for the very sharp increases in child poverty implied by base case uprating (shown in Table 4 in Chapter 6) might be that it is this, rather than the indexation of the CTC child amount only to prices from 2009, that so reduces

the effectiveness of CTC. In fact, this is not so. Amending the 20-year base case assumptions to uprate the CTC/WTC threshold by the RPI (but leaving other frozen elements alone) would lower the AHC child poverty rate by less than 1 percentage point (0.7) and the BHC child poverty rate by just 1 percentage point, from 33 to 32 per cent (compared with 18 per cent at the starting point).²

Table 10 Effects of price indexation on poverty after 20 years in relative earnings terms, compared with the base case

	Starting point	Base case	Minimum price indexation	Comprehensive price indexation
BHC median (£)	363.9	333.8	335.5	329.1
Poverty rates: all	16.6	23.4	22.7	23.8
Children	17.5	32.8	31.4	30.8
Pensioners	22.9	24.0	23.4	30.2
Working age	14.4	19.6	19.2	19.2
Poverty gap (median) (%)	18.6	22.1	22.4	25.1
AHC median (£)	311.1	279.6	281.9	275.5
Poverty rates: all	20.6	25.4	24.8	27.8
Children	26.7	39.0	38.1	37.6
Pensioners	16.0	14.3	13.1	28.5
Working age	19.8	23.7	23.5	23.8
Poverty gap (median) (%)	22.9	35.3	34.5	34.8

'Minimum price indexation' unfreezes all frozen elements of the system and indices by RPI.

'Comprehensive price indexation' indexes all elements by RPI (or Rossi if currently used).

Poverty rates are calculated as the percentage of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the 'companion' scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

The small effects on poverty rates of price indexation of all elements are a reflection of the small increase in numbers in receipt of some means-tested benefits, relative to the base case, shown in Table 11. Minimum price indexation increases the proportion of pensioners in receipt of any benefit, for example, because this reduces the limiting effects of capital thresholds in Housing Benefit and Council Tax Benefit that are frozen under the base case scenario. Table 11 also shows how comprehensive price indexation greatly lowers the proportion of pensioners in receipt of Pension Credit (to 10 per cent compared with one-third after 20 years under base case uprating). However, the proportion of pensioners on any benefit does not fall so much because Housing Benefit and Council Tax Benefit retain a greater role in the same manner as they do for working-age people as the value of the tax credits erodes under base case uprating (Table 7 in Chapter 7).

Table 11 Proportion of people in families in receipt of means-tested benefits or credits after 20 years of base case uprating and price indexation (%)

	Starting point	Base case	Minimum price indexation	Comprehensive price indexation
All on any benefit or credit*	43	30	31	28
Children on CTC with IS	17	16	16	16
Children on CTC alone or with WTC**	49	23	22	22
Pensioners on PC***	32	33	33	10
Pensioners on any benefit	45	45	47	33
All on HB/CTB	21	21	22	21

* Income Support (IS), Housing Benefit (HB), Council Tax Benefit (CTB), Pension Credit (PC), Child Tax Credit (CTC), Working Tax Credit (WTC).

** Not including cases receiving the CTC family element only.

*** Either Guarantee Credit or Savings Credit, or both.

Source: POLIMOD using FRS 2003–04.

Summary

- The size of benefit erosion in terms of spending foregone is larger than the size of fiscal drag in terms of extra revenue. The ratio is 57:43 after 20 years of base case uprating.
- Benefit erosion plays a much bigger role than fiscal drag at the bottom of the distribution (and the reverse at the top).
- Combined, they have proportional negative effect on incomes that is nearly four times larger for the poor than for the rich. The 20 per cent of households with the lowest incomes on average lose 17.3 per cent of the incomes relative to earnings. The 20 per cent of households with the highest incomes lose 4.8 per cent.
- Reducing or eradicating fiscal drag would do nothing to lower poverty rates relative to the base case. It is benefit erosion that is most important in thinking about the impact of policy choices on poverty rates.
- Fiscal drag has the effect of increasing marginal deduction rates on average. Benefit erosion has the opposite effect. As entitlements fall relative to income, fewer people are entitled to or face high effective marginal rates due to withdrawal of benefit. The proportion of the workforce with marginal rates above 50 per cent would fall from 9.5 to 5.8 per cent after 20 years of benefit erosion.

The impact of benefit and tax uprating on incomes and poverty _____

- It is unlikely that this improvement alone could bring about increases in work effort that would compensate for the loss in income through benefit erosion. It is therefore questionable whether it could justify the huge increase in poverty rates.
- If all thresholds and benefits were uprated uniformly by prices, the main effect would be a dramatic rise in the pensioner poverty rate, compared with the base case scenario, in which the Guarantee Credit and (from 2012) the Basic Pension are earnings linked. On an AHC basis, it would almost double from 16 per cent at the starting point to 29 per cent after 20 years.

9 Implications of alternative indexation strategies

The analysis in the preceding two chapters does not represent a forecast of what policies will actually be implemented over the next six or 20 years. Some of the substantial revenue gains that current indexation conventions would generate might be used to keep the government accounts in balance without tax rises in the face of other pressures, such as improving public finances to meet the ‘Golden Rule’, or the pressures from an ageing population. However, parts at least of them may in the event be ‘given back’ through periodic tax and benefit reforms or ad hoc tax ‘cuts’. This has certainly been the experience of the last ten years. What the analysis does do, however, is to indicate the scale of such reforms or adjustments that might be needed even just to prevent poverty rates from rising, let alone to make progress in reducing poverty.

This chapter explores the distributional implications of what would happen if the revenue gains were offset through other changes to the tax or benefit systems. To do this, we consider a series of illustrative scenarios, as follows:

- a. uprating benefits and tax credits at a higher rate than the current base case policy;
- b. uprating income tax and National Insurance contribution (NIC) thresholds at a rate higher than the current base case policy;¹
- c. cutting income tax (and NIC) rates by some common proportion.

Spending the total revenue gain would, by definition, be sufficient to uprate all taxes and benefits by earnings. Targeting the whole amount on one or other of scenarios (a) and (b) would result in uprating some elements by more than the growth of incomes generally. This may be desirable – either from the perspective of making the benefit system more generous or from the perspective of reducing tax burdens – but would amount to a ‘structural change’ in the terms we are using in this report. So, for illustrative purposes, we ‘spend’ just part of the total. We consider what would be possible if 43 per cent of the total were to be available after 20 years (£20.2 billion per year). In other words, that which could be achieved if only three-fifths of the base case revenue gain was actually used for other purposes. The proportion is calculated to correspond to the amount of revenue attributable to fiscal drag alone.² We term spending this proportion of total revenue as ‘public finance Scenario 2’ with the base case providing ‘Scenario 1’.

We examine the impact of using the revenue released under Scenario 2 either: (a) to mitigate the consequences of benefit erosion by financing a higher level of uprating than is applied in the base case; or (b) to increase tax thresholds; or (c) to reduce tax rates.

In order to provide some perspective to the size of these effects, we also consider at various points in our discussion some specific policies into which all the revenue could hypothetically be targeted, rather than more generally applied. These are explained in Box 5.

Box 5 Targeted policies

Three specific policies into which all the revenue could hypothetically be targeted are an increase in the level of:

- per child Child Tax Credit payment;
- Child Benefit for each child;
- the Basic State Pension.

The child payment in the Child Tax Credit is now seen as the primary instrument for directly increasing the incomes of low-income families with children and as a major component to the strategy to reduce child poverty (Hirsch, 2006). Here we simply consider targeting all resources on the child rate, while allowing the threshold to be eroded along with the rest of the credit and benefit systems. If we had also allowed the thresholds to maintain their relative value, this would have maintained the number of families who were entitled and would have made the revenue-neutral increase a lot smaller. Thus the particular illustration we have chosen is targeted especially at the lowest-income families and hence is especially effective at reducing child poverty. Other ways of channelling resources through Child Tax Credit to children would have other effects.

Although it is largely outside the scope of this report to compare alternative ways of reducing child poverty (see Bradshaw and Mayhew, 2006; Brewer *et al.*, 2006a; Hirsch, 2006), we do consider one other approach to child support, which is of interest since its effect does not depend on the way other components of the system are uprated. We explore how large an increase in Child Benefit could be achieved with £20.2 billion to spend and what impact that would make on child poverty.

The Basic State Pension is due to start rising with earnings in 2012 (or by the end of the next Parliament at the latest). However, it is of interest to see what would happen both to pensioner poverty and to reliance on means-tested payments by pensioners if this growth were accelerated. In fact the amount by which the Basic State Pension could be uprated after 20 years of fiscal drag under public finance Scenario 2 would almost exactly restore its 1979 value relative to earnings.³

Table 12 shows the increase in these three payments that would be possible on a first-round, revenue-neutral basis. The increases are shown relative to the 2006–07 starting point value, not the eroded value after 20 years.

The effects across the income distribution on poverty, work incentives and receipt of means-tested benefits are given at relevant points in the text.

Table 12 Revenue-neutral policy changes under public finance Scenario 2 after 20 years

Percentage increase in	
Child Tax Credit child amount	152
Child Benefit for each child	323
Basic State Pension	63.3

Changes are relative to the 2006–07 starting point amounts. Revenue neutrality is calculated before any behavioural responses.

Source: POLIMOD using FRS 2003–04.

The size of the revenue-neutral change is estimated in a first-round sense – without accounting for any behavioural reactions that may take place. In the case of benefit uprating, *all* benefit and tax credit thresholds, disregards and payment amounts are uprated by the same annual proportion over and above the base case, up to the equivalent of annual earnings uprating. The factor that uses up the revenue under Scenario 2 after 20 years is an increase of 1.87 per cent each year.⁴ So, for a component that is price uprated in the base case, the uprating is somewhere between the base case and what would happen under earnings uprating (assumed to be 2 per cent on top of price indexation per year). This is similar to uprating benefits by a weighted average of prices and earnings growth as used for pensions in Hungary, Finland, Switzerland and other countries (see Chapter 3). For elements that are frozen under the base case, the values still fall in relative earnings terms but by less than they would under the base case.⁵

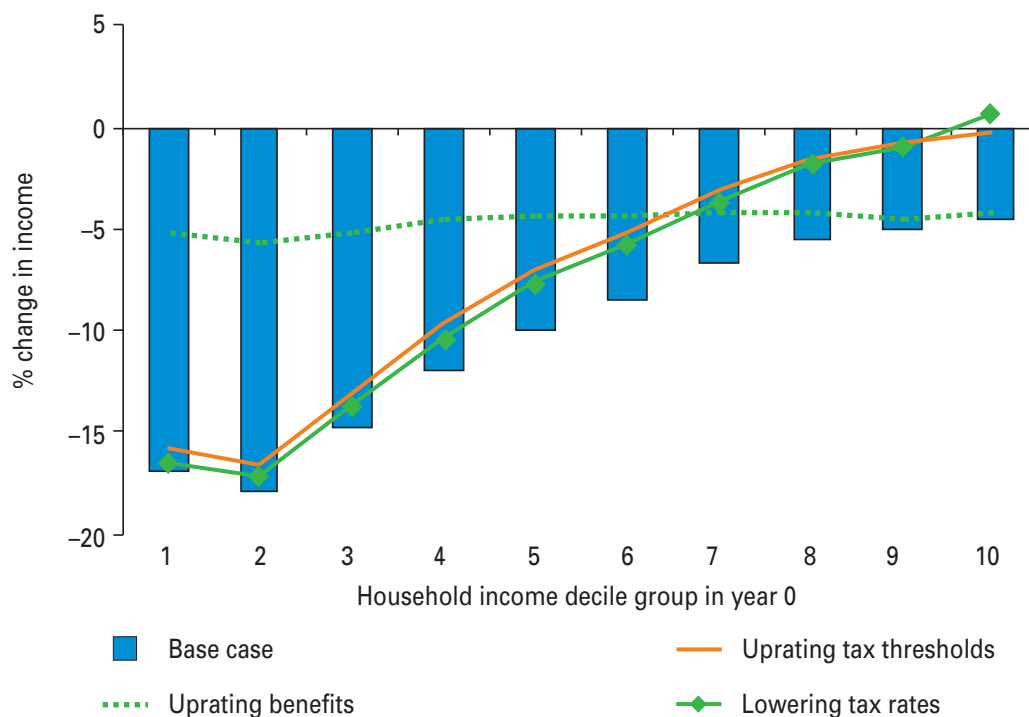
The impact of benefit and tax uprating on incomes and poverty

Spending the revenue under Scenario 2 on uprating tax thresholds is equivalent to uprating by earnings and reducing fiscal drag to zero. The additional factor in this case is therefore 2 per cent.

Spending the revenue under Scenario 2 on cuts in tax rates (including rates of employee and self-employed NICs) would allow them to be cut proportionately by 11.9 per cent after 20 years. This corresponds, for example, to a cut in the basic rate of income tax from 20 to 17.6 per cent.

Figure 20 shows the distributional effects of the combination of fiscal drag and benefit erosion, offset by each of the three changes described above after 20 years. The bars show the effect of the base case (as in Figure 18 in Chapter 8) and the lines plot the net income change (compared with the same starting point) under Scenario 2 with the revenue spent on the three options (a), (b) and (c).

Figure 20 Distributional effects of base case uprating and alternative spending under Scenario 2 after 20 years



Decile groups are defined according to the household disposable income of individuals at the starting point, equalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

Tax ‘cuts’

As might be expected, both mechanisms based on reducing tax burdens would have their main effect among higher-income households, with the reduction in tax rates having a slightly greater effect in the top decile group to the extent that the group as a whole would actually gain on average. The value of the tax cut would exceed losses under the base case.

Nevertheless, the political advantages in cutting tax rates make this scenario a not implausible outcome, if governments are committed to keeping the overall tax ratio constant. The direct tax system would become less progressive as thresholds fell in relative terms, but tax rates were cut. On the other hand, as shown in Table 13, poverty rates would rise relative to the starting point as a result of benefit erosion, as the two reductions in tax and contributions have rather little effect on poverty rates.

Table 13 Relative poverty in the UK after 20 years of alternative uprating regimes

	Starting point	Spending under Scenario 2 on			
		Base case	Benefit uprating	Increasing tax thresholds	Reducing tax rates
BHC median (£)	363.9	333.8	348.5	344.2	342.7
Poverty rates: all	16.6	23.4	17.8	23.9	24.1
Children	17.5	32.8	20.2	33.1	33.3
Pensioners	22.9	24	22.4	26.2	26
Working age	14.4	19.6	15.6	19.8	20.0
Overall median poverty gap (%)	18.6	22.1	18.0	22.9	22.9
AHC median (£)	311.1	279.6	295.4	291.2	289.1
Poverty rates: all	20.6	25.4	22.0	26.4	26.4
Children	26.7	39	29.9	39.1	39.1
Pensioners	16.0	14.3	15.6	19.1	18.7
Working age	19.8	23.7	20.9	23.9	24.1
Overall median poverty gap (%)	22.9	35.3	24.1	35.2	35.1

Poverty rates are calculated as the number of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the ‘companion’ scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

Benefit ‘increases’

In contrast, the combination of the base case mitigated by increased benefit uprating after 20 years shows an almost distributionally neutral effect, with an average loss of around 5 per cent of income across the whole distribution. In other words, if the other

pressures on the public finances necessitated this kind of revenue gain, a balanced way of raising the revenue would be to allow the fiscal drag to occur, but to uprate benefit and tax credit rates in real terms by the factor that would leave only slow benefit erosion (as benefits would be increased annually by 1.87 per cent over 20 years).

Nevertheless, poverty overall would be a little higher after 20 years of Scenario 2 with more generous benefit uprating than under the starting point (Table 13). While pensioner poverty would be a little lower after 20 years of this scenario, child poverty would be higher – 30 per cent compared with 27 per cent on an AHC basis and 20 per cent compared with 18 per cent on a BHC basis. Enhancing the annual rate of benefit uprating by 1.87 per cent would prevent dramatic increases in child poverty on the scale implied by base case uprating, but would not be quite sufficient to prevent child poverty from rising at all.

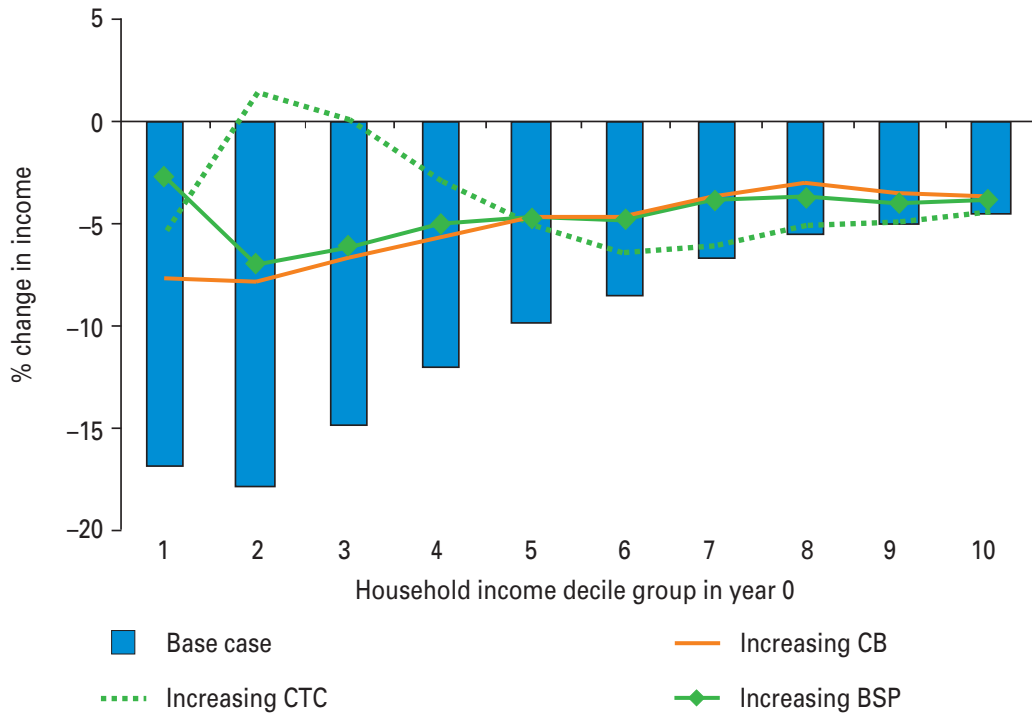
Targeted benefit or tax credit increases

The effect of uprating benefits and credits across the board by an amount between base case uprating and earnings can be contrasted with the effect of spending the same amount on a single benefit. The distributional effects of the three illustrative targeted ways of spending the resources released under Scenario 2 (see Box 5 earlier in this chapter) are shown in Figure 21.

The very large increase in CTC that could be financed by 20 years under Scenario 2 (increasing its value relative to the starting point by about 1.5 times) would have a strongly positive effect in the second and third decile groups, to the extent that the second decile group of households would be net gainers. As explained in Box 5 earlier in this chapter, increasing the child amounts while letting the income thresholds erode would focus the effect of CTC on households in a narrower band of incomes than is currently the case.

The distributional effect of a Child Benefit increase reflects the fact that the increase would be much smaller for those who receive it and that it would be spread over children at all income levels. The distributional effect is directly related to the position of children in the income distribution.

Figure 21 Distributional effects of targeted spending of the revenue from fiscal drag after 20 years



Decile groups are defined according to the household disposable income of individuals at the starting point, equivalised using the modified OECD scale.

Source: POLIMOD using FRS 2003–04.

The effects of increasing the Basic State Pension are also less clearly targeted by income than the CTC increase, but nevertheless would have the greatest proportional effect at the bottom of the distribution, roughly halving the loss experienced by the second decile group from 20 years of base case uprating and almost eliminating that of the bottom decile group.

Poverty and targeted increases

Not unexpectedly, given its distributional impact, the Child Tax Credit increase would have a dramatic effect on the child poverty rate, as shown in Table 14. It would fall to nearly half its AHC starting level (14 per cent compared with 27 per cent) and a third of the base case if all the resources from 20 years of Scenario 2 were used to raise the amount per child. On a BHC basis, the reduction would be to 9 per cent from 33 per cent under the base case (and 18 per cent at the starting point). Putting the

same resources into Child Benefit would reduce the child poverty rate by less, to 27 per cent AHC, more or less the same as at the starting point. However, the poverty gap overall would be lower with the increase in Child Benefit than with the Child Tax Credit increase – 22 per cent of the poverty line rather than 30 per cent. This is due to the fact that, while Child Benefit enjoys almost 100 per cent take-up, this is not the case for the tax credits.⁶ The increase in Child Benefit would not be large enough to pull many poor families across the poverty line, but would reach more very poor families than would the Child Tax Credit increase.⁷

Table 14 Relative poverty in the UK after 20 years of base case uprating and targeted spending

	Starting point	Base case	Spending under Scenario 2 on		
			Child Tax Credit	Child Benefit	Basic State Pension
BHC median (£)	363.9	333.8	350.5	352.1	350.9
Poverty rates: all	16.6	23.4	15.5	19.1	21.9
Children	17.5	32.8	9.3	17.7	35.8
Pensioners	22.9	24.0	27.3	27.5	8.0
Working age	14.4	19.6	14.2	17.0	21.1
Overall median poverty gap (%)	18.6	22.1	22.9	19.6	24.6
AHC median (£)	311.1	279.6	298.7	299.1	299.8
Poverty rates: all	20.6	25.4	17.7	22.7	25.4
Children	26.7	39.0	13.5	26.5	41.5
Pensioners	16.0	14.3	20.6	20.8	5.9
Working age	19.8	23.7	18.3	21.8	25.5
Overall median poverty gap (%)	22.9	35.3	30.0	25.5	38.3

Poverty rates are calculated as the percentage of people living in households with equivalised income below 60 per cent of the within-scenario median. The modified OECD equivalence scale is used with before housing costs (BHC) incomes and the ‘companion’ scale is used with after housing costs (AHC) incomes (see DWP, 2007a, p. 189).

Source: POLIMOD using FRS 2003–04.

As well as the effect at a point in time, the different scenarios would have distinct effects on income for any particular family as time went by and children grew to adulthood. Box 6 at the end of this chapter illustrates the case of a low-income couple who have two children and shows, using plausible assumptions about fertility, employment and education, how family income would move relative to the poverty line under alternative uprating scenarios.

Putting all the resources into raising the Basic State Pension would have a very dramatic effect on the pensioner poverty rate, reducing it to 6 per cent on an AHC basis, compared with 16 per cent under the starting point. This may seem surprising since low-income pensioners receive the Pension Credit, which is in any case uprated by earnings. The explanation lies partly in the fact that the increase in the Basic State Pension – an increase greater than earnings growth – would take some pensioners above Pension Credit guarantee level and partly in the fact that non-take-up of Pension Credit limits its effectiveness in preventing pensioner poverty. Those not taking up Pension Credit but with entitlements to the Basic State Pension would benefit from the increase in full.¹⁰

Reliance on means-tested benefits and work incentives

The extent to which raising the Basic State Pension, as in this scenario, would reduce reliance on Pension Credit is shown in Table 15. The proportion of pensioners in receipt would fall from 32 per cent at the starting point to 10 per cent. Reliance on any means-tested benefit would fall from 45 to 31 per cent. The proportion affected by Housing Benefit or Council Tax benefit would fall by less – from 21 to 19 per cent. Increasing Child Benefit would not have a corresponding effect on the proportion of children in families in receipt of in-work means-tested benefits, simply because Child Tax Credit does not take Child Benefit receipt into account. Incomes in families with children would rise accordingly. However, increasing Child Tax Credit would, of course, increase dependence on means-tested benefits. The proportion of children affected would be 38 per cent compared with 23 per cent in the base case. This is much smaller than at the starting point (49 per cent) because of the incidence of Child Tax Credit becoming more concentrated as the income thresholds erode.

Spending the resources on benefit uprating across the board increases the number of people facing marginal effective tax rates (METRs) in excess of 50 per cent (Table 16). This would rise to 8.9 per cent from 6.5 per cent of the working population. The increase in Child Tax Credit would make a bigger difference. METRs on average rise by 2.8 percentage points compared with the base case, with the percentage of those with earnings on very high rates (in excess of 50 per cent) rising to 12.4 per cent. Targeting means-tested payment increases on a group of children who are increasingly concentrated near the poverty line because of erosion of the tax credit threshold would have very large effects on the child poverty rate relative to the base case without these increases. But this would be at the cost of increasing METRs on earnings.

Table 15 Proportion of people in families in receipt of means-tested benefits or credits at the starting point, after 20 years of base case uprating and under alternative policy changes (%)

	Starting point	Base case	Spending under Scenario 2 on		
			Child Tax Credit	Child Benefit	Basic State Pension
All on any benefit or credit*	43	30	35	37	30 27
Children on CTC with IS	17	16	16	16	16 16
Children on CTC alone or with WTC**	49	23	32	38	23 23
Pensioners on PC***	32	33	31	33	33 10
Pensioners on any benefit	45	45	45	45	45 31
All on HB/CTB	21	21	21	21	21 19

* Income Support (IS), Housing Benefit (HB), Council Tax Benefit (CTB), Pension Credit (PC), Child Tax Credit (CTC), Working Tax Credit (WTC).

** Not including cases receiving the CTC family element only.

*** Either Guarantee Credit or Savings Credit, or both.

Source: POLIMOD using FRS 2003–04.

Table 16 Distribution of individual marginal effective tax rates (METRs) after 20 years of base case uprating, and under alternative policy changes: percentage of people in work

Range of METR %	Starting point	Base case	Spending under Scenario 2 on		
			Benefit uprating	Tax rate cuts	CTC increase
0 to 19.99	16.7	12.7	12.0	18.9	11.6
20 to 29.99	30.7	25.4	24.2	48.7	23.6
30 to 39.99	31.9	31.0	30.1	24.5	28.2
40 to 49.99	11.2	24.4	24.8	2.3	24.2
50 to 69.99	5.5	3.2	4.7	3.2	6.6
70 to 89.99	3.3	2.5	3.2	1.6	4.8
90+	0.7	0.8	1.0	0.8	1.0
All	100.0	100.0	100.0	100.0	100.0
Mean METR (%)	31.8	32.7	34.3	28.8	35.5

Marginal effective tax rates are calculated for each individual in paid work for a one hour per week increase in gross earnings, taking account of all effects on household disposable income.

Source: POLIMOD using FRS 2003–04.

Box 6 Growing up and out of poverty? Model childhoods

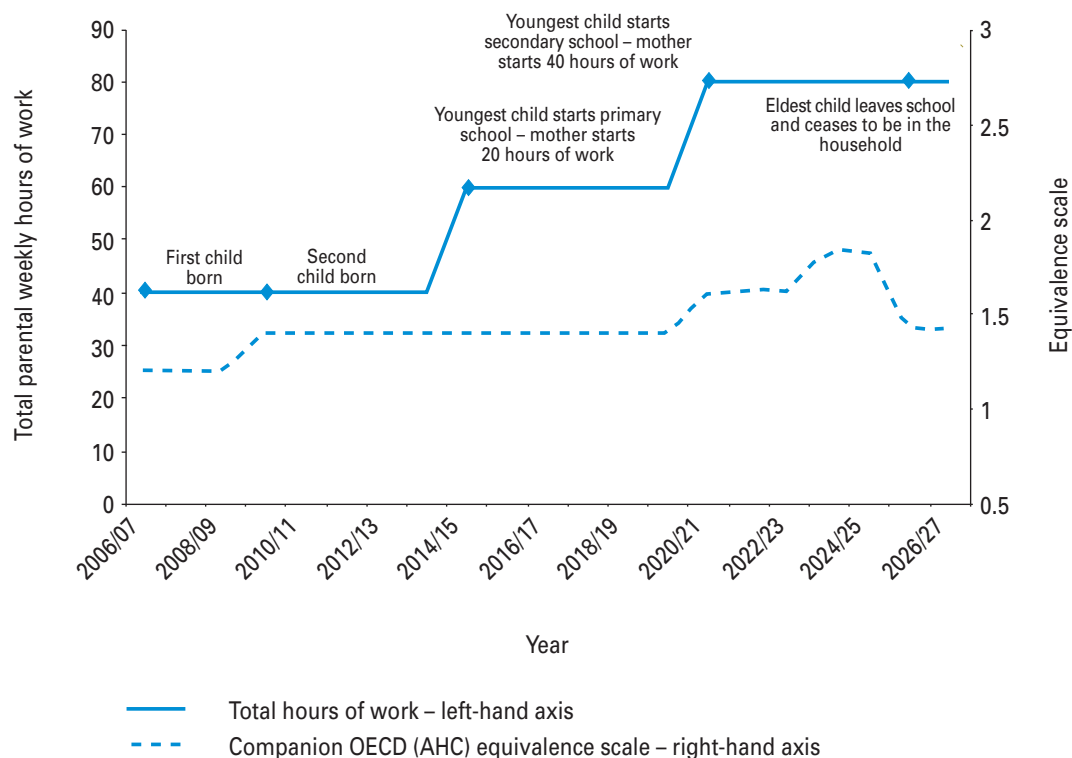
How does fiscal drag and benefit erosion affect the income of low-income families with children over the duration of their childhood? Our projections illustrate the effects of base case uprating on incomes in relation to the poverty line as children get older and are joined by siblings. We then compare them with the effects of some of the alternatives discussed in this chapter. The methodology uses hypothetical illustrative cases based on families who have their first child in 2006 and draws a profile of a ‘model childhood’ over the next 20 years based on the Lifetime Opportunities and Incentives Simulation model (LOIS).⁸

In general, the arrival of children increases consumption costs considerably. But these are not the only ‘costs of a child’ because children reduce maternal employment through a combination of periods of absence from the labour market, periods of part-time work and the resulting wage penalties. The ‘opportunity costs’ in combination with the direct costs change as children age – babies and young children *constrain* more and teenagers and older children *cost* more.

The ‘model childhood’ that we consider as an illustration is a stereotypical two-adult, two-children family, but with a high likelihood of poverty, as the parents work for the minimum wage. The eldest child is born in 2006 and its younger sibling three years later. Our starting assumption at the birth of the first child is that the father works 40 hours a week and the mother does not work at all until the second and youngest child reaches primary school age, when she takes up part-time work of 20 hours a week. When the youngest child reaches secondary school age, her employment increases to 40 hours a week. When the oldest child reaches 18 and leaves secondary school, both children are also assumed to have left the household.

Figure 22 summarises the underlying assumptions of the ‘needs’ of this model family as implied by the underlying equivalence scales used in measuring poverty after housing costs (the companion modified OECD scale) and the history of parental employment – shown by the number of hours worked and the childhood and employment events that underlie the employment history. It shows the increasing level of needs on the arrival of the second child and the subsequent ageing of children as the OECD equivalence scale assumes they reach the adult needs level at age 14. In 2025, the eldest child reaches 18 and is no longer in the household; needs are lower in the final two years. The solid line shows the assumptions about hours of work (measured against the left-hand axis).

Figure 22 Childhood needs and parental employment – overview for two-parent, two-children model family over childhood, 2006–26



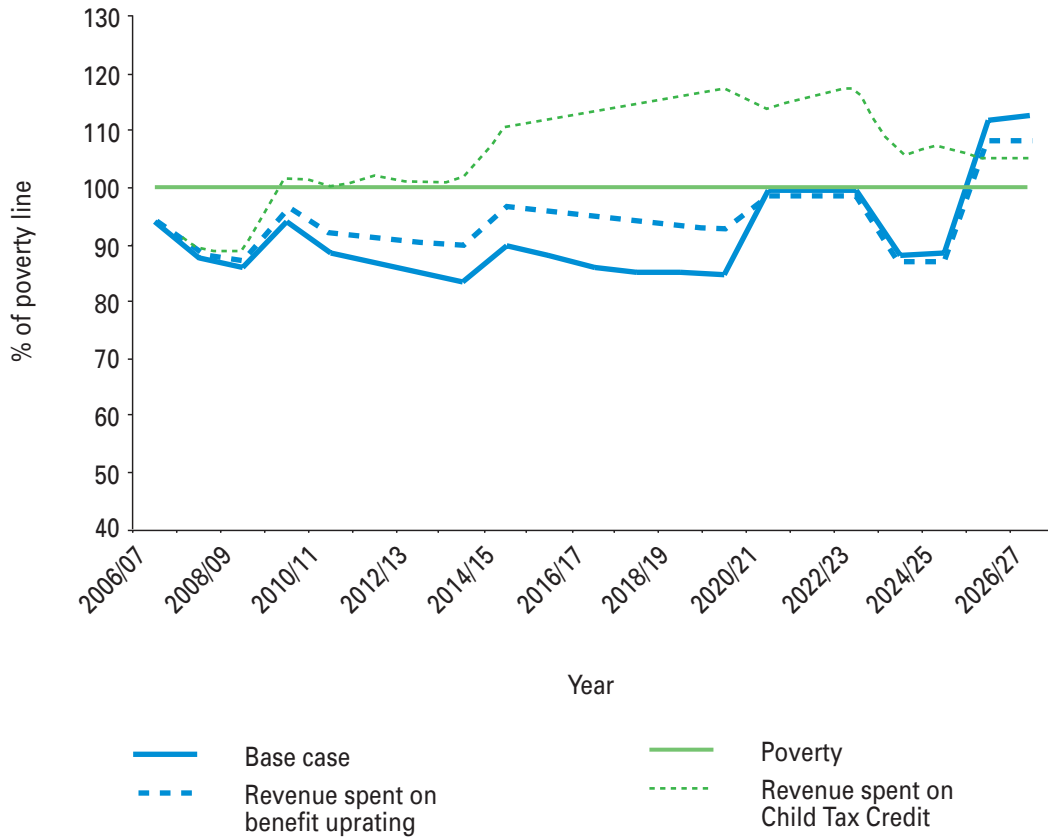
Source: own calculations using LOIS.

We explore the evolution of family income and the consequential risk of poverty over 20 years of childhood under the base case uprating assumption. We also consider the difference made by two of the alternative regimes under public finance Scenario 2, discussed elsewhere in this report:

- spending on benefit uprating across the board;
- spending on increasing the child amount in the Child Tax Credit.

Figure 23 shows the comparison of income and poverty for this family using AHC income and comparing it with the poverty line, generated by POLIMOD and applied for the particular family composition at each point in time. The figure shows the interaction of the profile of ‘events’ and step-changes in needs with the evolving income profile. In the base case scenario, incomes during early childhood (the period of single full-time earnings) declines over time. At the point in childhood where the mother returns to part-time work, there is a clear upward step-change in income in relation to the poverty line, but once again, under the base case, income not only is below the poverty line but also declines relative to it as the tax-benefit package falls in value relative to earnings.

Figure 23 Income (AHC) and poverty over childhood for a two-parent, two-children family at the minimum wage: 2006–26



Source: own calculations from LOIS.

In the later period of childhood, when both children are at secondary school and the mother is working full-time, income is maintained steadily at the poverty line under the base case. This is followed by two step-changes in needs as the younger child reaches 14 and thus has needs equivalent to an adult and the subsequent ‘ageing out’ of the oldest child when they reach 18 and, by assumption, leave home. The first of these step-changes has a larger negative effect than the positive gains from the mother moving to full-time employment. The second step-change results in income rising clearly above the poverty line.

Indexation is clearly crucial to combat relative poverty over childhood. Combining single full-time, minimum wage work and two children results in an income that is below poverty levels. Base case indexation worsens this position and causes early pre-school childhood family income to drift further into poverty. Only when the older child is no longer present does the one-child couple where both work full-time have income clearly above the poverty line.⁹

Indexation by more than under the base case helps to reduce the decline in incomes, but not to halt it, up to the point where the younger child starts secondary school and the mother takes up full-time work. By that time, the family is entitled to no means-tested tax credits and is in fact slightly worse off than under the base case because they pay slightly more in income tax and National Insurance contributions.

Targeting substantial extra spending on Child Tax Credit would overcome most of these problems over childhood and would lead to growing clearance of income above the poverty line until the increased needs of teenage children took effect and then entitlement was reduced by the older child reaching 18.

Summary

- Letting base case uprating continue unchecked for 20 years would have a significant positive effect on the government budget as a proportion of GDP. Spending a proportion of the budgetary gain could mitigate some of the adverse effects of benefit erosion or fiscal drag. As an illustration, we show what would happen if the required revenue gain was less (57 per cent of it) than that generated by base case indexation and if the remainder was spent in various ways. This is equivalent to foregoing the gains from fiscal drag (and enough to keep the tax ratio constant, other things being equal).
- Spending on *uprating tax thresholds* would benefit mainly households with high incomes and would have little effect on poverty rates. Using the resources to *cut tax rates* would benefit households with top incomes to an even greater extent and would also leave the increase in poverty no lower than in the base case. This scenario is equivalent to allowing fiscal drag to occur, but then reducing tax rates to keep the overall tax ratio constant.
- On the other hand, putting the same resources towards *uprating benefits* over and above what happens under the base case would reduce poverty rates to levels between those at the starting point and under the base case. For pensioners, the poverty rate would be returned to the level at the starting point.

- The combination of the base case mitigated by increased benefit uprating shows an almost distributionally neutral effect after 20 years, with an average loss of around 5 per cent of income across the whole distribution. If the other pressures on the public finances necessitated this level of budgetary gain, a balanced way of raising the revenue would be to allow the fiscal drag to occur, to leave tax rates unchanged, but to uprate benefit and tax credit rates in real terms by the factor that left only slow benefit erosion.
- If, on the other hand, more revenue was required to meet other demands, then a distributionally neutral solution (in the sense of all income groups facing the same proportional income reduction) would require taxes to be raised such that higher-income households contributed their share.
- Compared to general uprating of benefits and credits, targeting all the spending relative to the base case on *increases in the Child Tax Credit child amount* would have its main impact in the lower part of the income distribution and only among households with children. It would reduce the AHC child poverty rate to half the starting level and almost one-quarter of the poverty rate under the base case over 20 years. It would, however, double the number of parents facing very high marginal deduction rates to 12.5 per cent, compared with 6.5 per cent under the base case.
- Spending the same resources on *increasing the Basic State Pension* would reduce the AHC pensioner poverty rate to 6 per cent, compared with 16 per cent at the starting point. While low-income pensioners are entitled to the Pension Credit, which is uprated by earnings, non-take-up of Pension Credit limits its effectiveness in preventing pensioner poverty. Furthermore, the increase in basic pension – an increase greater than earnings growth – takes many pensioners above Pension Credit guarantee level. The proportion in receipt would fall from 32 to 10 per cent.

10 The older population and uprating policy

The analysis in this chapter investigates the effect of alternative uprating policies on the evolution of pensioner incomes. A particular focus on older people is interesting for several reasons. First, older people are affected by uprating for long periods of time. In retirement, the extent to which one's income keeps pace with or lags behind the incomes of the general population is heavily dependent on how state pensions and other pensioner benefits are uprated each year. Second, the uprating of pensioner benefits has been the subject of considerable debate ever since the Basic State Pension ceased to be linked to earnings and has been changed in recent years. The means-tested minimum income available to pensioners has been increased by at least earnings growth since 1999 and there is now a commitment to link the Basic State Pension to earnings from what is expected to be 2012. In addition, the 2007 Pensions Act changes the way certain parameters of the Pension Credit are uprated as a means of bringing about a structural reform to this benefit. These changes provide an interesting case study.

The analysis uses a dynamic microsimulation model, CARESIM. This model starts with a sample of today's older population. Like POLIMOD, it simulates income tax liabilities, means-tested benefit entitlements and then calculates the net incomes of sample members under different uprating policies. CARESIM also 'ages' the sample through time and so can be used to estimate the future incomes of those members of the sample likely to be alive in six and 20 years' time. This 'ageing' involves: predicting whether each sample member is alive in six and 20 years' time based on official projections of life expectancy (Government Actuary's Department, 2005); projecting the primary incomes of each living sample member taking account of the effect of the death of a partner and making assumptions on indexation of private pension income, etc.; and then simulating tax liabilities, entitlement to, and take-up of, means-tested benefits. Further details are given in Appendix 4.

To understand the impact of uprating policies on the evolution of pensioner incomes, we consider first differences across age groups in the incomes of today's pensioners. Table 17 presents median incomes, poverty rates and receipt of means-tested benefits in 2006–07 by five-year age groups, as simulated by CARESIM. From the youngest to the oldest age group, there is a clear fall in income, while poverty rates and receipt of means-tested benefits increase. Seventeen per cent of those aged 65–69 are poor (BHC) compared with 42 per cent of those aged 85 and over. AHC poverty is lower but the trend across age groups is similar, doubling from 8 per cent

amongst 65–69 year olds to 16 per cent of those aged 85 and over.¹ Nineteen per cent of the youngest age group receive Pension Credit compared with 48 per cent of the oldest. These differences could be due to individual pensioners experiencing reductions in their incomes, or to later generations of pensioners retiring on (and maintaining) higher incomes than earlier ones, or to a combination of the two.²

Table 17 Incomes, poverty rates and receipt of means-tested benefits among today’s pensioners by age group, relative earnings terms

Age in 2006–07	65–69	70–74	75–79	80–84	85+	65+
<i>Median income (£ per week)</i>						
BHC	295	272	258	244	240	266
AHC	289	259	242	230	223	250
<i>Poverty rate (%)</i>						
BHC	17	23	30	38	42	28
AHC	8	11	14	16	16	12
Receiving PC (%)	19	23	31	37	48	29
Receiving CTB (%)	29	34	38	43	47	36
Receiving HB (%)	16	17	20	24	27	20
Receiving any means-tested benefits (%)	32	38	43	50	57	42

Source: CARESIM using FRS 2003–04.

Box 7 Assumed growth in non-state income and other relevant monetary amounts used in the analysis of pensioner incomes

- Income from non-state pensions increases in line with the Retail Prices Index. If anything, this is likely to overestimate the increase in these sources of income that pensioners receive in practice. Defined benefit private pensions tend to increase by at most price inflation and many pensioners drawing annuity-based pensions opt for annuities that remain at the same nominal level throughout retirement.
- Capital holdings are assumed to remain constant in nominal terms and thus to fall in relative earnings terms. This is equivalent to assuming that pensioners consume all the income from their capital but do not deplete the original capital sum. No allowance is made for windfall increases in capital – for example, from inheritances.
- Since capital is assumed to remain constant in nominal terms, so too is income from it. By implication, interest rates are assumed to remain constant in nominal terms.
- Rent and Council Tax are assumed to increase in line with earnings.

The results of the analysis in this chapter are therefore presented in two ways. First, we consider the impact of policies on the incomes of pensioners who are at least 65 years old in 2006–07 as they age over the next 20 years. This helps us to gauge the extent to which individual pensioners experience changes in their income over time and the role of uprating policies in influencing the path of their incomes. Second, we compare the incomes of today's pensioners with projections of the incomes of people of the same age in six and 20 years' time. For example, the incomes of people currently aged 85+ are compared with projections of the incomes of those aged 85+ in 20 years' time where the latter group are the survivors of those currently aged 65+.

Uprating assumptions for taxes and state benefits used in the base case are those set out in Chapter 5, including the effect of the structural reforms announced in the 2007 Budget. Assumptions on earnings and RPI increases are also the same as in previous chapters. However, there are differences in how primary income from other sources is assumed to change. In earlier chapters, primary incomes are assumed to all grow together in line with average earnings (or prices). Here, we make particular assumptions about each source in order to model how the incomes of pensioners are likely to change in practice. These assumptions are listed in Box 7.

As before, the base case assumptions for uprating policies amount to a continuation of current policy, including the changes contained in the 2007 Pensions Act and the 2007 Budget. The alternative policies examined are as follows.

- 1 The uprating policy for the Basic State Pension (BSP) and Pension Credit (and linked parameters of Housing Benefit and Council Tax Benefit) is that which pre-dates the Pensions Act. The BSP and the Savings Credit threshold are linked to the Retail Prices Index but, as in the base case, the (ordinary) Guarantee Credit level is linked to earnings.
- 2 Price linking (RPI or ROSSI as appropriate) of all components of state pensions, Pension Credit and HB and CTB for pensioners, except the historically frozen elements such as the capital thresholds.
- 3 As (1) above, but with revenue under Scenario 2 used to increase the Basic State Pension (see Box 5 in Chapter 9).
- 4 As (1) above, but income from the State Second Pension (S2P) and its predecessor, the State Earnings Related Pension (SERPS), is indexed to earnings rather than prices from 2012.

CARESIM ages an initial sample of people aged 65 and over, so these people (if they are still alive) are aged 71 and over after six years, and 85 and over after 20 years. Therefore, when we compare the incomes of today's older people with CARESIM's projections of the incomes of people of the same age in six and 20 years' time, the age groups we can analyse are limited. We therefore focus on those aged 75+ and 85+ for the comparisons between now and six years' time, and on people aged 85+ for comparisons with 20 years' time.

The analysis is also restricted to people who were single and over state pension age in the starting year, or part of a couple where both partners were over state pension age. Income is measured a little differently from Chapters 6 to 9. It is the total income of the benefit unit rather than the household (ascribed to each person in the household). Also disability/care-related social security benefits – Attendance Allowance, Disability Living Allowance and Carer's Allowance and the associated premiums in Pension Credit – are excluded from income. These benefits are intended to provide help with the extra costs associated with disability. If they are included in income, the incomes of disabled people will appear higher than similar people without disabilities when their standard of living is not actually any higher. As receipt of these benefits is much higher among the older population than in the general population, we exclude them from income in the analysis in this chapter. In calculating poverty rates, poverty thresholds are based on the median income levels, in relative earnings terms, given in Table 4 in Chapter 6. Because of differences in the definition of income and of pensioners, pensioner poverty rates and other results are not directly comparable with those in earlier chapters or with official Households Below Average Income (HBAI) statistics.³ However, it is the trends over time and differences across uprating policies that are the main point of interest.

The impact of uprating policies on pensioners as they age

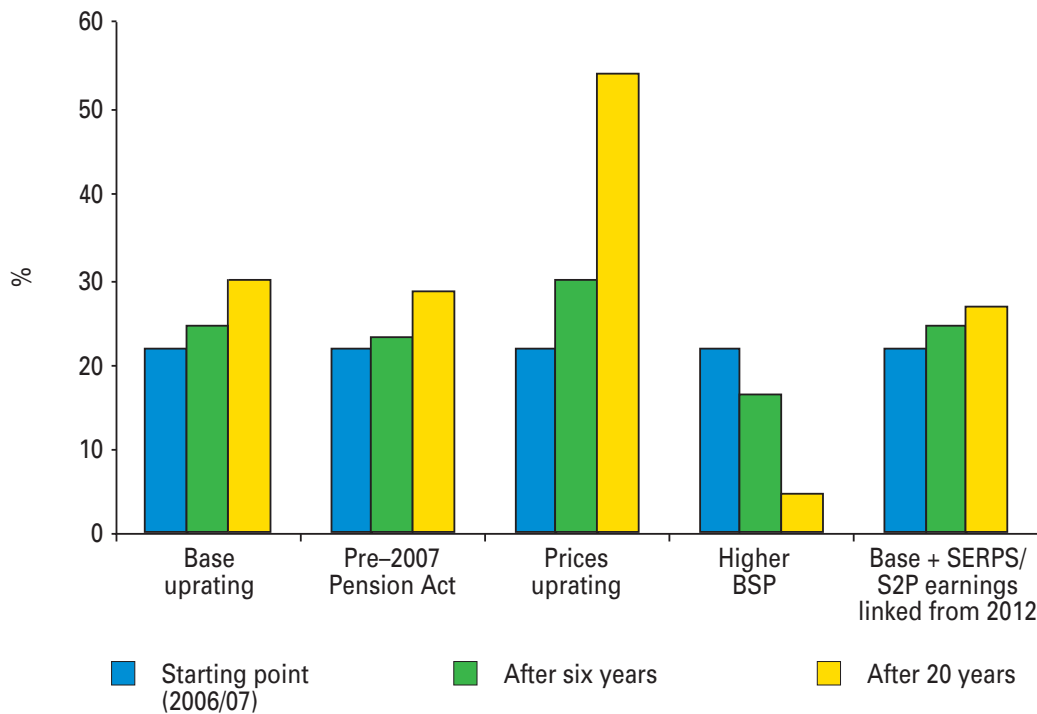
Table 18 and Figures 24, 25 and 26 show the effect of different uprating policies on pensioners as they age. For simplicity, the figure shows only BHC poverty rates but AHC rates are included in the table. Monetary amounts are expressed in relative earnings terms. Under the base case, the poverty rate (BHC) among those who survive the next 20 years rises from just over a fifth (22 per cent) to getting on for a third (30 per cent) after 20 years.

Table 18 Impact of alternative uprating policies on pensioners as they age: people aged 65+ in 2006–07 and alive after 20 years, relative earnings terms

	2006–07 starting point	After six years						After 20 years						
		Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012	Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012			
<i>Median income (£ per week)</i>														
BHC	282	263	282	252	282	263	237	235	193	295	244			
AHC	263	251	265	239	272	250	227	232	179	295	232			
<i>Poverty rate (%)</i>														
BHC	22	25	23	30	16	24	30	29	54	5	26			
AHC	10	11	10	21	7	10	10	12	45	2	8			
Receiving PC (%)	23	30	33	20	21	30	35	50	19	7	33			
Receiving CTB (%)	32	36	37	31	30	36	41	47	33	24	40			
Receiving HB (%)	16	16	17	16	16	16	17	18	16	13	17			
Receiving any MTB (%)	35	41	43	34	35	41	46	57	37	27	45			

Source: CARESIM using FRS 2003–04.

Figure 24 Effect of alternative uprating policies on people aged 65+ in 2006–07 and alive after 20 years: poverty rates BHC

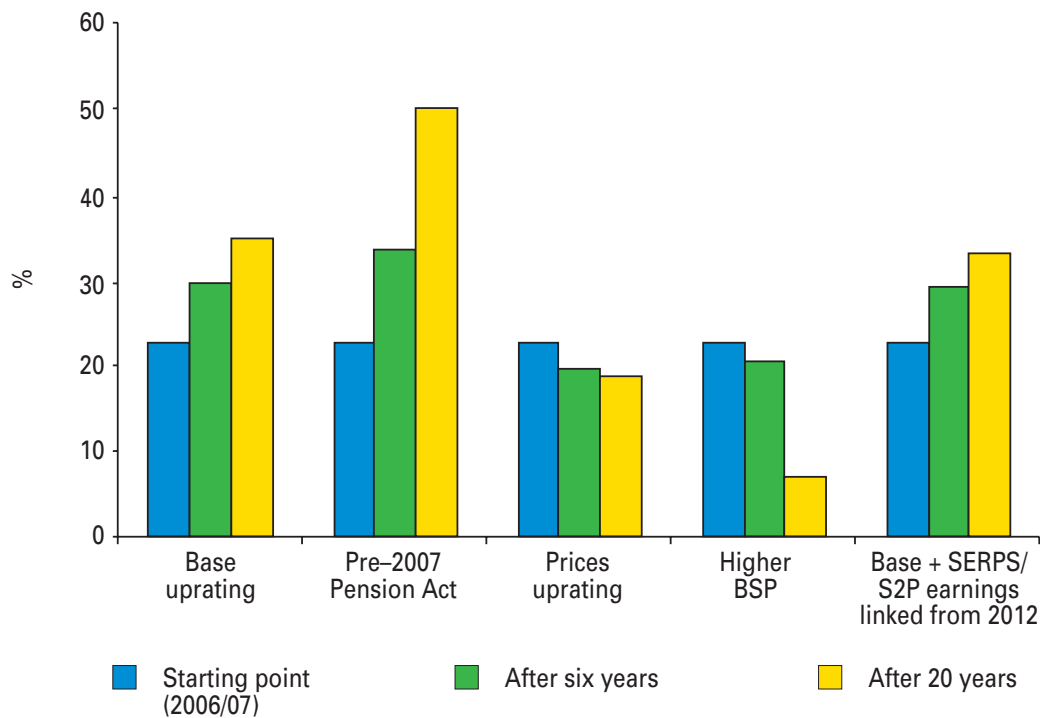


Source: CARESIM.

The percentage receiving Pension Credit increases from 23 to 35 per cent, while receipt of any means-tested benefit rises from 35 to 46 per cent. Poverty rates rise a little more after the Pension Act, but rates of receipt of means-tested benefits rise much less than if previous uprating policy had continued. Under pre-Pension Act policies, half of this generation of pensioners would be receiving Pension Credit after 20 years, with the proportion on any means-tested benefit reaching 57 per cent.

The ‘base case’ and pre-Pensions Act results already incorporate the current Government’s commitment to earnings uprating of the Guarantee Credit. In the context of the discussion elsewhere in this report of the effect of the lack of such a commitment for other age groups, it is instructive to look at what would have been implied if the means-tested minimum for pensioners had instead remained price linked. The results show that a return to price indexation of all but the frozen elements of pensioner benefits would contain the growth in Pension Credit receipt. After 20 years, the proportion receiving Pension Credit would be slightly lower than at the start of the period (19 compared with 23 per cent) and the proportion receiving any means-tested benefit would be only a little higher (37 compared with 35 per cent). But this would be at the cost of a poverty rate in 20 years’ time of close to one-half (54 per cent BHC; 45 per cent AHC).

Figure 25 Effect of alternative uprating policies on people aged 65+ in 2006–07 and alive after 20 years: receipt of Pension Credit



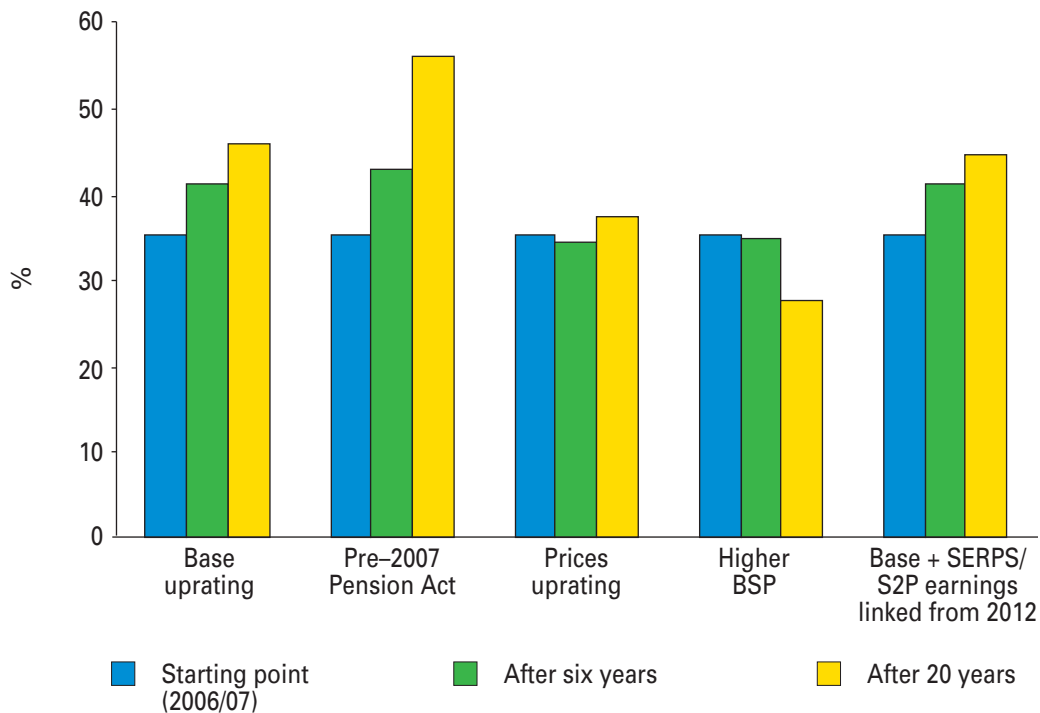
Source: CARESIM.

Going in the other direction, in contrast, spending the revenue under Scenario 2 on increasing the Basic State Pension would reduce poverty to very low levels and substantially diminish dependence on means-tested benefit. Poverty among this generation of pensioners would fall to 5 per cent (BHC), receipt of Pension Credit to 7 per cent and receipt of any means-tested benefit to 27 per cent.

Linking the S2P/SERPS to earnings from 2012 would reduce future poverty rates and dependence on means-tested benefits by slightly more than under the base case.

Figure 27 provides a gender breakdown of the effect of alternative uprating policies on poverty (BHC – income is still measured as the income of the benefit unit). Women in this generation are more likely to be in poverty than men at the start of the period, and also more likely to be receiving means-tested benefits. This remains true for future years under each of the alternative uprating policies. None affects one sex more than the other.

Figure 26 Effect of alternative uprating policies on people aged 65+ in 2006-07 and alive after 20 years: receipt of any means-tested benefit

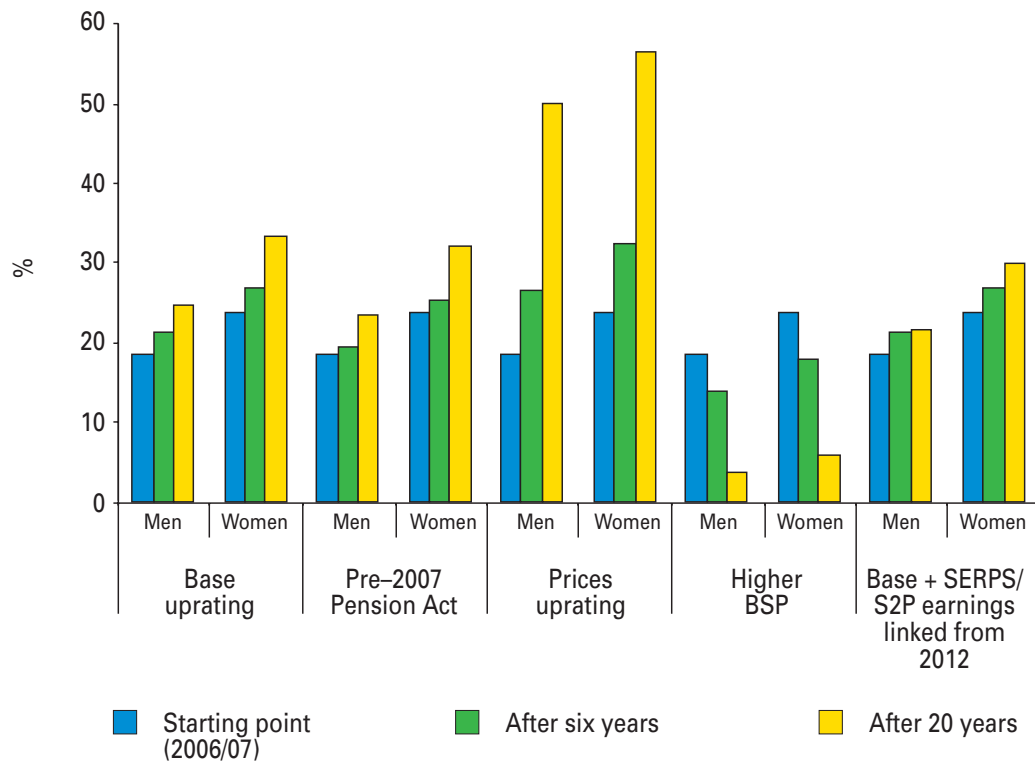


Source: CARESIM.

The impact of uprating policies on differences in the incomes of current and future pensioners

In six years' time, poverty rates and reliance on means-tested benefits among pensioners aged 75+ and 85+ would be similar to today under the base uprating policy and also under pre-Pension Act policies or if S2P/SERPS was linked to earnings from 2012 (Table 19). In 20 years' time, poverty rates would be lower among those aged 85+ than today under each of these three uprating policies (Figures 28, 29 and 30). Just over two-fifths (42 per cent) of people currently aged 85+ are poor (BHC). In 20 years' time, the equivalent proportion would be 30 per cent under base case policies and a little lower under pre-Pension Act policies or linking S2P/SERPS to earnings. Receipt of Pension Credit would have fallen from just under a half (48 per cent) to 35 per cent under the base case but before the Pension Act reforms would have risen slightly.

Figure 27 Effect of alternative uprating policies on people aged 65+ in 2006–07 and alive after 20 years, by gender: poverty rates BHC



Source: CARESIM.

Table 19 Impact of alternative uprating policies: comparison of today's pensioners with those of the same age in six and 20 years' time, relative earnings terms

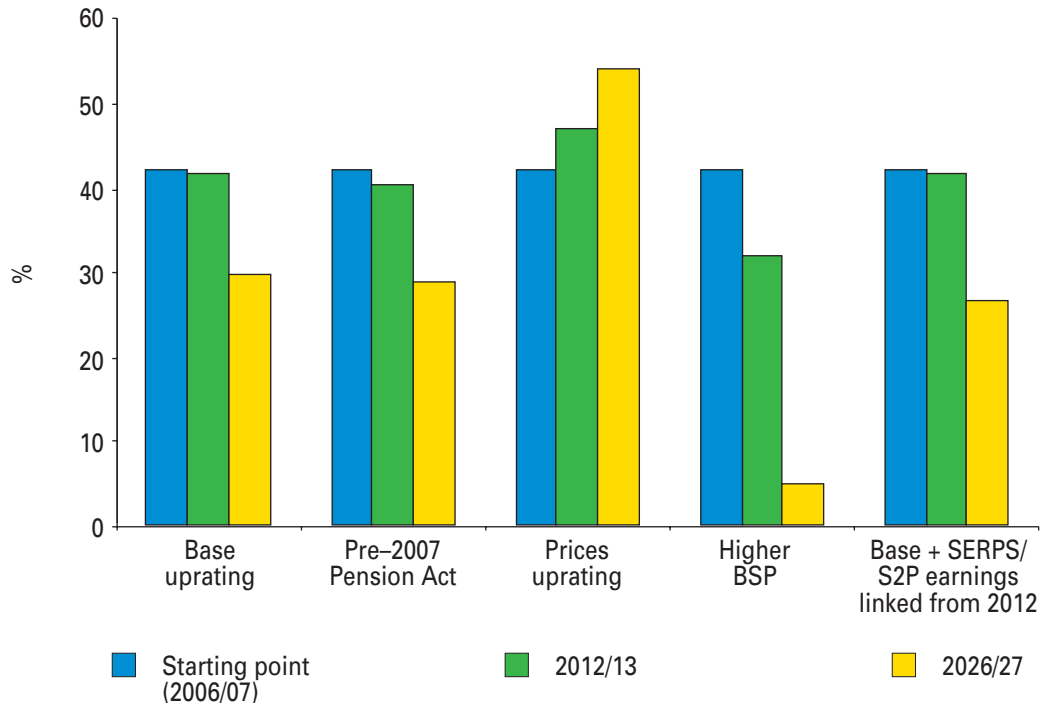
	2006-07 starting point	After six years					After 20 years				
		Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012	Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012
Aged 65+											
median income (£ per week)											
BHC	266										
AHC	250										
Poverty rate (%)											
BHC	28										
AHC	12										
Receiving PC (%)	29										
Receiving CTB (%)	26										
Receiving HB (%)	20										
Receiving any MTB (%)	42										
Aged 75+											
median income (£ per week)											
BHC	250	248	250	235	265	248					
AHC	232	234	238	214	251	234					
Poverty rate (%)											
BHC	36	32	31	38	23	32					
AHC	15	14	13	27	8	14					
Receiving PC (%)	37	37	40	28	28	37					
Receiving CTB (%)	42	42	43	37	36	42					
Receiving any HB (%)	23	21	21	20	20	21					
Receiving any MTB (%)	49	48	49	42	42	48					
Aged 85+											
median income (£ per week)											
BHC	240	233	236	218	250	234	237	234	193	295	244
AHC	223	220	225	197	233	220	227	232	179	296	232

Continued overleaf

Table 19 Impact of alternative uprating policies: comparison of today's pensioners with those of the same age in six and 20 years' time, relative earnings terms – Continued

	2006-07 starting point	After six years						After 20 years					
		Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012	Base case	Pre-2007 Pensions Act	Prices uprating	Spending under Scenario 2 on BSP	SERPS/ S2P linked to earnings from 2012		
<i>Poverty rate (%)</i>													
BHC	42	41	40	47	32	41	30	29	54	5	27		
AHC	16	16	15	36	10	16	10	12	45	2	8		
Receiving PC (%)	48	48	49	38	38	48	35	50	19	7	33		
Receiving CTB (%)	47	49	49	44	43	49	41	47	33	24	40		
Receiving any HB (%)	27	26	26	25	25	26	17	18	16	13	17		
Receiving any MTB (%)	57	56	57	51	52	56	46	56	37	28	45		

Figure 28 Effect of alternative uprating policies on people aged 85+ in 2006–07, 2012–13 and 2026–27: poverty rates (BHC)

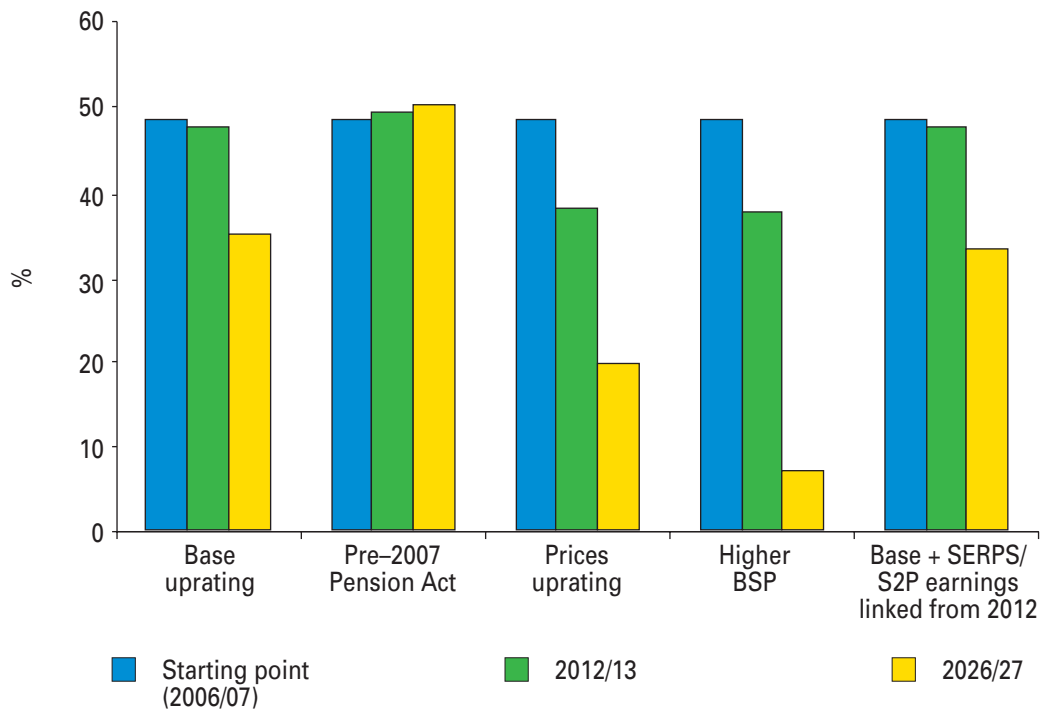


Source: CARESIM.

If we were to revert to general price uprating, the model shows poverty rates rising even after six years. The increase would be modest for those aged 75+ (from 36 to 38 per cent, BHC) but by more for people aged 85+ (from 42 to 47 per cent). In 20 years' time more than half (54 per cent) of those aged 85+ would be poor under prices upratings. But, as before, prices uprating would reduce the proportions receiving Pension Credit and means-tested benefits in general. In contrast, spending the revenue from fiscal drag on increasing the Basic State Pension would reduce poverty rates – very substantially after 20 years – and reliance on means-tested benefits.

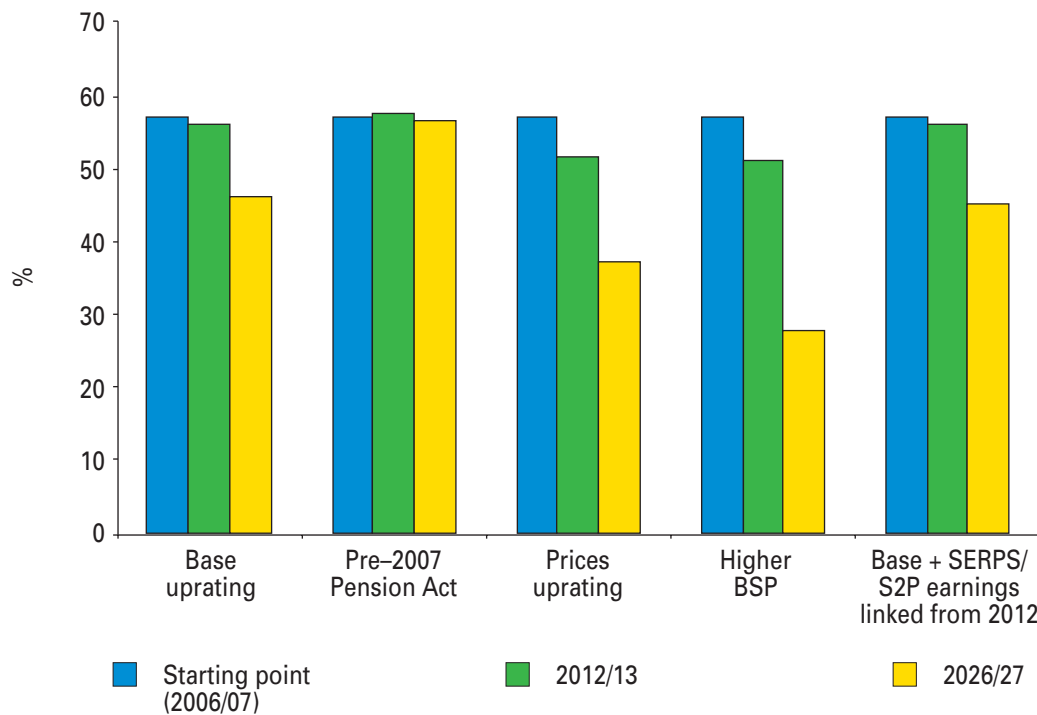
This chapter has shown that linking the Guarantee Credit and Basic State Pension to earnings will substantially reduce pensioner poverty compared to general price uprating. However, there remain parts of the pension system that are not linked to earnings, or where practice has been for them to remain frozen in nominal terms for long periods. Box 8 at the end of this chapter provides illustrations for some particular cases.

Figure 29 Effect of alternative uprating policies on people aged 85+ in 2006–07, 2012–13 and 2026–27: receipt of Pension Credit



Source: CARESIM.

Figure 30 Effect of alternative uprating policies on people aged 85+ in 2006–07, 2012–13 and 2026–27: receipt of any means-tested benefit



Source: CARESIM.

Box 8 Living through retirement and the effects of uprating

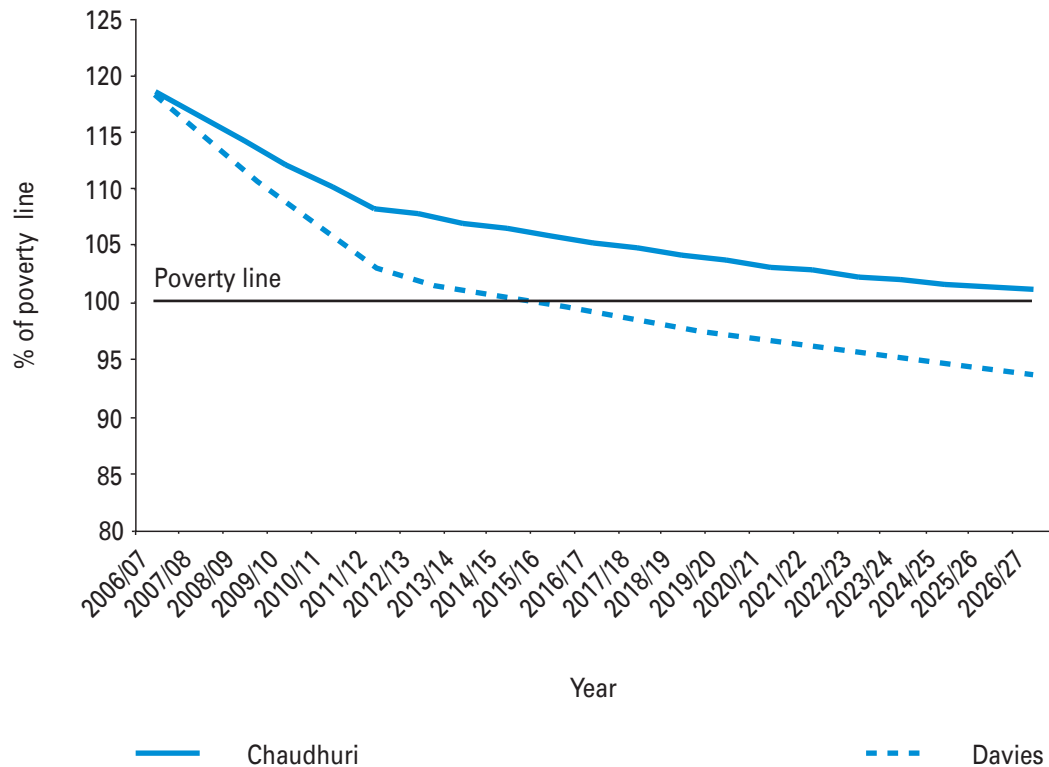
How poorer retirees will be protected against poverty through their retirement is illustrated by a pair of newly retired pensioner couples.⁴ They both have private pension incomes, additional savings and own their homes outright. To make commentary and discussion easier we give names to the two couples. The Chaudhuris, both aged 65, have full state pensions and both have also paid into their employers' defined benefit occupational pensions. Between them they have £81 a week income from these pensions and these are assumed to keep pace with inflation. Their neighbours, the Davies, have exactly the same circumstances, but their private pensions are from personal pension schemes that give them £81 per week in an annuity that is not price protected. Both couples have £18,250 in savings and pay £17.90 per week Council Tax.

Figure 31 shows how income evolves in relation to the BHC poverty line for these couples over the next 20 years of retirement – until they all reach the age of 85. The poverty line is taken from earlier analysis in Chapter 6 and reflects the combined impact of benefit erosion and fiscal drag on median income. The two couples begin their retirement with the same level of income. This is less than 20 per cent higher than the BHC poverty line in spite of having substantial private pensions. Income declines for both couples, but the Davies' falls faster because their private annuity pensions are not protected against inflation, to the extent that they slide into poverty in 2015 (on our assumption of no other changes – for example, to their health).

This happens because of a combination of fiscal drag on Council Tax and the effect of their savings of £18,250 on Council Tax benefit entitlement. Council Tax rising with earnings takes a higher proportion of their incomes over time. However, they can never claim Council Tax benefit to assist them, as their savings are over the £16,000 capital limit, which is never updated. They are not protected by the Guarantee Credit, which provides a safety net income at or around poverty income levels. If they were, then their capital would no longer exclude them from entitlement to help with Council Tax. However, income would not fall to Guarantee Credit level within the 20 years we consider.

The prospects for both couples would improve when their private pensions fell further and their retirement income fell to Pension Credit levels. At this point, a further six more years on (in 2032 when they are aged 91), their incomes would rise significantly as they would also have their Council Tax paid in full.

Figure 31 Couple retirees with moderate private pensions: BHC income in relation to the poverty line 2006–26



Source: own calculations from LOIS.
Poverty lines are derived from Table 4 in Chapter 6.

This illustrates how the combination of capital rules and uprating policy can result in strong disincentives to maintain even the nominal value of savings in retirement for those with moderate private incomes. Both couples would be well advised to draw from their capital and, say, take the ‘cruise of a lifetime’, which costed £6,000 in total, on their 66th birthdays. If this amount were taken from their savings, this would result in neither couple ever sliding across the poverty line.

Summary

Under current policies, pensioners face an increasing risk of poverty and of reliance on means-tested benefits as they age. However, the 2007 Pension Act reduced substantially the growth in the likelihood of receiving Pension Credit. Both the Pensions Act and the uprating practice that immediately predated it substantially

reduced the rise with age in the risk of poverty compared with general price uprating. Price uprating would have resulted in a reduced risk of being means-tested as pensioners aged. Diverting revenue from fiscal drag into the Basic State Pension would mean pensioners facing reduced risk of both poverty and reliance on means-tested benefits.

In contrast to the picture for individual pensioners, under base case uprating, we can expect poverty among the oldest pensioners (85+) to be lower in 20 years' time than it is for pensioners of the same age today. As a direct result of the Pension Act reforms to uprating policies, fewer of them will be receiving Pension Credit and means-tested benefits more generally. This could have been achieved by reverting to general price linking but at the cost of rates of poverty exceeding 50 per cent. Spending the revenue from fiscal drag on increasing the Basic State Pension would reduce both poverty and receipt of Pension Credit among those aged 85+ to very low levels in 20 years' time.

Caution needs to be exercised in extrapolating from the projections for the age groups considered here to pensioners in general. This is because, as discussed at the beginning of this chapter, differences in the incomes of different generations of pensioners are at least partly due to differences in the levels and sources of income on retirement. These are harder to predict than the effects of uprating on the incomes of today's pensioners.

11 Conclusions: choices and trade-offs

Much of the debate over the tax and benefits system surrounds structural changes to the system – changes to the tax system introduced in each year's Budget, or reforms to benefits and tax credits preceded by government policy documents, and sometimes requiring legislation. But, as this report has illustrated, the quieter decisions taken each year on how benefit levels and tax thresholds are adjusted for inflation and income growth can, over time, have much larger effects.

In this report, we show the results of modelling what would happen (other things being equal) if we continued uprating benefits, tax credits and direct tax thresholds each year in line with current policies for the next 20 years. Among other effects, one would expect a very considerable, if silent, improvement in the public finances, measured in relation to national income, as a result of what is known as 'fiscal drag' and what we have called 'benefit erosion'. Overall, the budgetary effect could be a benefit to the public finances equivalent to up to 3.6 per cent of GDP after 20 years.

But, at the same time, the incomes of a considerable part of the poorer non-pensioner population would fall behind those of the population as a whole and of those on higher incomes, and relative poverty would rise. For instance, in this 'base case', child poverty as conventionally measured (before housing costs) would rise from 18 per cent at the starting point to 33 per cent after 20 years. Instead of eradicating child poverty, the effect of continuing current uprating policies would be almost to double it. Looking at different family types, Figures 6, 8, 9 and 10 in Chapter 6 illustrate the large deterioration in the ability of the tax and benefit system to protect them from relative poverty.

Even looking only in real terms and at poverty rates against an absolute threshold, the freezing of some elements of the system in nominal terms leads to some groups falling behind, including some groups with low earnings affected by the way in which thresholds for tax credits are calculated (Box 4 in Chapter 6). Nor would such changes necessarily improve work incentives (Chapter 7).

Ad hoc and structural reforms – enabled in part by the creeping revenue gain – can, of course, offset such gradual effects. But the analysis here suggests that such changes would have to be very frequent if they were to do so. For instance, the reforms announced in the 2007 Budget can be expected to have a progressive effect, raising incomes of those in the lower-income groups overall and reducing relative poverty. However, a reform of that scale would be required every two to three years to offset the rise in relative child poverty that benefit erosion implies under current

policy, and indeed every year to offset the fall in relative income for lower-income groups as a whole.

Policy-makers may see fiscal drag and benefit erosion as politically painless or 'stealthy' ways of improving the public finances without taxing incomes at a higher rate. This may, for instance, be seen as necessary to cope with the demands of an ageing society. Figure 18 (Chapter 8) shows how the default evolution of the benefit and tax system would cause people overall to retain less relative to an average earned income, the inference being that Government could take more to spend either on things other than income transfers or on the extra cost of income transfers caused by demographic and other changes.

In general terms, this might be acceptable. As people live longer they may be prepared for their disposable income to form a lower proportion of their average annual (lifetime) gross earnings than it did for their parents, because the difference would be paying for a longer non-working life and/or for more, or higher-cost, state-provided health care. Two particular factors might potentially help to make such an outcome more acceptable. One would be that it would come about gradually, during a time when incomes were growing, and so would not involve actual cuts in living standards. The other might be if this were happening to everyone. If so, for instance, median net incomes – and hence a relative poverty line – would grow more slowly than gross earnings, but relative poverty itself would not necessarily increase.

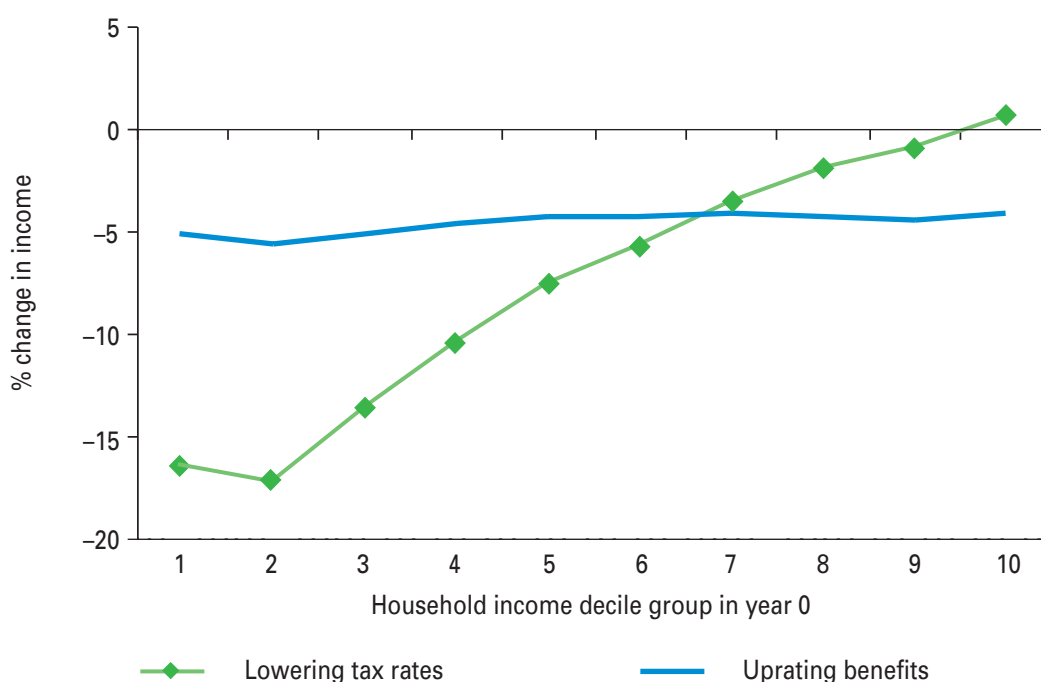
But the problem is, as demonstrated by Figure 18 in Chapter 8, that achieving a gain to the public finances like this would *not* affect everyone in the same way. The distributional impact would be very unequal. Put simply, 'benefit erosion' has greater impact on people in lower-income groups than fiscal drag, because transfers to and from Government comprise a greater part of income than they do for people in higher-income groups. And this has huge implications for relative poverty, even after taking account of the way median incomes would grow more slowly than gross earnings.

So, while it is possible to argue that fiscal drag and benefit erosion might be necessary, at least to some degree, to finance other things, our analysis highlights the inequitable way in which the burden of doing so would be distributed, and the extent to which we could be on a structural route to growing inequality.

In the event, of course, the tax and benefit system will not be left on autopilot for the next six years, let alone for the next 20. However, structural reforms would not *necessarily* improve the distributional position. For instance, we show in Chapter 9 what would happen if, instead of Government accepting the whole revenue gain

implied by fiscal drag and benefit erosion over 20 years, it decided to cut tax rates to offset the rise in the tax ratio otherwise implied by fiscal drag. This is not such an unlikely scenario. Governments might well want to avoid a rise in the tax ratio – this is, after all, assumed in the Treasury’s own long-term fiscal projections. Lower tax rates could be seen as the most politically visible tool. But the effects would be regressive. Using results from Chapter 8, Figure 32 contrasts the distributional impact of this route with an alternative scenario – with the same overall net revenue gain to Government, but where benefits and tax credits are uprated annually by an amount closer to earnings growth than prices growth. Under the first scenario, net incomes would fall considerably behind average gross earnings for those in lower-income groups, and relative poverty rises, but those with the highest incomes would actually see their net incomes rise *faster* than earnings as they gained from cuts in tax rates. Under the alternative shown, all income groups would fall behind earnings growth, but would do so in proportion, and relative poverty would not rise nearly so dramatically.¹

Figure 32 Distributional effects of spending on tax rate cuts and uprating benefits by an index between prices and earnings after 20 years



Source: POLIMOD using FRS 2003–04.

While we have argued that, in the main, the choices made about year-to-year uprating and indexation are invisible and their effects little noticed, this has been far from the case for pensions policy. Chapter 10 – looking at the prospects for cohorts of current pensioners as they age – illustrates the effects of the series of the controversies and policy decisions stretching over more than 20 years that culminated in the 2007 Pensions Act. While the poverty rate (before housing costs) for today's pensioners aged 85 and older is modelled at 42 per cent, this could have risen to over 50 per cent for the equivalent group in 20 years' time if all pensioner benefits were to be price-linked. By contrast, with the reforms now in place, with the Guarantee Credit and (eventually) the Basic State Pension linked to earnings, the poverty rate for this group would fall to 30 per cent.

But the outcome of those reforms is a sharp distinction in practice between the pensioner and non-pensioner populations. If one returns to the principles outlined in Chapter 2 (and summarised in Table 1), pensioners now have a regime that is more in line with giving a return on contributions, and a little more generous than would be necessary to be consistent with unchanging inequality or relative poverty. By contrast, the *default* treatment of other non-working households is aimed only at preventing falls in their real standard of living, and that of families with low earnings and children, only a little more generous. As we have stressed, ad hoc policy reforms can protect some groups, and have periodically done so, as illustrated in the case of the 2007 Budget reform announcements. But this serves to illustrate that perhaps the main principle being applied is to maintain government flexibility.

As our survey of international practice in Chapter 3 shows, the UK is not alone in the debate being more lively for pensions than other aspects of the system, or in applying a variety of approaches to different groups. There is no 'international best practice' to pull off the peg – for the very good reason that the starting points of countries' systems vary, as do the principles that drive their political priorities.

However, international comparisons of uprating practice highlight the importance of transparency about the nature of default and its implications. The use of 'hybrid' indices in some countries combines the effects of changing prices and incomes in one compromise index. The precise formula must be defined and nature of the compromise discussed, helping to make the political choices explicit. In practice, such a hybrid index could correspond to something like the 'distributionally neutral' regime illustrated by the nearly horizontal line in Figure 32. Or, if the case could be made, it could involve greater reductions to the relative value of benefits and tax credits combined with tax increases, which would maintain distributional neutrality while releasing resources for other priorities. It could also be constructed to favour either rich or poor. The point is that the intention and the effect would be explicit and open for debate.

The impact of benefit and tax uprating on incomes and poverty _____

As things stand in the UK, with the combination of high poverty rates in international terms, particularly for children, and a system largely using price linking as a default, the consequences of leaving decisions about uprating on autopilot are very large and deserve much more open discussion than has been the case.

Notes

Chapter 2

1. This is distinct from the problems of actually determining the appropriate flow of resources to tax or take into account in means testing. At times of inflation, real interest receipts or capital gains are much lower than nominal receipts or gains, but it is arguably the former that should be the basis of income assessments. Such 'capital-income adjustment' issues are beyond the scope of this report (Meade Committee, 1978, Chapter 6).
2. See also Johnson (1996) who discusses similar issues in relation to pensions only.
3. The CPI is an internationally comparable price index used in particular to assess and compare inflation rates across the European Union. It covers somewhat different items from the RPI – for instance, including air fares, university accommodation fees, foreign students' university tuition fees, and unit trust and stockbrokers' charges, while excluding mortgage interest payments, Council Tax, house depreciation, road tax, buildings insurance and various health expenditures.
4. At the time of writing in 2007, the 'long term' applies after 2011–12, but, of course, this horizon shifts forward as time passes.
5. This was also expected to be the case in the 2008 uprating, as the September 2007 RPI increase (3.9 per cent) was higher than the July 2007 average earnings increase (3.6 per cent).

Chapter 3

1. Our sources include OECD (2004, 2005), the *Mutual Information System on Social Protection in the EU and European Economic Area* (European Commission, 2005), national legislation and budget documents when available in English, and consultation with national experts. We are grateful to Sara Baetens, Didier Coeurnelle, Judi Egerton, Ann Harding, Christopher Heady, Carol Krahe, Natasa Kump, Hanna Nicholls, Satish Parmar, Alari Paulus, Alicia Payne, Daniel Van der Sypt, Peter Whiteford, Eszter Zolyomi and Anthony Zuza.

2. According to the formula, if nominal wage growth, measured in the two previous years, exceeds 2 per cent a year, a maximum of 0.3 percentage points of the excess over 2 per cent gets allocated to a social spending reserve.
3. For example, in 2007, the rates of Child Care benefit were raised 10 per cent more than price indexation.
4. Previously, in the early 1980s, the amount was uprated as a gross (and then a net) proportion of average earnings until, in 1989, CPI became the basis for indexation, provided that the amount stayed between the 65 and 72.5 per cent of net earnings. Amounts were subsequently frozen between 1991 and 1993, when the floor–ceiling band was restored.
5. A reform of social assistance benefits is currently under discussion in Slovenia with one of the aims being the unification of different uprating regimes for social benefits (except pensions).
6. Also, the uprating index in the overall calendar year cannot exceed the annual growth index of average national salaries and cannot be inferior to CPI unless the annual growth index of average salaries is lower than CPI.
7. Indexation is not an issue for the tax schedule because a flat income tax has been in place since 1994. The personal allowance has been increased several times and has more than doubled overall in real terms between 2000 and 2007.

Chapter 4

1. Since 1977, when the Rooker-Wise amendment to the Finance Act made increasing personal allowances in line with inflation a statutory commitment, indexation with prices (at least) has occurred in most years. This did not happen in 1981–82, 1993–94, 1994–95 or 2003–04 when the main single allowance was frozen.
2. HMRC Table 2.7, www.hmrc.gov.uk/stats/t_expenditures/menu.htm.

Chapter 5

1. In fact, as announced in the 2008 Budget, but not taken into account, CTC child amounts will increase by more than earnings growth in 2008, 2009 and 2010.
2. As announced in the 2007 Budget, a tax rate of 10p will continue to apply to people with investment income who would previously have been taxed at that rate (i.e. to the extent that other income does not exceed the equivalent of the former 10p band). Those eligible will have to apply to have their tax deducted in this way and it is not obvious that take-up of this concession will be 100 per cent. For simplicity of modelling, we have not incorporated this aspect of the reform.
3. In our results showing the effects of the reform as if it had been implemented all at once in 2006–07, we take future cash values as announced in the 2007 Budget documents and adjust them back to 2006–07 values using the normal indexation factors between the relevant years. Appendix 3 provides details. Thus, for example, Child Benefit for the first child was to reach £20 in 2010. It is assumed that this is in nominal terms and this amount is just 22 pence more than it would be under price indexation. The real value of the increase reduces to 20 pence in 2006–07 terms. As announced in the 2008 Budget, the £20 level for the first child will be reached one year earlier in 2009 and will therefore be worth a few pence more than taken into account in the modelling.
4. The ‘base case’ does not include the additional £25 in maximum CTC announced in the 2007 Pre-Budget Report, nor the further increases announced in the 2008 Budget.
5. See note 3 above.

Chapter 6

1. Note that these estimates, as well as all other POLIMOD results, take account of non-take-up of the means-tested elements of benefits, tax credits and pension incomes. See Appendix 4 for more information.
2. HM Treasury (2007a, Table A1).
3. Assuming that rents, Council Tax and the minimum wage all grow in line with average earnings, moving as described in Chapter 5. The poverty line is that derived from POLIMOD and given in Table 4 in this chapter.

4. The poverty line is derived from the analysis of data on a sample of the whole population, as explained later in this chapter.
5. The median poverty gap is the proportion by which the household income of the typical person in poverty falls short of the poverty line.
6. On a BHC basis, after six years, the median poverty gap actually falls a little – from 19 to 18 per cent.
7. Poverty measured relative to a fixed line that is adjusted only for inflation.
8. As explained in Chapter 5, we model this by taking the projected parameters of the tax and benefits systems after six and 20 years, adjusted back to the base year by expected earnings growth, and then applied to the population's distribution of other gross incomes as they were in 2006–07. Note that these estimates do not include the effect of continuing to index the thresholds for *employer* NICs with prices. It is likely that in practice these would move consistently with *employee* NIC thresholds.
9. Within these hours limits, this, together with higher income tax and NICs, has a greater effect than the indexation by earnings in the early period of the child amounts in Child Tax Credit.

Chapter 7

1. Income Support (IS), Housing Benefit (HB), Council Tax Benefit (CTB), Pension Credit (PC), Child Tax Credit (CTC), Working Tax Credit (WTC).
2. The proportions are not exactly the same at the starting point and after six and 20 years because of the way the Savings Credit is uprated – see Appendix 1. Note that, as explained in Chapter 5, this is not a forecast of how many pensioners would be receiving Pension Credit in 2026–27, as it takes no account of factors such as the changing composition of pensioner income or the ageing of the population. As before, the comparisons isolate the impact of indexation processes by themselves.

Chapter 8

1. Elements currently uprating using the Rossi index remain treated in this way.
2. It is worth noting that also amending the base case assumptions to include earnings uprating of the child CTC amount by earnings throughout the period reduces the child poverty rate on a BHC basis by a further 5 points (to 26 per cent). This is a significant reduction, but does not return the child poverty rate to that at the starting point because the threshold as well as other benefit incomes remain indexed to prices and because the CTC child amount remains just one component of the support received by households with children.

Chapter 9

1. Not including employer NIC thresholds.
2. This should not be taken to suggest that the revenue from fiscal drag should (or indeed could) be ring-fenced in this way. We simply take this proportion of the total revenue in order to provide some sense of scale to an otherwise arbitrary choice.
3. Under the assumption of no changes in pensioner characteristics or numbers.
4. Elements that are frozen under existing policy (like capital thresholds for means-tested benefits) are uprated each year by this factor alone; elements that are currently uprated by the RPI are uprated by 1.87 per cent more than this annually, meaning that their value falls to 98 per cent of the starting value instead of 67 per cent as under the base case.
5. They fall to 56 per cent of their present value after 20 years instead of 39 per cent under the base case.
6. See Appendix 4 for a description of how non-take-up is captured in the modelling.
7. This depends on the assumption that increases in entitlement do not encourage a higher rate of take-up.
8. For more details, see Appendix 4; and Evans and Eyre (2004) and Evans and Scarborough (2006).

9. Under all three regimes, after 20 years and when both parents work full-time and there is only one dependent child, incomes are above the poverty line. The distance above varies partly because of differences in taxes and benefits and partly because the poverty line varies across regimes.
10. Non-take-up of Pension Credit and other means-tested elements of the system is accounted for in the modelling, as explained in Appendix 4.

Chapter 10

1. As explained later, these figures are not directly comparable with the poverty rates in the previous chapters or indeed with the official Households Below Average Income statistics. It is the comparison across age groups that is important to note at this point.
2. A decline in income across the age groups would also be observed if those on higher income died younger than those on lower incomes. Since all the evidence suggests the opposite – richer people live longer than poorer people – this is unlikely to be an explanation. Rather, the fall in income across the ages would be more marked if there was less difference in life expectancy between rich and poor.
3. The exclusion of disability benefits not only affects income before means-tested benefits but also reduces entitlements to means-tested benefits through the severe disability premium. This will affect BHC but not AHC incomes. In CARESIM, all owner-occupiers are assumed to have paid off their mortgages, which results in smaller differences between BHC and AHC income than in the POLIMOD results. Combined with the use of benefit unit rather than household income, and the exclusion of benefit units in which one partner is under state pension age, these differences explain why, for the 65+ group as a whole, BHC poverty rates are higher and AHC poverty rates are lower than the pensioner poverty rates estimated by POLIMOD.
4. These hypothetical examples are informed by the 2005–06 Pensioners' Income series, www.dwp.gov.uk/asd/pensioners_income.asp.

Chapter 11

1. The reason it rises at all is that the effect on incomes of the scenario in which benefits are uprated by more than prices is not exactly the same across the income distribution. At the median (4.4 per cent), it is lower than in the bottom (5.1 per cent) and second decile group (5.7 per cent). Furthermore, at each income level shown in Figure 32, there are households losing substantially more than 5 per cent of their income in relative earnings terms and others losing less, or gaining. In particular pensioners, where fully protected by earnings indexation, will see their incomes rising somewhat faster than the poverty line.

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Appendix 1: Current benefit uprating policies¹

Section 150 of the Social Security Administration Act 1992 requires the Secretary of State to review the level of benefits annually to determine whether they have retained their value relative to the general level of prices. The Act provides that certain benefits must be uprated in line with prices. The Secretary of State considers the Retail Prices Index (RPI) to be the appropriate measure for uprating these benefits. Although the Secretary of State must review the level of income-related benefits, he is not required to increase them in line with prices. Historically, he has exercised his discretion to provide an increase and considers the most appropriate index for these benefits to be the RPI less costs that are met through the income-related benefits such as housing costs.

Benefits with statutory requirement for uprating

- Attendance Allowance
- Child Special Allowance
- Disability Living Allowance
- Industrial Death Benefits (existing cases only)
- Industrial Injuries Disablement Benefit
- Carer's Allowance
- Incapacity Benefit
- State Pension (including SERPS and Graduated Pension)
- Severe Disablement Allowance
- Widowed Mother's/Parent's Allowance
- Widow's Pension (including child and dependency additions) – replaced by Bereavement Benefit

Benefits without a statutory requirement for uprating

- Child Benefit
- Child Tax Credit
- Council Tax Benefit*
- Housing Benefit*
- Income Support*
- Jobseeker's Allowance
- Maternity Allowance
- Statutory Maternity Pay
- Statutory Sick Pay
- Working Tax Credit

* These benefits are not uprated by the RPI (all items). They are uprated by New Rossi, which is currently defined as RPI (all items) less rent, local taxes and mortgage interest payments.

Note

1. This appendix is based on an extract from *The Abstract of Statistics for Benefits, National Insurance Contributions and Indices of Prices and Earnings: 2006 Edition*, 'Appendix A: Uprating policy' (DWP, 2006a).

Appendix 2: Base case uprating assumptions

Table A2.1 shows how each element of the tax and benefit system is uprated according to the base case under the application of current uprating policies and assumptions. The values of the uprating factors are shown in relation to prices and earnings. We have assumed that the Retail Prices Index (RPI) and the Rossi index move up to 2011/12 as given in the 2007 Budget Report (HM Treasury, 2007a, Table C3). These indices apply to uprating of taxes and benefits in the following year. So, for example, the 2011/12 index will be used for uprating taxes and benefits in April 2013.¹ For the remaining 13 years of uprating (to 2026/27), we assume the same constant rate growth in RPI and Rossi as given for the final year, 2011/12 – 2.75 per cent for the RPI and 2.25 per cent for Rossi. Table A2.2 shows the nominal value of the indices used as the basis for the uprating of individual elements shown in Table A2.1.

Earnings uprating uses the change in Average Earnings up to the previous July. The specific index used in practice is the AEI LNNC.² However, there are no official projections or assumptions about how this will move in the future. We have made the assumption that real earnings growth is 2 per cent per year over the whole period. The resulting nominal index is shown in Table A2.2.

Table A2.1 Base case uprating assumptions

Tax and benefit levels and thresholds	Current uprating policy or assumption	Change relative to prices (RPI) (%)		Change relative to earnings (%)	
		Six years	20 years	Six years	20 years
Income tax personal allowances and Married Couple's allowance	In line with RPI	0.00	0.00	-11.20	-32.70
Income tax thresholds and income limit for age-related allowance					
National Insurance contribution lower and upper limits and thresholds					
Child Benefit, Widowed Parent's Allowance, Bereavement Allowance, Contributory JSA, Incapacity Benefit, Carer's Allowance, Attendance Allowance, Severe Disablement Allowance, Disability Living Allowance, maternity pay and allowances, War Pensions					
All Working Tax Credit payments, additions and disregards					
Severe disability premiums on IS, HB, CTB					
Basic State Pension (BSP)	In line with RPI (with 2.5% minimum nominal increase) until year 7 (2012/13), then with earnings	2.00	34.59	-9.43	-9.43
Family element of the Child Tax Credit, baby element of the Child Tax Credit, Child and Working Tax Credit thresholds	Frozen: no change in nominal amount	-16.25	-42.71	-25.63	-61.45
Childcare element of the WTC maximum amounts					
Housing Benefit, Income Support, Council Tax Benefit and Pension Credit capital limits					
Earnings and other disregards in IS, HB and CTB					
Winter fuel payments to pensioners					

Table A2.1 Base case uprating assumptions – Continued

Tax and benefit levels and thresholds	Current uprating policy or assumption	Change relative to prices (RPI) (%)		Change relative to earnings (%)	
		Six years	20 years	Six years	20 years
Income Support, income-based JSA, Housing Benefit and Council Tax Benefit applicable amounts (except for pensioners and children)	In line with Rossi index: 2.25 per year	-2.88	-9.29	-13.76	-38.95
Non-dependent deductions and income limits in IS, HB, CTB					
Council Tax second adult rebate income thresholds					
Pension Credit Guarantee amounts (GC), income tax age-related allowances	In line with earnings	12.62	48.59	0.00	0.00
Savings Credit (SC) lower threshold Single	In line with RPI until year 3 (2008/09), then with earnings until year 9 (2014/15), then calculated from GC level and maximum payment (indexed by prices)	10.41	57.41	-1.96	5.94
Couple		10.41	55.46	-1.96	4.62
Savings Credit (SC) maximum amount Single	According to a formula depending on the movement of the SC lower threshold and GC amounts until year 9 (2014/15) and then in line with RPI	18.86	23.66	5.54	-16.78
Couple		20.19	25.04	6.72	-15.85
Per child element of the Child Tax Credit	In line with earnings until year 4 (2009/10) and then in line with RPI	6.12	6.12	-5.77	-28.58
Minimum wage, Council Tax	In line with earnings (by assumption)	12.62	48.59	0.00	0.00

Many rules for the uprating of benefit amounts involve rounding assumptions. Typically, benefits are rounded to the nearest 5 pence a week, the increase in tax thresholds up to the nearest £100 a year and the increase in tax allowances to the nearest £10 a year. These conventions are ignored in the uprating of the systems shown here.

Table A2.2 Assumptions about year-to-year percentage changes in prices and earnings

Uprating applied in	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14 ... 2026/27
RPI ^a	3.5	3.5	2.75	2.75	2.75	2.75	2.75
Rossi ^a	3.0	2.25	2.5	2.5	2.5	2.25	2.25
Earnings ^b	5.57	5.57	4.805	4.805	4.805	4.805	4.805

All changes from last year, September–September for RPI, July–July for earnings (so 2006/07 uses September 2004–September 2005 and July 2004–July 2005).

a. HM Treasury (2007a, Table C3).

b. RPI with 2 per cent earnings growth.

Notes

1. The index of annual change up to the previous September is used and this is what is assumed by HM Treasury in the price indices shown in Table A2.2.
2. www.statistics.gov.uk/StatBase/tsdataset.asp?vlnk=392&Pos=1&ColRank=1&Rank=-1.

Appendix 3: Structural changes announced in the 2007 Budget and accounted for in the 2006–07 starting point system

Budget announcement	What is modelled	Actual 2006–07 value	Modelled starting point value
Working and Child Tax Credits (WTC/CTC) taper increased to 39% in 2008	WTC/CTC taper increased to 39%	37%	39%
Basic rate of tax reduced to 20% in 2008	Basic rate of tax reduced to 20%	22%	20%
Reduced tax rate abolished in 2008	Reduced tax rate abolished	10%	20%
WTC/CTC threshold increased by £1,200 p.a. in 2008	WTC/CTC threshold increased by £1,200 (default is to freeze at nominal value)	£5,220	£6,420
Child Tax Credit (CTC) child amount increased by £150 p.a. over price indexation in 2008	CTC child amount increased by £150 less two years of earnings indexation (the assumed default); Housing Benefit and Council Tax Benefit child amounts increased accordingly	£1,765	£1,905
National Insurance contribution (NIC) Upper Earnings/Profits Limits (UEL) increased by £75 p.w. nominal in 2008 and to match effective Higher Rate Threshold ^a for tax (HRT) in 2009	NIC UELs increased to HRT in 2009 less three years of price indexation	£645 p.w. (£33,540 p.a.)	£751.19 p.w. (£39,062 p.a.)
HRT increased by £800 more than inflation in 2009	Tax upper threshold indexed in 2008 and 2009, then £800 less three years' price indexation added	£33,300 p.a.	£34,027 p.a.
Tax age allowances increased by £1,180 over price indexation in 2008; age 75+ allowance to reach £10,000 by 2011	Age allowances increased by £1,180 less two years of price indexation; for 75+ allowance, £86 (the amount added to reach £10,000 in 2011) less five years of price indexation is also added	<75 £7,280; 75+ £7,420	<75 £8,381; 75+ £8,605
Child Benefit for the first child to reach £20 in 2010 (22p more than price indexation)	Increase first child premium by 22p less four years' price indexation (HB and CTB family premiums increased accordingly)	£5.75 p.w.	£5.95 p.w.

a. The effective HRT is the value of the upper threshold plus the personal allowance.

Appendix 4: Methods and models

POLIMOD

POLIMOD is a tax-benefit microsimulation model based on the UK Family Resources Survey (FRS).¹ All households in the sample are used. The data used in this analysis were collected in 2003–04 and the income variables are updated to 2006–07 levels of prices and incomes.² The household income variables used here to measure poverty among other things have been deliberately defined to be as similar as possible to those used in the Households Below Average Income (HBAI) statistics (DWP, 2007a). There are some minor departures from HBAI methodology due to the fact that POLIMOD simulates taxes and benefits in order to evaluate changes in the rules that govern them.

POLIMOD calculates liabilities for income tax and National Insurance contributions (NICs) and entitlements to Child Benefit, Working Tax Credit (WTC), Child Tax Credit (CTC), Income Support (IS) – including income-related Jobseeker’s Allowance – Pension Credit (PC) including the Savings Credit (SC), Housing Benefit (HB) and Council Tax Benefit (CTB). Otherwise, elements of income are drawn from the recorded values in the FRS dataset.

As in HBAI analysis, incomes are measured before housing costs (BHC) and after housing costs (AHC). BHC income includes all original incomes (including private pensions) and all benefits (including public pensions and HB) and tax credits, less income tax and employee and self-employed NICs. AHC income is BHC income less net housing costs (rent, mortgage interest less HB plus any other housing payments).

POLIMOD captures the effects of non-take-up of means-tested benefits and tax credits (CTC, WTC, IS, PC, SC, HB and CTB) by applying the take-up proportions estimated on a caseload basis by the Department for Work and Pensions (DWP, 2007b) and HM Revenue & Customs (2007).³ For example, we assume that some 7 per cent of lone parents do not receive the combination of CTC and WTC to which they are entitled, and that this proportion is higher in London (37 per cent of all families with children). Of those entitled to PC, 25 per cent do not take up, with the proportion much higher (55 per cent) if there is only entitlement to SC. In general, we assume that take-up behaviour is not affected by changes in the size of benefit or tax credit entitlements.

In common with HBAI, the POLIMOD analysis uses the OECD equivalence scale to adjust BHC incomes for differences in household size and composition. AHC incomes are adjusted by the so-called companion scale. The scale values are 1 for a couple and 0.20 for a child under 14. A single person is weighted by 0.67 for BHC incomes and 0.58 for AHC incomes, and additional adults 0.33 and 0.42 respectively.

CARESIM and technical details underlying the analysis in Chapter 10

CARESIM is a microsimulation model whose main function is to analyse the distributional effects of alternative long-term care-charging regimes. It also simulates older people's income tax liability and entitlement to means-tested benefits under alternative policy options and it is this feature that is used here. CARESIM is based on a sample of older people drawn from the UK Family Resources Survey. It performs simulations for a base year and for future years. The initial sample consists of people aged 65 and over whose partner, if they have one, has reached state pension age. This sample is 'aged' for this report by six and 20 years. This involves the following.

- Predicting whether each member of the initial sample will be alive in six and 20 years' time. This uses the age and gender-specific survival probabilities underlying the Government Actuary's population projections.
- Predicting whether each sample member will have become a widow or widower in six and 20 years' time. This is done once survival of each partner has been predicted.
- Simulating how the income and wealth of each sample member and partner will have changed after six and 20 years, on the assumptions stated in the main text.
- Modelling any inheritance of income and capital of the surviving partner, if there is one.

Assumptions are the following.

- The survivor inherits all of his/her late partner's financial assets and income from them.
- The survivor inherits half of any non-state pension income that his/her partner had.

- The survivor inherits a proportion of the late partner's State Earnings Related Pension (SERPS) income, which falls from 100 per cent if the partner reached state pension age in 2002 or earlier, to 50 per cent if he/she attains state pension age after 2010, in line with announced government policy.
- If the survivor is a woman and her own Basic State Pension is less than that of her late husband's, her own Basic State Pension is increased by the difference between the two.

No allowance is made for changes in household composition except as a result of the death of a partner.

The sample is not 'refreshed', i.e. as individuals in the original sample are aged, no new individuals are added to replace those at younger ages. By 20 years from the base year, the simulations are therefore representative only of people aged 85 and over.

Non-take-up of means-tested benefits is allowed for in the same way as in POLIMOD.

Tax-benefit models for hypothetical model families

The calculation of taxes and benefits for hypothetical families in Chapters 6 and 7 adopts the methodology and definitions employed by the Department for Work and Pensions' Tax Benefit Model Tables (TBMT) (DWP, 2006c). The calculations reported here have been adapted from the original spreadsheets to calculate taxes and benefits using incremental increases in hours worked at the National Minimum Wage for an adult (£5.35 per hour in October 2006), rather than bands of gross earnings used in TBMT. We also change the DWP assumptions on the calculation of before housing costs income in TBMT, deducting Council Tax as an element of tax, rather than treating it as a housing cost and thus as a deduction only from AHC income. This change ensures consistency with both POLIMOD and DWP's Households Below Average Income series. The assumptions for rent and Council Tax levels follow the TBMT assumptions of changing amounts to reflect family size and tenure. All calculations in this report adopt the assumption of social sector rents, termed 'LA rents' in TBMT.

The starting point model adopts the changes introduced in the 2007 Budget based on the 2006 system. This makes use of the same policy parameters as POLIMOD, described above, and also adopts the poverty lines based on 60 per cent of median income derived from POLIMOD.

The models that describe the tax-benefit systems after six and 20 years of base case uprating also adopt the same tax and benefit parameters as POLIMOD, and make use of the poverty lines generated by POLIMOD under base case uprating assumptions.

Lifetime Opportunities and Incentives Simulation (LOIS)

LOIS uses the same underlying methodology as the cross-sectional tax benefit models for hypothetical families discussed above, except that the profile is longitudinal. This means that changes are analysed between different points of time, rather than solely according to potential changes in concurrent earnings. Adding the dimension of time means that tax-benefit calculations over time for a hypothetical family reflect a combination of lifetime events and trends, and their interaction with tax and benefit policy.

Two reduced forms of lifetime profiles are used in this report to reflect the 20-year projections used in Chapters 6 to 9. The first set of profiles, used in Chapter 9, creates 'model childhoods' for 20 years for a couple who have their first baby in 2006 followed by a second child three years later. These birth profiles allow a continuous period of 'childhood' to be profiled over 20 years over the combination of two children. The first, however, ceases to be a child after 18 years. The parents of these children are given both earnings histories and wage rates.

The second LOIS model, used in Chapter 10, illustrates the position of hypothetical people who retire in 2006 aged 65. The profiles employ a simplifying assumption that couple members retire together at age 65. To focus on the effects of uprating, no demographic events are included in these illustrative 'model retirements' – put simply, the retiree couple get older together and face neither death nor separation.

LOIS analysis in Chapters 9 and 10 adopts the baseline from current uprating practice outlined in Chapters 5 and 6, and all policy parameters and poverty lines are aligned with those used in, or generated by, POLIMOD. This means that the individual profiles from each policy alternative can be compared consistently to poverty lines that reflect that alternative across the whole population.

Notes

1. Department for Work and Pensions, 2003–04 Family Resources Survey. Distributed by the Economic and Social Data Service. Crown Copyright material is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.
2. See Redmond *et al.* (1998) for more information.
3. Where ranges of take-up proportions are published, the mid-point is used.

