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Introduction

This short paper updates the material presented in Microsimulation Research Notes 35 and 36 on the impact of Budget changes on incomes in general and child poverty rates in particular. It takes account of all the main policy changes to be introduced by the Labour government of 1997-2001. The focus is on personal taxes and social security benefits that have a direct effect on household incomes.

As well as providing a picture of the distributional effects, the paper aims to show how choices made in the presentation of distributional analysis can affect the conclusions that are drawn.

The calculations were carried out using the Microsimulation Unit’s tax-benefit model POLIMOD, based on Family Expenditure Survey data updated to 2001/2 incomes. The starting point is April 1997 policy, indexed to 2001/2 prices and incomes. The effect on household incomes of this is compared with Labour policy, also in 2001/2 terms. Details of the modelled changes are provided in the Appendix.

Section 1 describes the effect across the overall distribution of household incomes. Section 2 examines the impact of the policy changes on poverty rates, focusing particularly on child poverty. Finally, section 3 explores some distributional aspects of the Children’s Tax Credit, introduced for the first time in April 2001 and the associated “baby credit” which was announced in the March 2001 Budget and is due to be implemented in 2003.

1 Distributional effects

First, we consider the impact of the changes on the household distribution as a whole. As well as the changes listed in the appendix, the main real changes to excise duties since 1997 are modelled. Figure 1 shows the average proportional change in income in each income decile

1 Holly Sutherland is director of the Microsimulation Unit in the Department of Applied Economics at the University of Cambridge. Data from the Family Expenditure Survey are Crown Copyright. They have been made available by the Office for National Statistics (ONS) through the Data Archive and are used by permission. Neither the ONS nor the Data Archive bears any responsibility for the analysis or interpretation of the data reported here. POLIMOD is the tax-benefit microsimulation model constructed by the Microsimulation Unit, originally funded by the ESRC (R000 23 3257).

2 For more information about POLIMOD, see Redmond et al. (1998). It is assumed that the rates of take-up of means-tested benefits correspond to the estimates provided in DSS (2000).
group. Income deciles are calculated using household disposable income equivalised using the McClements scale and counting each household once.

Figure 1: Five Labour Budgets: impact on the income distribution

Figure 2 shows the proportions of households gaining and losing across the distribution, with the darker parts of each bar showing households who gain or lose at least £10 per week.

Figure 2: Five Labour Budgets: gainers and losers

Figure 3 shows the average proportional change in income in each decile group for households with children and households with pensioners. The figure also shows the position of these
groups in the all-household distribution. Both of these groups benefit by more than average in percentage terms from the package of policy changes. Most of the income increases for children are targeted on the lower half of the income distribution. However, the extra gains for pensioners spread right to the top of the distribution.

![Figure 3: Five Labour Budgets: proportional changes in income by household type](image)

An alternative picture is provided by Figure 4, which plots the absolute average change in income for each group.

![Figure 4: Five Labour Budgets: absolute changes in income by household type](image)

Here we see that with the exception of the top decile group, the cash increases in income are larger for households with children than for pensioner households. For a given increase in absolute income the percentage change is smaller for higher-income households. Households with children tend to have higher incomes than pensioner households at the same point in the *equivalised* income distribution. For example, a pensioner couple on £200 a week will be at
the same point as a couple with 2 children aged 6 and 8 on £290. A £20 increase in income amounts to a 10% increase for the pensioners and equivalent in percentage terms to £29 for the family with children. (At the same time, a 10% increase for a lone parent with a baby at the same point in the distribution will be worth only £14.)

2 Child poverty reduction

The poverty line is defined as 60% of median equivalised household incomes, with households weighted by their size and using a Before Housing Costs (BHC) income measure. These are Eurostat recommended assumptions. (However, we use the McClements equivalence scale that is standard in UK government household income statistics, rather than the Eurostat-recommended OECD scale.) Household income is defined as closely as possible to be the same as that used in the Department of Social Security’s Households Below Average Income (HBAI) analysis (DSS, 2000a). It therefore excludes the effect of indirect taxes. Table 1 shows the effect on poverty rates of the tax and benefit changes introduced during the first Labour term.

Table 1 The impact of five Labour Budgets on child poverty

<table>
<thead>
<tr>
<th></th>
<th>All persons</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>One parent</td>
</tr>
<tr>
<td>Poverty rate, April 1997 policy (%)</td>
<td>19.4</td>
<td>25.9</td>
</tr>
<tr>
<td>“Constant” relative poverty line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty rate, Labour policy (%)</td>
<td>14.0</td>
<td>15.8</td>
</tr>
<tr>
<td>% point difference</td>
<td>5.4</td>
<td>10.1</td>
</tr>
<tr>
<td>Net no. removed (thousands)</td>
<td>3090</td>
<td>1330</td>
</tr>
<tr>
<td>% reduction in poverty rate</td>
<td>28</td>
<td>39</td>
</tr>
<tr>
<td>% reduction in poverty gap</td>
<td>29</td>
<td>41</td>
</tr>
<tr>
<td>“Current” relative poverty line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty rate, Labour policy (%)</td>
<td>15.9</td>
<td>18.3</td>
</tr>
<tr>
<td>% point difference</td>
<td>3.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Net no. removed (thousands)</td>
<td>2020</td>
<td>1000</td>
</tr>
<tr>
<td>% reduction in poverty rate</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>% reduction in poverty gap</td>
<td>17</td>
<td>29</td>
</tr>
</tbody>
</table>

Notes: The poverty line is 60% of median equivalised (BHC) household income. The “constant” line is set under pre-Labour policy; the “current” threshold is allowed to rise with median incomes following Labour’s policy changes. The poverty gap is defined as the sum of the shortfall between equivalised household income and the poverty line, for each person (child) counted as poor. Numbers of people are given to the nearest 10,000. Columns may not add due to rounding.

Source: POLOMOD

3 The material in this section updates the child poverty reduction estimates reported in Piachaud and Sutherland (2001) and Sutherland and Piachaud (2001).
The upper part of the Table shows the effect of the policy changes on poverty rates if the poverty line is defined using pre-Labour policy and is kept constant. In fact, the policy changes will cause median income to rise (by about 4%) and so the lower part of the Table shows the impact on poverty rates using a shifting “current” 60% median threshold. With a constant line the number of children brought across the line by Labour policies is 1.33 million, a reduction in child poverty (on a BHC basis) of 39%. The figure for children in lone parent families is even higher: 55%. If the poverty line is allowed to keep pace with incomes then the reduction in poverty rates is less: by 29% or one million children moved across the (shifting) line.

Interestingly, for children as a whole the proportional reduction in the poverty gap - the total shortfall in income below the poverty line - is of the same size as the reduction in the rate (29% using the current line). The policy changes have done more than move children from just below the line above it. Some very poor families have experienced large increases in income (which may or may not have brought them across the poverty line). This may be less the case for children in one-parent families - where the gap reduction (36%) is less than the rate reduction (44%). But for children living with two parents the reduction in poverty gap (27%) exceeds the rate reduction (22%).

3 The Children’s Tax Credit (CTC) and the “baby credit”

The CTC is a “true” tax credit in that it is a reduction to tax liability that is not refunded to non-taxpayers. It is available to one parent and is allowed per family with at least one child aged under 16 (rather than per child). The maximum value is £520 per year in 2001. If either parent is a higher rate taxpayer the value of the credit is withdrawn at a rate of £1 for every £15 of annual taxable income above the higher rate threshold.

Parents apply for the CTC to be allowed against their tax liability via their tax code. In the modelling reported here it is assumed that take-up of the credit is 100% (in other words that all eligible parents apply and are awarded the credit within the year). It is also assumed that no fraudulent claims are successful.

A large proportion of families with children are not eligible either because their incomes are too low (they have no income tax liability) or because they are too high (all the credit has been tapered away). A further group only receive part of the maximum £10 per week because (a) their income is in the range of the operation of the taper above the higher rate threshold or (b) they have less than £10 tax liability before the credit and/or (c) because of withdrawal of Working Families Tax Credit (WFTC) or Housing or Council tax benefit. (These “credits” and benefits depend on after tax income; if income tax falls, WFTC/benefit entitlement also may fall.). A further small group of families with dependent children do not qualify because their youngest child is aged over 16. According to POLIMOD the proportions in each group are
Receiving in full 43
Receiving in part (income too low) 12
Receiving in part (income too high) 4
Not receiving because youngest child is too old 4
Not receiving (income too low) 29
Not receiving (income too high) 8

The distribution of households benefiting from the CTC is shown in Figure 5. It shows the proportion of households with children who benefit in each all-household income decile group.

Figure 5: Percentage of households with children benefiting from the CTC

Clearly, the CTC is well-targeted on middle-income families. An alternative would have been to increase transfers to all families with dependent children by increasing child benefit for the first child and the family premium in Income Support and other income-related benefits. Figure 6 shows the effect of doing this instead of introducing the CTC, while keeping the net cost the same. The revenue-neutral increase in child benefit (or income-related benefit) per family would be just over £5 per week. The figure shows the average absolute increase in income for households with children in each all-household income decile. It also shows the

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4 Income Support and other income related benefits are increased for this comparison because otherwise the recipients of these benefits do not see an increase in their incomes, just a shift in the source of income from means-tested to unconditional benefit. It could be argued that Income Support (IS) rates have already been increased alongside the introduction of the CTC. However, one could also argue that the extent of child poverty that still remains - see section 2 - suggests that the level of protection offered by IS is still not sufficient.
position of households with children in the overall distribution (dotted line). While upper-middle income households with children benefit by more from the CTC, on average children in the bottom 30% as well as the top 10% would benefit by much more from the increase in universal cash benefit.

The **baby tax credit** is an additional £520 for the year in which a child is born, to be introduced in 2003. According to POLIMOD, 2.9% of households have babies aged under 1. Of these 55% benefit in full from the baby credit and an additional 13% benefit partially (either because there is a higher-rate income tax payer parent who is on the taper or because they have less than £10 tax liability before the credit and/or because of benefit/WFTC withdrawal).

*Note that 2.9% of the POLIMOD database includes about 400 households: too small a sub-sample to produce very reliable results. These numbers should be treated as illustrative.*

The distributional effects are shown in Figure 7 as the percentage of households with babies who gain, with those gaining the full £10 shown in darker grey. As in all the preceding analysis the first graph in Figure 7 uses the McClements equivalence scale to adjust household incomes for differences in needs according to household size and composition. This is the scale generally used in government distributional analysis. It allows a notoriously small amount for babies and young children. The OECD scale - most often used in international comparisons - allows the same amount for babies as for other children aged up to 14. The effect of using this scale is shown in the second graph. The remaining two graphs use the modified OECD scale, as recommended by Eurostat and the square root of household size,

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5 The position of children is different in this distribution than that shown in Figures 3 and 4 because these figures were based on the pre-Labour distribution whereas Figure 8 is based on the distribution after Labour policies (except the CTC) have been introduced.
also commonly used in international comparisons (and in the US). The relativities in the scales (except for (d)) are shown in Table 2. The differences between the graphs are simply due to households with babies appearing at different points in the overall income distribution.

Figure 8 shows the position of babies in the distribution, using the four alternative scales.

Figure 7: The baby credit: percentage of households with babies who benefit

![Graphs showing the position of babies in the distribution using different equivalence scales.](image-url)
The choice of equivalence scale affects one’s view of the distributional effect of the baby credit. The scales which are more generous to young children put households with babies lower down the distribution and make the credit look better targeted on households with lower incomes.
References


Starting point and counter-factual
We start with tax and benefit policy as in April 1997 and uprate this to April 2001 using the RPI (or the Rossi index for means-tested benefits). Uprating is applied to all monetary values, not just those that are subject to statutory uprating or are traditionally uprated every year.

The policy changes that are included are all those that have been announced, whether or not they are operational in 2001/2. New policy is set in terms of 2001/2 prices (although announcements about future policy are often ambiguous about whether the amounts refer to the current year or the year of implementation). Changes that are due for implementation part way through 2001/2 are modelled as though they apply all year.

Modelled changes in tax and benefit policy announced between April 1997 and April 2001

*Amounts are weekly and in 2001/2 prices and differences are expressed in real terms, unless otherwise specified.*

Introduction of a **Minimum wage**. This was originally £3.60 per hour for employees aged 22 and over; £3.00 for employees aged 18-21. It was uprated to £3.70 and £3.20 in 2000 and the adult rate will be increased to £4.10 in October 2001. It is this adult rate (with £3.20 for young people) that is modelled.

**Child benefit** increased in real terms by £3.15 to £15.50 for first or only children and £0.30 to £10.35 for other children.

**Lone parent benefit** abolished (the 1997 benefit would have been worth £6.75 in 2001/2 in real terms).

**Maternity pay**: the flat rate element will increase to £75 in 2002/3 and £100 the following year. The £100 level is equivalent to a real increase of £33 per week.

**Working Families Tax Credit** (WFTC) replaces family credit. WFTC in June 2001 has a more generous starting point (by £9.65 in real terms); a lower taper (55% instead of 70%); a higher adult credit (by £7.55), higher credits for children aged under 11 (by £13.00 per child) and children under 16 (by £4.45 per child) but lower credits for children aged 18 (£10.70 lower). (The childcare tax credit is not modelled.)

**Income Support**: family premium increased by £2.85; lone parent premium abolished (it would have been worth £5.35 in 2001/2); rates for children aged under 11 increased by £14.70 (by October 2001), for children aged under 16 increased by £6.25 and those for other children aged under 18 by £1.00; rates for children aged 18 reduced by £9.05 (rates for children aged 16 and over are assumed to be increased so that they become the same as those for younger children). Disability premia increased by £1.45 per person. The earnings disregard in Income Support and Job Seekers Allowance for lone parents, disabled and carers increased by £5 to £20 in April 2001.
Housing benefit (HB) and Council tax benefit (CTB) changes to rates and premia match those for income support except that the real value of the 1997 lone parent premia (abolished) is £23.80 (HB) and £12.15 (CTB); there is no reduction in allowance for children aged 18 in HB and CTB.

Basic state retirement pension (and widows’ pension) increased in real terms in 2001/2 by £2.75 (Cat. A) or £1.65 (Cat. B). A further increase has been announced for 2002/3, which is assumed to be worth an additional £1.80 (Cat A.) or £1.10 (Cat. B) in real terms (the announced increase has been deflated by an assumed inflation rate of 2.5%).

Minimum Income Guarantee (MIG): the capital limits for MIG (Income Support for pensioners) are increased from £3,000 to £6,000 (so that income from capital less than £6000 per benefit unit is disregarded) and from £8,000 to £12,000 (so that pensioners with capital between £8,000 and £12,000 may be entitled to MIG assuming other conditions are met). Premia for those aged up to 75 increased by £17.90 (single) and £25.30 (couples). Premia for older pensioners increased (by somewhat less) to align with these levels.

Capital thresholds in all means-tested benefits except MIG (and including WFTC) reduced in real value by 8.5% since 1997. (These have not been uprated since 1988.)

Winter fuel allowance: £150 per year for households containing a person over state pension age or in receipt of Income Support pensioner premium. (Assumed to be £2.88 per week.)

National insurance contributions: Class 1 employee contribution lower earnings limit (LEL) increased by £18 (to £87); upper earnings limit (UEL) increased by £50 (to £575); contributions on earnings below the LEL (“entry fee”) abolished (worth up to £1.38 per week). Class 2 (self-employed) contributions reduced by £4.85. Class 4 (self-employed) lower profits limit aligned with the Class 1 LEL (a reduction of £63); Class 4 upper profits limit aligned with the Class 1 UEL (an increase of £50) and the rate of Class 4 increased from 6% to 7%.

Income tax schedule: introduction of a 10% lower rate; in 2001/2 this applies on the first £1880 of annual taxable income, including income from investments (replaces 20% lower band); standard rate reduced from 23% to 22%.

Married couples allowance (MCA) for couples both aged under 65 and Additional personal allowance for lone parents abolished. (Under 1997 policy these would have been worth 15% of £2050 per year or £5.91 per week in 2001/2 prices.) Age-related MCA increased so that pensioner couples do not lose. Age-related personal allowances increased by £160 per year (age 65-74) or £230 per year (age 75+).

Mortgage tax relief abolished. (In 1997 the maximum annual relief was 15% of the annual interest on £30,000.)

Introduction of a Children’s tax credit: this is for taxpayer families with children aged under 16. If either parent is a higher-rate (40%) taxpayer, the value of the annual credit is tapered at a rate of £1 for every £15 of income per year above the 40% threshold. The credit is introduced in April 2001 at the level of £10.00 per week per eligible taxpaying family (£520 per year). An additional baby tax credit for families with a child born within the year will be introduced in April 2001. This will be tapered along with the children’s tax credit. It has been announced as having an annual value of £520 in real terms.

Incapacity benefit is reduced by 50p for every £1 of occupational or personal pension income over £85 per week.
New announcements in the 2001 Budget
- increase in width of 10p tax band by £300 per year in real terms
- increase in value of children’s tax credit by (up to) £1.50 per week
- baby tax credit worth up to £10 per week for families with baby born within year
- increase of £5 in WFTC weekly adult rate
- increase in IS child rates by £1.50 per week
- increase in flat rate maternity pay
- increase in basic state pension in real terms of £4.55 (Cat A) or £2.85 (Cat B)
- increase in adult minimum wage from £3.70 to £4.10 per hour.

Measures modelled but not due for implementation until April 2002 or later:
- baby tax credit
- additional basic state retirement pension increases
- increases in flat rate maternity pay.

Among the changes that are not modelled are:
- child care tax credit
- child support changes
- effect of lengthening maternity leave and introduction of paternity leave
- pensioner tax credit (details not known yet).