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THE IMPACT ON INCENTIVES OF
FIVE YEARS OF SOCIAL SECURITY
REFORMS IN THE UK

Mike Brewer
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THE INSTITUTE FOR FISCAL STUDIES
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The Impact on Incentives of Five years of Social Security Reforms in the UK

Mike Brewer and Tom Clark¹

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Abstract: The UK's Labour Government has expanded means-testing of social security but attempted to do so while minimising the disincentive effects typically associated with such an approach. We test whether it has succeeded by reviewing the effect of 5 years of reforms on a range of incentives across the British population, undertaking micro-simulations on survey data. The incentive to enter work increases for the first earner in families, but for second-earners in couples the incentive to work has generally been dulled. Effective marginal tax rates have generally increased for workers, in spite of reductions in benefit withdrawal rates, owing to the increasing numbers facing means-tested benefit withdrawal. Reforms have reduced the number of pensioners facing very high effective marginal rates, but increased the number on moderately high rates. Incentives regarding family life have been affected: partnering has become less financially attractive for low-income individuals; having children has become more financially attractive.

JEL Classification: H24, H31.

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1. Introduction

As we describe and discuss in a companion paper (Brewer, Clark and Wakefield, 2002), our characterisation of Labour's approach to social security reform has been an extension of means-testing, although in a new, more generous and, it hopes, more palatable, form. In this paper, we look at some economic implications of this by examining the impact of the reforms on incentives. As in our companion paper, owing to limitations of space, our approach is selective. We give little attention to how welfare reform has affected people with illnesses or disabilities, nor do we discuss the reforms to the CSA and child maintenance payments. We also assume some familiarity with the social security system and Labour's changes to it since 1997.

The clearest advantage of increasing means-tested benefits is that this strategy allows bigger increases in support for those who claim them than would the same expenditure if delivered through non-targeted benefits (and this is how the Government has defended its policies, see Brewer, Clark and Wakefield (2002) and the references therein). There are several disadvantages though. A principled objection made by some is that means-tested benefits place too much power in the hands of government officials, and are inherently demeaning. Another is that many people with entitlement do not claim it. Our focus here, however, is narrower: we are concerned with the effect on incentives of Labour's expansion of means-testing – in particular, with the way its reforms have changed people's behaviour by altering incentives to work, save, cohabit and comply with government agencies.

Perhaps the most fundamental incentive problem posed by means-testing is the discouragement it gives claimants to increase their own income. Almost by definition, these benefits are reduced as a family achieves an increase in its current or future income – by, for example, doing more paid work or building up more pension rights. This paper principally focuses on these issues, partly because of their importance, and partly because of the relative ease of quantification. Section 2 deals with work incentives and Section 3 with incentives to accumulate wealth.

We think of means-tested benefits as affecting the desire to increase incomes in two ways - through an ‘income’ effect and a ‘substitution’ effect. The income effect (which applies to both means-tested and universal benefits) refers to the idea that when benefits increase people are more likely to judge that state provision covers more (or even all) of the income that they desire, and so feel less inclined, for example, to earn or to acquire private pension rights. The ‘substitution effect’ refers to the changes in the ‘price’ at which higher incomes can be obtained – in the absence of government, the price of increasing income through earnings is foregone leisure; in the case of acquiring pension rights, it is the sacrifice of today’s consumption to finance tomorrow’s. Means-tested – unlike universal – benefits increase the price at which higher incomes can be purchased, because recipients see some or all of the gain from increasing their private income offset by reductions in benefit entitlement.

But there are also other potential incentive effects. Because means-tested benefits are assessed for the family as a whole, they affect the financial incentive to cohabit, or at least to inform the authorities of cohabitation. The financial incentive to have children could also be affected. We touch on these issues briefly in section 4.

Given that there has already been considerable analysis of the effect of Labour's social security reforms on work and savings incentives, what do we hope to add? First of all, comprehensiveness: much existing work has looked at individual elements of reform rather than reviewing the effect of the whole package.² We look at the effect of all of the personal tax and benefit reforms announced between 1997 and 2002 considered together, including the impact of the new tax credits that are due in 2003 (but whose details are known now): in other words, we compare the tax and transfer systems in operation in April 1997 to that due to be in operation in April 2003 (as well as we can predict it, given pre-announced reforms and the usual procedures for increasing tax allowances and benefit rates each year).

Another dimension in which we hope to increase comprehensiveness – as compared to previous studies – is in the generality of the results we present. Some previous studies have shown the effect of social security reforms on sample families: here instead we hope to summarise effects across the whole population. We do this by using a micro-simulation model, TAXBEN, operating on a large cross-section survey of UK households (the Family Resources Survey or FRS), and assuming full take-up in all means-tested benefits.³ A use of a detailed micro-simulation model means that we are capturing the interactions inherent in the tax and benefit system.

Calculating the financial rewards to work requires that we know people's wages. If we were concerned only with individuals currently in-work, this would pose

² For example, Blundell *et al*(2000) focused on WFTC only.

³ This might seem worrying, given estimated take-up rates for FC and WFTC were around 60-70 per cent. However, the number of families predicted to be entitled to some FC or WFTC from our TAXBEN model operating on the Family Resources Survey is close to the number of individuals actually receiving the benefits (discussed further in Clark and McCrae, 2001).

no problems, as we could simply use the wage recorded in the survey data. Because we are attempting to summarise the effect across the whole population, however, we are also concerned with the effect on those who are out of work, who (obviously) do not have recorded wages. We get round this by using econometric techniques to estimate the types of wages that such individuals might face. This procedure is discussed further in the Appendix.

The analysis requires some caveats. We attempt to model the changes in incentives due only to the changes in personal taxes and benefits: we ignore the changes due to other policies (such as the minimum wage and the New Deal), and we ignore any changes due to changes in demographics or the distribution of wages over this period by using a single data-set, the FRS 1999/00. This allows us to focus exclusively on the changes due to fiscal factors in the government's direct control (i.e. the tax and benefits system), but the disadvantage is that the results should not be taken as an analysis of all that actually happened to incentives over this period (as we have argued elsewhere in a similar context: Brewer, Clark and Goodman, 2002).

Section 2 deals with Labour market incentives, first of all in terms of the move into (or remain in) work, and second, in terms of increasing earnings once one has a job. Section 3 considers the incentive to acquire pension rights and to save more generally. Section 4 briefly reviews incentives concerning family life – in terms of partnering and parenting. Throughout the analysis amounts to a description of how incentives have changed for individuals. There is no attempt to quantify what these changes to incentives mean for behaviour in aggregate.

2 Labour market incentives

The traditional policy dilemma in the design of welfare systems is to balance the desire to raise the living standards of low-income households with that of encouraging self-sufficiency through the promotion of work incentives, and reducing government expenditure – the so-called “iron triangle” of welfare reform (see Blundell, 2001). Means-tested benefits are relatively good at increasing living standards for a given level of government expenditure, but tend to undermine work incentives. Labour has increased the generosity of means-tested benefits, but has also sought to minimise the potentially harmful impact of the reforms on work incentives. For example, benefit withdrawal rates have been reduced in some cases, and there has been an emphasis on increasing the generosity of in-work benefits. This section assesses whether these reforms have proved able to offset the negative work-incentive effects that might otherwise have been expected from an expansion in means-testing.⁴

Any change to the system of means-tested benefits is bound to affect work incentives by altering the relationship between pre- and post-transfer income. There are several effects going on and several dimensions within which to analyse them, meaning that “work incentives” is a rather imprecise term. We could consider the impact of reforms separately on incentives to participate in the labour market, and on

⁴ Labour’s reforms to social security benefits included changes in the activities expected of those claiming out-of-work benefits, changes often backed up with financial sanctions for non-compliance. The effects of these changes on incentives are not considered in this paper (there have, though, been many evaluations of the impact of Labour’s reforms to out-of-work benefits on employment rates and flows.)

incentives to increase earnings given participation.⁵ An individual's work incentives are determined by the shape of the entire budget constraint (ie the relationship between hours of paid work and disposable, after-tax-and-benefit income), given his/her wage. We first focus on the incentive to do any work at all, summarised in the replacement rate (RR) and the average tax rate (ATR).⁶ The RR can be thought of as the inverse of the proportional increase in family income an individual achieves by working. The ATR is one minus the cash gain to working as a proportion of gross earnings; it measures the extent to which the tax and benefit system erodes someone's gross earnings. Low numbers are associated with stronger financial incentives: an ATR of zero would mean that all of someone's net income increased by their gross earnings, an RR of zero occurs where someone has no income if they do not work, and both an ATR and an RR of one indicate that there is no financial reward to working.

We use the two measures partly because their levels can give very different impressions of the incentive to work for people in couples as a consequence of counting their partner's observed earnings in the definition of income. For example, a low-earning person living with a high-earning partner may have a very high replacement rate (because whether they work makes little difference to the family's income), but a very low average tax rate (possibly zero if they earn less than the personal allowance, because the family should not be entitled to any means-tested

⁵ Of course, any changes that affect work incentives are more generally affecting the incentive to undertake any earnings-enhancing activity, such as investing in human capital: see Blundell, 2001, for more discussion.

⁶ The RR is defined as: (net income when not working) / (net income in work), and the ATR is defined as: $[1 - \{(\text{net income in work} - \text{net income out of work}) / \text{gross earnings}\}]$. Both are evaluated at 20 and 40 hours a week for all working age individuals in the FRS. "Net income" means incomes after taxes and benefits. For individuals in couples, the definition of income includes their partner's income (at "observed" earnings). Childcare costs are set to zero for all, housing costs are not deducted from income.

benefits).⁷ It is also the case that a given reform can change the two measures in different ways: for example, an equal cash gain in in-work and out-of-work incomes will not change the ATR, but will increase the RR.⁸

The effective marginal tax rate captures the incentive to earn an extra pound of (weekly) income. But if we want to look at marginal incentives, we need to decide at what margin: we have chosen to look at the smallest possible margin that we can: the impact of an extra penny of weekly earnings, but it may also be sensible to examine the impact of an extra hour of work a week, for example.

Changes to taxes and transfers can change incentives because of both income and substitution effects. And, given that means-tested benefits and tax credits are jointly assessed, there will be interactions between the 2 members of a couple which could lead to asymmetric impacts of a given reform on the two individuals: for example, the well-known impact of an expansion in a jointly assessed in-work benefit is that it improves the financial gain for one person to work but reduces the financial gain if the second person works (see, for example, Blundell et al, 2000, Eissa and Hoynes, 1998, and Bennett, 2002).

In general, the analysis is based on individuals, and we divide the population into cells according to family type and employment status, giving 12 groups.⁹ For the

⁷ This is discussed more in Gregg, Johnson and Reed (1999).

⁸ In more detail: if we define $RR = Y_{np} / Y_p$ and $ATR = 1 - (Y_p - Y_{np}) / E$, where E is earnings, Y_{np} non-participation family income, and Y_p family income in-work, then: $\frac{\partial RR}{\partial Y_{np}} = \frac{1}{Y_p}$, $\frac{\partial ATR}{\partial Y_{np}} = \frac{1}{E}$ and $\frac{\partial RR}{\partial Y_p} = -\frac{Y_{np}}{Y_p^2}$, $\frac{\partial ATR}{\partial Y_p} = -\frac{1}{E}$.

RR and the ATR, we simulate earnings at 20 and 40 hours work a week. For someone observed in work, we use their observed hourly wage (ie calculated from the earnings information in the FRS); for those out of work, we predict a wage (see Appendix A for more details). In general, we expect people not currently working to earn a lower wage if they did work than the people observed in work: this proves to be important in some cases when we consider the impact of Labour's changes. We calculate MTRs by simulating the impact of an extra penny of weekly earnings for all employees in the FRS.

2.1 Replacement rates and the incentive to enter work

The Labour government made widespread changes to the tax and benefit system, altering out-of-work benefits, in-work benefits, reducing some taxes and increasing others. There is, therefore, no obvious prior as to what may have happened to the distribution of financial incentives to work.

Table 1 therefore shows how (median) simulated out-of-work and in-work¹⁰ incomes changed for our 12 groups at 20 and 40 hours of work a week as a result of the reforms between April 1997 and April 2003 (called "pre" and "post").¹¹ For individuals in couples, both "out-of-work" and "in-work" income is computed across

⁹ The six main distinctions are: single person not working, single person working, non-working person with non-working partner, working person with working partner, non-working person with working partner, working person with non-working partner. These are then split between parents and non-parents. The two individuals in a couple can therefore appear in different cells.

¹⁰ Whether individuals are observed in or out of work makes no difference to the calculations we perform: for both, we compare calculated in-work income at 20 or 40 hours to out-of-work income. Any differences in the results are due to the different hourly wages: for those in work, we used observed hourly wage, and for those not working, we calculate a (typically lower) wage.

the family and therefore includes the incomes of their partners (calculated at their partners' observed level of earnings).

The first numerical column gives weekly income at non-participation, including benefit income and the income of any partner calculated at their partner's observed level of earnings. The second column gives the calculated gross earnings at 20 hours work at the observed or imputed hourly wage: this obviously does not change between the base and the reformed tax and benefit systems. The third column shows net incomes after taxes and benefits (and including any partner's observed earnings), and the final 2 columns give the calculated RR and ATR.

For those without children, as shown in Table 1 and Table 2, ATRs and RRs tend to be relatively low on the April 1997 system. Perhaps in consequence, work incentives for this group have received much less attention than those for families with children, and Labour's tax and benefit reforms for this group have not been substantial. Out-of-work incomes are almost entirely unchanged for both singles and couples. In-work incomes at low levels of earnings have increased because of income tax and national insurance changes (in particular, the starting 10p rate of income tax, and the abolition of the entry fee and the increase in the Lower Earnings Limit for National Insurance).

Taken together, these changes mean that the RR and ATR at the median for single people has fallen. But for couples, these tax cuts have been offset by tax

¹¹ In this section, the sample is people aged 18 to 55 who are either employees, seeking work, waiting to start work or unoccupied in FRS 1999/00.

increases elsewhere – notably the abolition of the married couples’ allowance and MIRAS, the mortgage interest subsidy.¹² Thus, for adults in couples without children, both RRs and ATRs have either not fallen in any significant way or increased.

Table 1. Simulated Work incentives at 20 hours/week, people without children, £/week.

		Out of work income (median)	Simulated earnings (median)	In-work income (median)	RR (evaluated at the median)	ATR (evaluated at the median)
Single						
Not working	Pre	56	128	134	.42	.39
	Post	55	128	140	.39	.34
Working	Pre	54	143	127	.43	.49
	Post	54	143	129	.42	.48
Couple						
Neither working	Pre	174	140	271	.64	.31
	Post	177	140	264	.67	.38
Both working	Pre	262	168	404	.65	.15
	Post	259	168	400	.65	.16
Individual working, partner not working	Pre	177	150	298	.59	.19
	Post	175	150	292	.60	.22
Individual not working, partner working	Pre	316	161	462	.68	.09
	Post	310	161	458	.68	.08

Source: authors’ calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: The incomes of individuals in couples includes their partner’s observed (net) income. RRs and ATRs calculated for the values given in the first three columns.

In general, at 40 hours a week, both ATRs and RRs are lower than at 20 hours a week.

This is because, at low levels of earnings, the loss of income due to the withdrawal of income support is a relatively important determinant of work incentives. The patterns of changes, though, are the same at 20 and 40 hours a week, but they are more pronounced at 20 hours a week (probably because the financial impact of abolishing

¹² Of course, MIRAS is available to single people as well as couples, but couples tended disproportionately to receive it. Even though MIRAS was formally available to all individuals (whether in-work or not) our model effectively treats it as an in-work privilege because most of those without work are assumed to be on income support and through that benefit are eligible for payment of their

the NICs entry fee and the mortgage interest subsidy do not vary with an individual's earnings, and so have a proportionally larger impact at 20 hours work).¹³

Table 2. Simulated work incentives at 40 hours/week, people without children, £/week.

		Out of work income (median)	Simulated earnings (median)	In-work income (median)	RR (evaluated at the median)	ATR (evaluated at the median)
Single						
Not working	Pre	56	255	215	.26	.38
	Post	55	255	220	.25	.35
Working	Pre	54	286	220	.25	.42
	Post	54	286	222	.24	.41
Couple						
Neither working	Pre	174	280	382	.46	.26
	Post	177	280	377	.47	.29
Both working	Pre	262	336	523	.50	.22
	Post	259	336	519	.50	.23
Individual working, partner not working	Pre	177	299	417	.42	.20
	Post	175	299	412	.42	.21
Individual not working, partner working	Pre	316	323	595	.53	.14
	Post	310	323	591	.52	.13

Source: authors' calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: The incomes of individuals in couples includes their partner's observed (net) income. RRs and ATRs calculated for the values given in the first three columns.

The changes are larger, and more complex, for individuals in families with children.¹⁴

This is partly because Labour did not just increase the credits in means-tested benefit, but it also lowered the withdrawal rate under FC/WFTC; this means that the gains are not related to income in a monotonic manner. Support for children has increased across the income distribution, through a mixture of universal and income-related

mortgage interest (the 9 month waiting period is not enforced). The loss of MIRAS for people on income support gives rise to an offsetting decline in benefit entitlement for people on income support.

¹³ The impact of the new working tax credit for those without children is hard to see from these tables as it has little effect at the median of the distribution.

¹⁴ Difficulties in knowing how much childcare families would consume at hypothetical weekly hours of work means that we assume no childcare costs throughout: this means that we probably understate the improvement in the financial gain to work for parents with eligible childcare costs.

transfers (see Brewer, Clark and Goodman, 2002, or Brewer and Gregg, 2001). This means that both out-of-work incomes and in-work incomes have increased for all: the impact on RRs and ATRs, then, depends on the relative size of these impacts.

At 20 hours/week, RRs and ATRs have fallen (often substantially) for people with children who are the “primary earner” (i.e. those with no partner or a partner that does not work). ATRs have seen larger percentage point declines than RRs: for example, individuals in workless couples will be able to keep an extra 9% of their gross earnings if they move into part-time work, but the replacement rate remains unchanged (see Table 3). This result should be expected given that Labour has sought to reduce the proportion of families where no-one works by increasing in-work financial support for first-earners on typical pay by more than it has increased out-of-work incomes.

By contrast with primary earners, parents with working partners typically face a dulled financial incentive to work: growing proportions of people in this position see their partner attract means-tested financial support which is reduced in respect of any earning that they themselves do (Blundell et al. 2000., explores this further for the WFTC, and Brewer, Clark and Myck, 2001, do the same for the new tax credits). This is shown for individuals in families where both partners work.¹⁵

¹⁵ The ATR evaluated at the median increases from 18% to 30%, but is not seen for non-working individuals with working partners at the median: this is purely due to the inadequacy of the median to capture all of the interesting changes.

Table 3. Simulated Work incentives at 20 hours/week, individuals in families with children, £/week.

		Out of work income (median)	Simulated earnings (median)	In-work income (median)	RR (evaluated at the median)	ATR (evaluated at the median)
Single						
Not working	Pre	173	100	223	.78	.50
	Post	199	100	261	.76	.38
Working	Pre	157	123	218	.72	.50
	Post	168	123	252	.67	.32
Couple						
Neither working	Pre	214	125	269	.80	.56
	Post	257	125	323	.80	.47
Both working	Pre	277	168	414	.67	.18
	Post	308	168	425	.72	.30
Individual working, partner not working	Pre	196	174	266	.74	.60
	Post	226	174	310	.73	.52
Individual not working, partner working	Pre	358	135	481	.74	.09
	Post	379	135	501	.76	.10

Source: authors' calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: The incomes of individuals in couples includes their partner's observed (net) income. RRs and ATRs calculated for the values given in the first three columns.

For most types of individuals in families with children, as Table 3 and Table 4 show, the pattern is identical at 40 hours work a week to 20 hours a week. The exception is working parents with a non-working partner: at the median, their RRs and ATRs have risen at 40 hours a week, presumably because their full-time earnings are too high to benefit fully from the WFTC or new tax credits at the median, but their out-of-work incomes have risen substantially.

Table 4. Simulated work incentives at 40 hours/week, individuals in families with children, £/week.

		Out of work income (median)	Simulated earnings (median)	In-work income (median)	RR (evaluated at the median)	ATR (evaluated at the median)
Single						
Not working	Pre	173	200	254	.68	.60
	Post	199	200	305	.65	.47
Working	Pre	157	246	266	.59	.56
	Post	168	246	303	.55	.45
Couple						
Neither working	Pre	214	249	339	.63	.50
	Post	257	249	391	.66	.46
Both working	Pre	277	336	536	.52	.23
	Post	308	336	543	.57	.30
Individual working, partner not working	Pre	196	349	391	.50	.44
	Post	226	349	407	.56	.48
Individual not working, partner working	Pre	358	270	591	.61	.14
	Post	379	270	600	.63	.18

Source: authors' calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: The incomes of individuals in couples includes their partner's observed (net) income. RRs and ATRs calculated for the values given in the first three columns.

Our conclusions may be sensitive to looking at how RRs and ATRs have changed at the median: below, we present some limited analysis of how the distribution of these statistics has changed.

The analysis up until now has used ATRs and RRs evaluated at the median to gauge changes to different types of individuals' work incentives. We can get a more general idea of how work incentives have changed by looking at changes to the whole distribution of these statistics for different family types. Figure 1 and Figure 2 both show the cumulative distribution of RRs and ATRs before and after the set of reforms we are analysing (ie the percentage of the population on the vertical axis against the

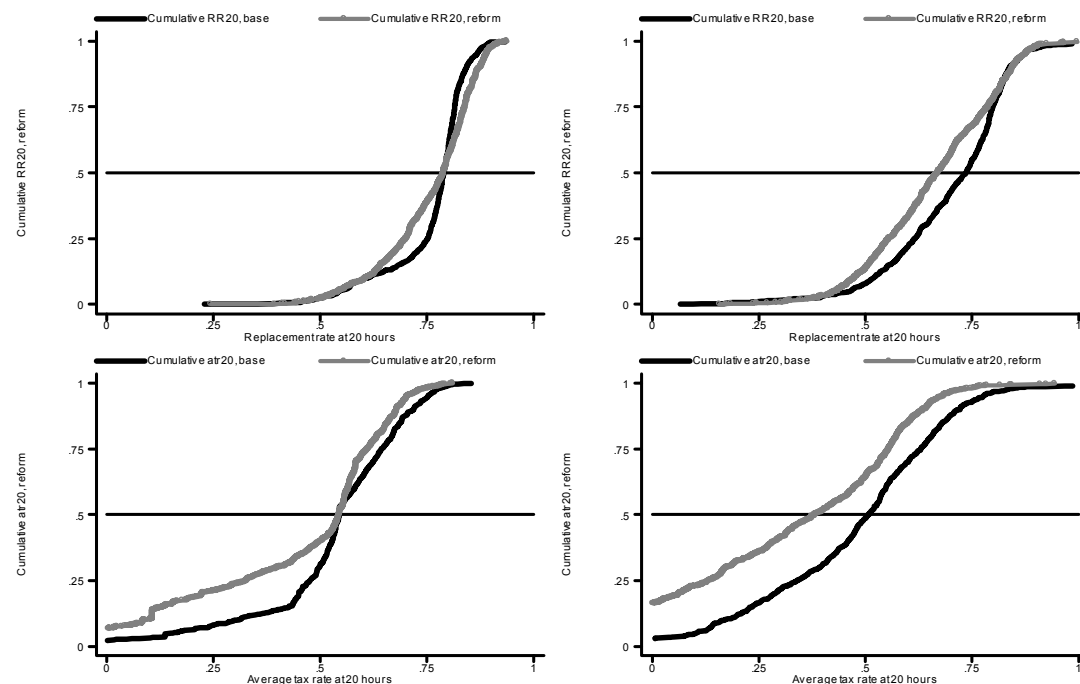
RR or ATR on the horizontal axis; where the horizontal line intersects the CDFs shows the median RR/ATR).

For lone parents, Figure 1 shows that ATRs and RRs fell in general, but the worst work incentives in 1997 may be even worse by 2003. The distribution of RRs has not simply shifted leftwards or upwards (which would be a good thing if we preferred lower RRs): the number of lone parents facing very high RRs at 20 hours/week has increased. It also shows the difference in the changes between lone parents who are observed in work and those observed not working: the lowering of RRs and ATRs is greater for those observed in work because they tend to have higher wages (which means that they benefit more from the move to WFTC and then the new tax credits) and because they tend to have older children (which means that out-of-work benefits have increased by less). So Labour's reforms, which had as an explicit aim of improving the financial reward to work for lone parents, have done more to strengthen the rewards to staying in work for those already working than to encourage those not working to move into paid employment.

Figure 1. Changes in replacement rates and average tax rates for lone parents

(a) Those observed not working

(b) Those observed working



Source: authors' calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: Vertical axis shows percent of population with RR/ATR below various levels. The incomes of individuals in couples includes their partner's observed (net) income. "Base" means the April 1997 tax and benefit system, reform means April 2003.

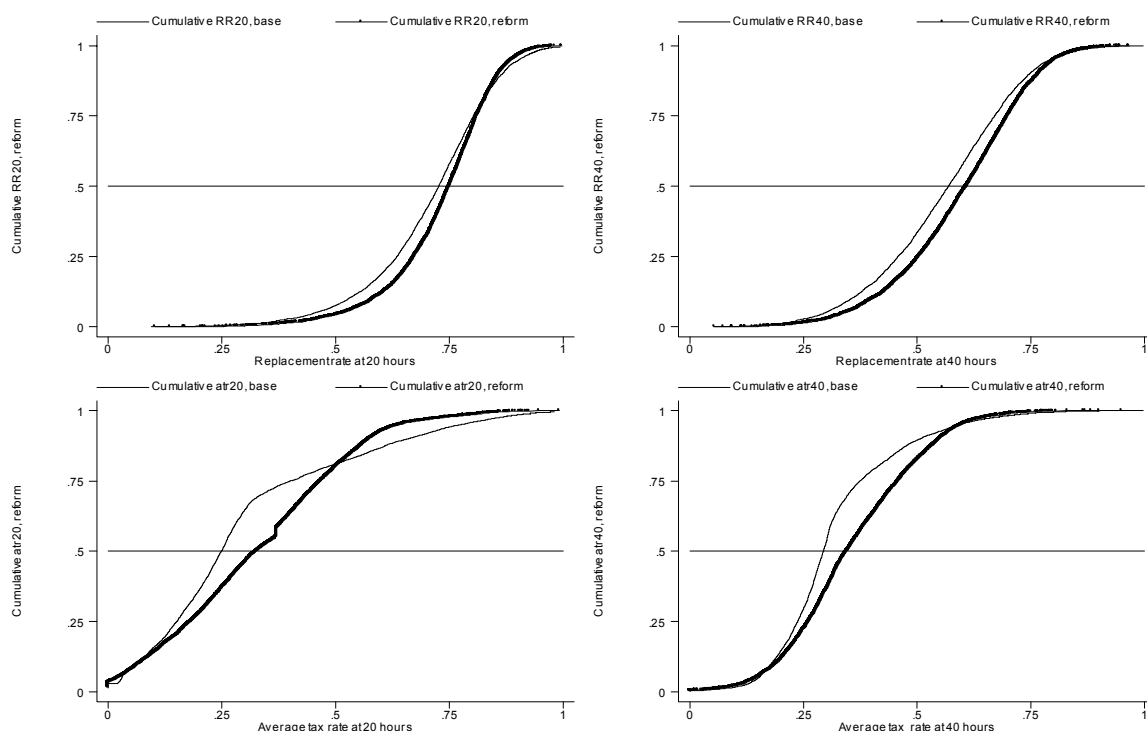
Figure 2 shows the changes for couples with children where both individuals are in work: it shows that replacement rates and average tax rates have both generally increased, except for the slight reduction in the number facing the very highest RRs and ATRs. This is due to the interaction of a number of changes: first, a redistribution to primary earners will increase the "out-of-work" income for second earners, and so increase their replacement rate (if nothing else changes); second, the expansion of tax credits means that more second earners face some sort of benefit withdrawal, and so their average tax rates will have increased. It also shows that the change in the median (which is what we showed in Table 1, for example) is not representative of the distribution, particularly contemplating 20 hours work a week: the number of very

high average tax rates has been reduced, but lower average tax rates have tended to increase due to new entitlements to means-tested benefits.¹⁶

Figure 2. Changes in replacement rates and average tax rates for couples with children where both work

(a) 20 hours a week

(b) 40 hours a week



Source: authors' calculations from FRS 1999/0 and TAXBEN. See text for details.

Notes: Vertical axis shows percent of population with RR/ATR below various levels. The incomes of individuals in couples includes their partner's observed (net) income. "Base" means the April 1997 tax and benefit system, reform means April 2003.

2.2 Marginal effective tax rates and incentive to increase earnings

Usually, an increase in the generosity of means-tested support would increase the number facing high marginal effective tax rates, but Labour has also lowered withdrawal rates in means-tested support, and made increases and decreases in tax

¹⁶ More of these charts are available on request from the authors; the conclusions from these other charts do not differ qualitatively from those from the corresponding Tables in this document.

rates. So, as with RRs and ATRs, it is difficult to know in advance what has happened to the distribution of MTRs after 5 years of reforms.

Error! Reference source not found. and Table 6 therefore shows the impact of the reforms on (bands of) effective marginal tax rates faced by all workers (the spikeyness of the distribution makes drawing density functions problematic: the modal effective marginal tax rate was 33% before and after the reforms, and this dominates the distribution¹⁷). **Error! Reference source not found.** suggests:

- small increases in the number facing a zero marginal rate (due to increases in the personal allowance and primary threshold)
- decreases in the number facing rates over 20% but less than or equal to 30% (due to the abolition of the old 20% income tax band)
- an increase in the number facing marginal rates over 40% but less than or equal to 50% (due to the extension of NI above the UEL);
- an increase in the number facing marginal rates over 60% but less than or equal to 70% (due to the expansion of tax credits).¹⁸
- decreases in the number facing very high marginal rates, due to the reduction of the taper in in-work benefits, and a reduction in the number of people on multiple tapers.

¹⁷ In April 1997, this was made up of 10% national insurance rate plus a 23% income tax rate; in 2003, it will be an 11% national insurance rate plus a 22% income tax rate.

¹⁸ The (very small) number of people facing a marginal rate of over 100% are people who are very close to exhausting entitlement to certain means-tested benefits which have minimum payments.

Table 5. Marginal effective tax rates, thousands of employees

Marginal effective tax rate	Before the reforms	After the reforms	Change
0%	1,108	1,281	+ 173
0% - 10%	494	116	- 378
10.1% - 20%	133	405	+ 272
20.1% - 30%	4,774	1,874	- 2,900
30.1% - 40%	13,834	13,437	- 397
40.1% - 50%	132	2,081	+ 1,949
50.1% - 60%	18	237	+ 219
60.1% - 70%	52	1,521	+ 1,469
70.1% - 80%	499	167	- 332
80.1% - 90%	191	271	+ 80
90.1% - 100%	336	172	- 164
100.1% or more	15	24	+ 9
Total	21,580	21,580	0

Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights.

Overall, as Table 6 suggests, the reforms have increased the number of people facing a low marginal rate, and reduced the number of people facing a very high marginal rate. But there have been increases in the number of people facing rates over 20% and less than or equal to 70%.

Table 6. Marginal effective tax rates, thousands of employees, cumulative

Marginal effective tax rate	Before the reforms	After the reforms	Change
0%	1,108	1,281	+ 173
10% or less	1,602	1,397	- 205
20% or less	1,735	1,802	+ 67
30% or less	6,509	3,676	- 2,833
40% or less	20,343	17,113	- 3,230
50% or less	20,475	19,194	- 1,281
60% or less	20,493	19,431	- 1,062
70% or less	20,545	20,952	+ 407
80% or less	21,044	21,119	+ 75
90% or less	21,235	21,390	+ 155
100% or less	21,571	21,562	- 9
Total	21,580	21,580	0

Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Rates equal to multiples of 10% are included in the first applicable band (ie people with a rate of 10% are included in 10% or less). Positive changes indicate that there are now more people facing METRs in the band suggested, which is a good thing if lower METRs are a good thing.

Again, the changes differ between individuals with and without children, and so Table 7 shows the distribution of the change in effective marginal tax rate by family type: employees with children are more likely to have seen a change in their marginal rate, and those that have seen a change are more likely to have seen an increase, primarily due to the new tax credits.

Table 7. Changes in marginal effective tax rates, percentage of all employees

Change in marginal effective tax rate, % of employees by family type	Employees without children	Employees with children
40% + fall	0.1	1.1
30% - 40% fall	0	0.8
20% - 30% fall	0.1	1.1
10% - 20% fall	0.4	2.2
0% - 10% fall	7.2	9.8
No change	67.1	44.8
0% - 10% rise	20.6	24.8
10% - 20% rise	0.6	1.3
20% - 30% rise	0.4	1.7
30% - 40% rise	3.3	12.2
40% + rise	0.4	0.3
Total	100	100

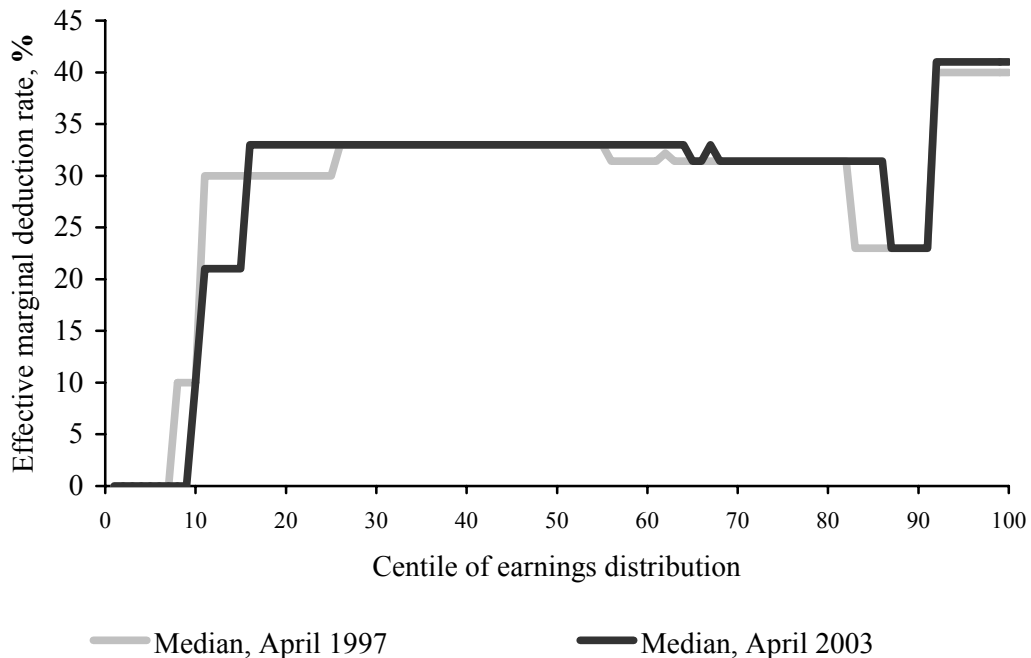
Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Rates equal to multiples of 10% are included in the first applicable band (ie people with a rate of 10% are included in 0-10%).

Also of interest is how marginal tax rates vary with characteristics, such as earnings, hourly wage and hours. For example, at what earnings level do people face the highest marginal tax rate? Are high marginal rates concentrated at particular points of the wage or hours distribution? We answer these questions below.

The methodology here is to divide employees into cells according to their weekly earnings (although we could also use weekly hours of work or hourly wages), and then to calculate some function of the effective marginal tax rate in each cell (in this paper, we use only the mean and the median). Figure 3 shows the median. It shows that, in each cell (which corresponds to a centile of the earnings distribution),

the median effective marginal tax rate is made up of income tax and national insurance only (the slight variations in the top half of the distribution are due to employees being contracted out of SERPS). This means that at least half of all people in each cell are not on tax credits or means-tested benefits, and, therefore, that Labour's changes in means-tested benefits and tax credits will not be picked up by looking at the median effective tax rate.

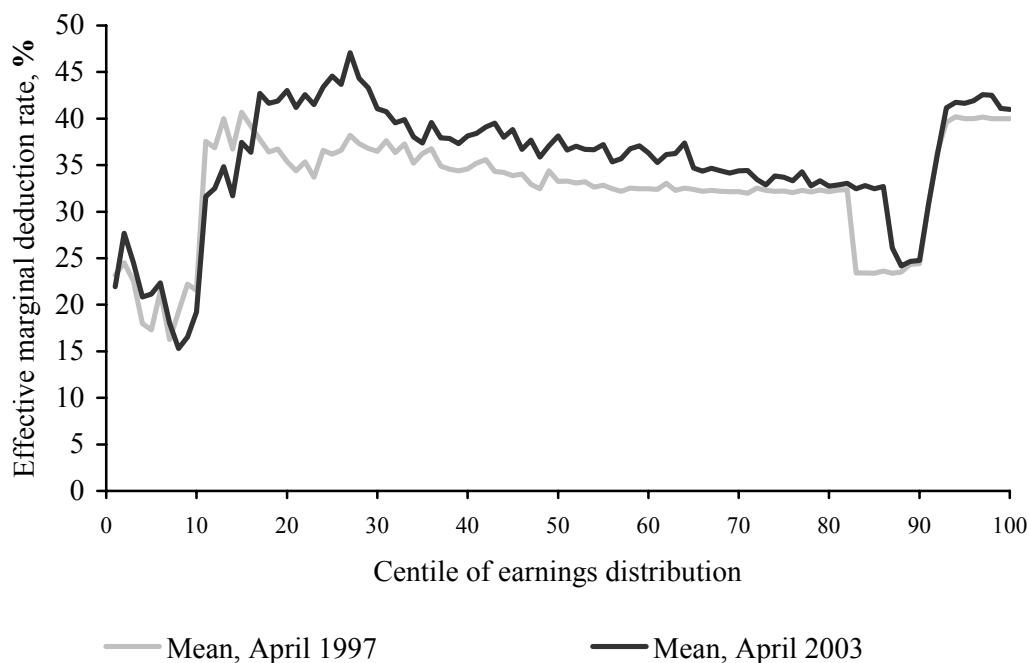
Figure 3. Median effective marginal tax rate by weekly earnings, all employees



Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Gross weekly earnings distribution divided into 100 equal-sized cells.

Figure 4 therefore shows the mean effective marginal tax rate in each cell (having dropped from the sample the few people with marginal rates over 100% or less than zero). This shows that mean marginal tax rates have increased at almost all centiles of the earnings distribution, but the largest increases have been at the lower end of the distribution. The highest mean marginal tax rate after the reforms, 47%, is found at the 27th centile of the earnings distribution (about £166/wk).

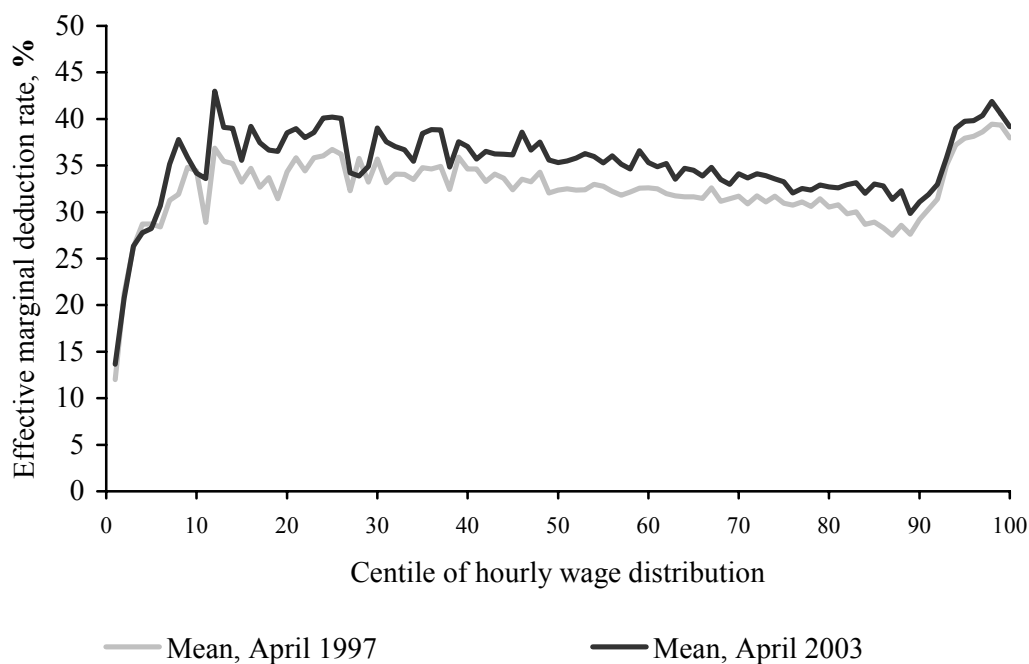
Figure 4. Mean effective marginal tax rate by earnings, all employees



Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Gross weekly earnings distribution divided into 100 equal-sized cells.

Figure 5 shows that creating cells by hourly wage (rather than weekly earnings) shows a slightly different pattern. Again, the median effective marginal tax rate (not shown) reveals only the changes in income tax and national insurance. Mean marginal tax rates, though, have risen across the hourly wage distribution, but the change is fairly constant at all wages. This means that the increase in marginal rates arising from the increase in tax credits is not concentrated on a particular segment of the labour market; this is partly because hourly wages are not very well correlated with family income, which is the basis for calculating entitlement to tax credits.

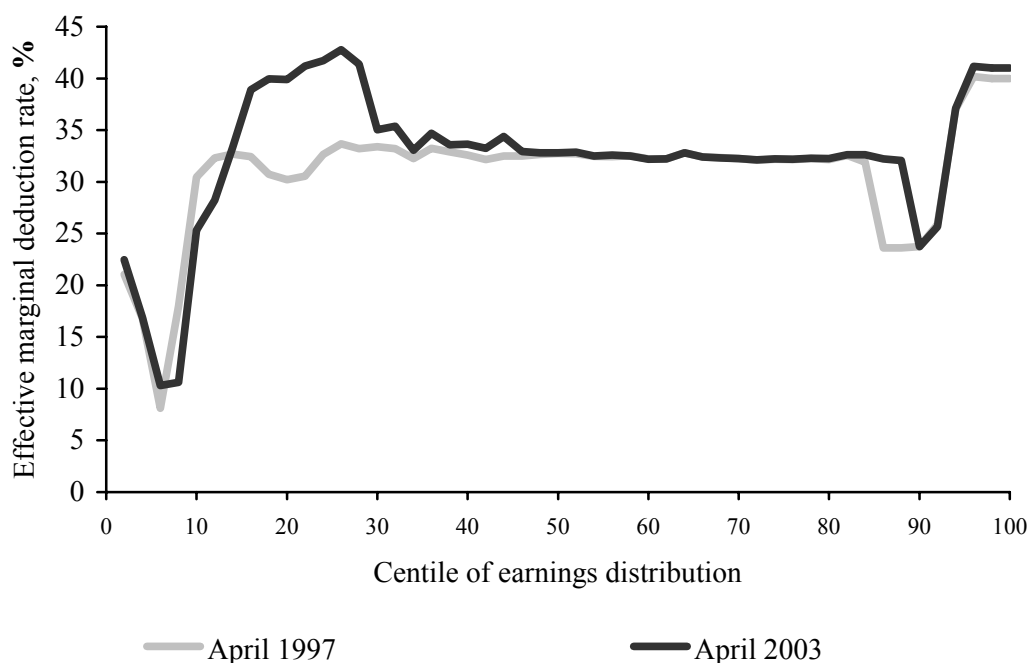
Figure 5. Mean effective marginal tax rate by hourly wage, all employees



Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Gross weekly earnings distribution divided into 100 equal-sized cells.

Figure 6 and Figure 7 explore the differences in the changes for employees with and without children. There have been some increases in marginal rates for those without children, heavily targeted on those with low earnings, and these are mainly due to the Working Tax Credit. Beyond the median point of the earnings distribution, there is no change to mean effective tax rates for those without children, apart from the impact of the increase in the Upper Earnings Limit and the increase in the national insurance rate.

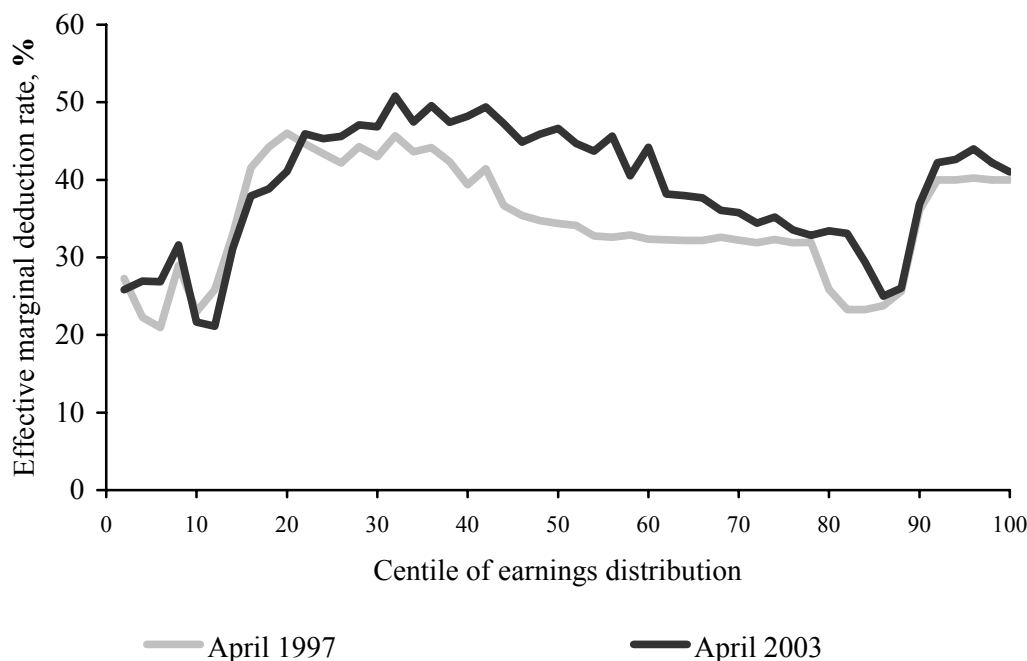
Figure 6. Mean effective marginal tax rate by earnings, all employees without children



Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Gross weekly earnings distribution divided into 100 equal-sized cells.

For those with children, the changes to tax credits mean that there have been some falls in marginal rates for low earners (between the 10th to 20th centile points), but increases in marginal rates at higher earnings. The biggest increases occur around the middle of the earnings distribution, where average marginal rates have increased from around 35% to around 45%: many of these will be families facing a withdrawal of one of the new tax credits who would not have been entitled to any means-tested benefits in 1997. The increases at the very top of the earnings distribution reflect the tapering away of the child tax credit for families with incomes over £50,000.

Figure 7. Mean effective marginal tax rate by earnings, all employees with children



Source: authors' calculations from FRS 1999/0 and TAXBEN. Figures grossed up using FRS weights. Gross weekly earnings distribution divided into 100 equal-sized cells.

2.3 “Real-time” work incentives and the new tax credits

Much of what we have done has assumed a weekly tax and benefit system and has looked at weekly incomes.¹⁹ This assumption, frequently made by UK studies as most household surveys collect income over a short period of time, will become less appropriate under the new tax credits. This is because the new tax credits will depend upon annual income, and, more importantly, because for some people they will depend upon income in the previous year. There will, in some sense, be a disregard of £2,500 in annual income: if a family's income rises by anything less than £2,500

¹⁹ This is not quite true: the FRS records income over a short period of time: this is turned into weekly income by TAXBEN, but for tax purposes, we assume annual income equal to 52 times the weekly income.

compared to the previous tax year, there will be no effect on their tax credit award in that year (see HM Treasury, 2002, for more details; note that the disregard is asymmetric: falls in income will translate immediately into extra tax credits, but rises may be ignored for a year). Eventually, though, the tax credit awards will “catch up” with these income rises.

This disregard has been ignored in our analysis, and this means that the short-run (or “real-time”) effective marginal tax rates will be lower than those we show for rises in income (for falls in income, our numbers will be accurate).²⁰ Thinking in a dynamic context, a better concept to look at might be a “long-run” effective marginal tax rate, which is the suitably-discounted version of the effective marginal tax rate in the number of expected years of tax credits left. If families have a high discount rate (or future entitlement to tax credits is expected to be short), then the “long-run” MTR may differ substantially from the short-run MTR.²¹

3 Incentives affecting saving behaviour

Another perceived problem with old means-tested benefits was their impact on incentives to save. This section asks whether Labour has managed to introduce reforms which succeed in avoiding this problem. We look at two types of saving separately – saving through the acquisition of pension rights, and saving financial capital.

²⁰ The concept of “real-time” work incentives is discussed more in Walker and Wiseman, 1997.

²¹ This sort of complexity could be found in the tax and benefit system before the new tax credits: FC and WFTC awards were completely fixed for 6 months, and only changed in response to income changes in certain assessment periods (see Brewer, 2001).

Although we focus the discussion of the effects of means-tested benefits for older people on the incentive to acquire pension rights in one's working life many of the results could also be interpreted with respect to work incentives for the over-60s. For example, where high marginal effective tax rates apply to pension income they will, in general, also apply to earned income, and so to the extent that they dull the incentive to acquire an extra pound of pension income they will also dull the incentive to work an extra hour.²²

3.1 Incentives to Save in private pensions

A model of pension provision that is based on low state expenditure will – unless the elderly are to have low incomes – rely on extensive private pension coverage. The Government has embraced the idea of low-public, and high-private pension provision – explicitly stating that it would like eventually to invert the existing 60:40 ratio of state to private provision. It also hopes that its promotion of low-cost ('stakeholder') pensions will encourage an expansion of coverage amongst low- to middle-earners in particular.²³ The extent to which Labour's welfare reforms help encourage the acquisition of private pension rights is therefore a test of their coherence.

As we mentioned in the introduction, high means-tested retirement benefits can reduce the incentive for working-age people to save in pensions, as benefits which top-up the incomes of those without (or with low) pension rights reduce the link between pension rights and final income. More formally, the income effect (which

²² In practice, earned income disregards in the means-tested benefit system mean that at very low levels of earning, marginal rates are lower – even zero.

applies to both means-tested and universal benefits) means people planning for retirement are more likely to judge that state provision will cover more of their desired pension income, something that will mean that they will tend to judge they can afford to spend more today, and to save less for tomorrow. The substitution of means-tested benefit withdrawal is that the number of pounds of net income in retirement that can be ‘purchased’ by a pound saved in a pension today will decrease, reducing the attraction of acquiring pension rights.

There have been some increases in non-means tested benefits (see Brewer, Clark and Wakefield (2002)) – the winter fuel payment and the retirement pension increase – but the Governments’ main policy on pensioner benefits has been to increase the generosity of its means-tested element.²⁴ The first element of expanded means-testing has been a straightforward increase in the rates of income support for pensioners (which was relabelled as the Minimum Income Guarantee). For example, for a single pensioner aged under 75 the rate increased by 31% in real terms between 1996 and 2002 (to reach £98.15 in April 2002). Furthermore, the Government has the ‘aspiration’ of increasing this benefit in line with earnings in the future, so it should continue to increase in real terms over time.

This benefit increase exerts a negative income effect on the incentive to save of anyone planning for retirement who expects to retire on an income sufficiently low that they will receive some means-tested benefits. There is no substitution effect for those who were already going to be on income support – they already suffered pound-

²³ DSS, (1998)

²⁴ In terms of the cost of reforms to date increases in means-tested and non-means-tested benefit have been comparable. But strategically, expanded relative spending on means-testing is central: the Government’s own figures show that if existing policy continued over the next few decades then

for-pound loss of benefits for any pension they accrued, and this continues. But the increase in benefit rates means that higher pension entitlement is required to exhaust means-tested entitlement. This means that more people, when planning for retirement, could expect to be in receipt of means-tested benefits after the reform. For these ‘floated on’ to benefits, the negative income effect is compounded by a negative substitution effect – these people became exposed to the effect of pound-for-pound withdrawal of their savings income for the first time.

The first two columns of Table 8 show a large increase in the number of pensioners on high marginal effective tax rates as a result of Labour’s increase in the rates of means-tested benefits for pensioners. In particular, the number of adults aged 65 or over facing a 100% effective tax rate had increased from 1.5 to 2.5 million as a result of the MIG increase. The total number facing a marginal rate of above 50% and of above 80% also increased substantially as a result of reforms between 1996/97 and 2002/03.

means-testing spending would increase dramatically. See DWP, (2002) and Brewer, Clark and Wakefield (2002).

Table 8. Numbers (thousands) in pensioner families with various effective marginal tax rates

<i>Marginal rate</i>	<i>Before all reforms</i>	<i>2002 system</i>	<i>Full 2003 system</i>
100%	1,553	2,532	483
90%–99%	-	85	827
80%–89%	814	514	96
70%–79%	-	24	33
50%–69%	122	33	1,465
1%–49%	3,889	3,674	4,412
0%	2,071	1,586	1,134
Total over 80%	2,367	3,131	1,406
Total over 50%	2,489	3,188	2,904

Notes: Marginal rates are calculated specifically for unearned, non-capital income (e.g. private pensions). Table includes all adults aged 65 or over. The 2002 system includes the most important increases in the Minimum Income Guarantee, but not the Pension Credit reform. The full 2003 system includes Pension Credit and associated Housing Benefit/Council Tax Benefit changes. It will be effective only from Autumn 2003 All systems deflated to the same prices.

Source: IFS tax and benefit model, TAXBEN, run on 1999/2000 Family Resources Survey.

Perhaps in the light of this increase in the number of people for whom saving for retirement might not have been worthwhile, the Government embarked on additional reform: the introduction of the ‘savings credit’ into the MIG system (which will itself be relabelled again, this time as the ‘Pension Credit’) from 2003. Essentially this amounts to a reduction in the MIG withdrawal rate from 100% to 40% for income that individuals possess in excess of the basic-state pension.²⁵ Before we can analyse the incentive effect of the reform, we need first to recognise that for people with modest private pensions this is another benefit increase – those who were already on the MIG now see less of their benefit withdrawn; those who previously had

incomes that were just too high to qualify will now be eligible for the MIG. (In addition, as part of the Pension Credit reform the Government decided to introduce further increases in the generosity of council tax benefit and housing benefit. For more details, see Clark (2002)).

Three groups who are differentially affected by the Pension Credit reform can be identified. People expecting to retire on only the basic state pension (or a non-means tested benefit income below this) face no income effect (their benefit does not go up) and a positive substitution effect, so the financial incentive to save unambiguously improves. Those who would previously have retired on the MIG but with some private pension face a negative income effect but a positive substitution effect, and so see their incentive to save affected ambiguously. Abstracting from the changes to council tax and housing benefits, those whose private pensions would previously have been just sufficient to see them retire outside the MIG system now see both their benefit income and their effective marginal tax rate increase. For this group the incentive to save is unambiguously weakened. (In practice, the Government's decision to increase the income that people can have before they face council tax and housing benefit withdrawal means that the substitution effect is dependent on a family's council tax bill and rent).

We estimate that in the current pensioner income distribution, each of these groups contains approximately 1.5 million families, (see Clark, 2001, for more details). Whether the introduction of the relatively generous and tapered Pension

²⁵ The substitution effect might not be as large as a change from a 100% withdrawal rate to a 40% withdrawal rate because many low income pensioner households will also be affected by the

Credit will encourage or discourage saving will depend on which of the effects acting on these groups dominates, and will need to be investigated empirically.

Table 8 also shows how the net effect of reform on the marginal tax rates of today's pensioners. Compared with the 2002 system, the 2003 system certainly looks like an improvement in marginal rates. Although there is a large increase in those facing positive but moderate tax rates (50% or less) there is a big reduction in the numbers on an effective tax rate of 100%, and also the total number on 80%. There is, however, a significant growth in the number of individuals facing effective tax rates of 90-99%. This is because some of those moving from a 100% to a 40% benefit taper as a result of the Pension Credit reform will, post-reform, be exposed to the simultaneous withdrawal of council tax benefit and housing benefit. Individuals in this position will face an effective tax rate of 91% (assuming that they claim all of their benefit entitlement).²⁶

The contrast with the 1996/7 benefit system is a little less flattering. There is still a very large drop in the number facing pound-for pound withdrawal, and the total number facing rates above 80% will also have dropped. However, there will have been very significant growth in the numbers facing an effective tax rate at between 50% and 70%, so the total number facing effective tax rates in excess of 50% has increased as a result of Labour's reforms.

withdrawal of other means tested benefits such as housing benefit and council tax benefit.

²⁶ Withdrawal rate of 91% calculated as follows: [pension credit taper] plus [(rebates taper) times (income kept after pension credit taper)], i.e. $0.40 + 0.85 (1 - 0.40) = 0.4 + (0.85 \times 0.6) = 0.4 + 0.51 = 0.91$.

In the future, if the Government's policy on benefit indexation continues (that is, for the MIG to rise in line with earnings, but the basic state pension to rise only in line with prices) then the numbers on Pension Credit will very likely grow. Whereas around half of pensioners will initially be entitled, the proportion may well grow to represent a substantial majority in a few decades' time (Clark and Emmerson, 2002). In essence, this is because if the MIG rises with earnings each year, while the basic state pension is fixed in real terms, then (given that the MIG is already higher than the basic pension) the *gap* between the two must rise faster than earnings. The ratio between this gap and one's private pension determines whether one is eligible for Pension Credit. So, to avoid being on means-tested benefits, future generations of workers will have to obtain pension rights that represent a larger proportion of their earnings.

If today's workers, in planning to retire, are aware of this situation (or, perhaps more plausibly, if their financial advisors are so aware), then their incentive to save in a pension will be affected. In particular, there will be a trend over time for a growing number of individuals to expect a higher pension even if their savings are low (giving a negative income effect on the incentive to save) and also a reduction in the gain from saving each extra pound of pension rights (which also implies a negative substitution effect). In short, the Pension Credit together with existing policy on indexation implies that a very significant proportion of people planning to retire in the distant future face an unambiguously reduced financial incentive to save as a result of Labour's social security reform.²⁷

²⁷ Aside from its reforms for pensioners, the Government introduced a cost-saving reform to Incapacity Benefit (effective from April 2000) which reduced it in respect of any occupational pension that

3.2 Saving financial capital

Pensions aside, Labour has given considerable attention to tax-benefit policies affecting the incentive to save financial assets more generally. Part of the reform has been on the tax side – ISAs replaced TESSAs and PEPs. Because ISAs, unlike earlier savings products like TESSAs, did not make tax-relief conditional on holding one's assets for a particular length of time, they were designed in part to promote the acquisition of savings amongst lower-income individuals, who might put more of a premium on keeping their funds liquid.

Most of the lowest-income households, however, are outside the income tax system entirely, so this reform should have had little effect on them.²⁸ (Besides which, as a tax issue it is somewhat beyond our remit). Reforms to the taxation of saving have, therefore, been complemented with changes on the social security side. In particular, reforms are underway to the asset rules in means-tested benefits and, in addition, there are plans to introduce asset-based welfare policies to encourage saving amongst poorer households even more directly.

3.2.1 Capital rules in social security

claimants had. (See Brewer, Clark and Wakefield, 2002 for more details). This imposed a negative substitution effect, which should have reduced the financial incentive to acquire pension right. But as a benefit cut, it also exerts a positive income effect, leaving the overall effect on saving ambiguous.

²⁸ In practice there will have been an effect on the relatively small number of non-taxpayers who do hold shares. From April 1999 the refundable income tax credit on dividends was abolished for non-taxpayers; but the dividends earned on shares held within ISAs will attract it – even if they are owned by non-taxpayers.

The first step has been to reform the capital rules in social security – for some groups they have been made less punitive, and for some plans are afoot to abolish them entirely. Before 1997, means-tested benefits were tapered away sharply in respect of any financial capital that a family held. Income support and family credit were reduced by £1 for each £250 of capital a family had in excess of £3,000 (the ‘lower limit’); where total capital exceeded £8,000 (the ‘upper limit’) no benefits were payable. (The capital rules in council tax benefit and housing benefit worked in the same way apart from the upper limit was higher, at £16,000). These rules, then, treated £250 of capital as equivalent to a pound of income for the purpose of the means-test, equivalent to an annual interest rate of a little over 20%. Given that in all likelihood this would exceed the rate of return available to low-income individuals, they were effectively having benefits reduced in respect of their wealth as well as any investment income (see Baldini et al, 2002, for some justification of assessing safety-net benefits against wealth as well as income).

Labour’s first reform was for pensioners: in the MIG the lower capital limit was increased to £6,000 and the upper limit was increased to £12,000. It indicated that the next stage would be to abolish these limits entirely for the new tax credits and the Pension Credit, and replace them with investment income tests.²⁹ The new tax credits will indeed be introduced without any capital limits. In the end, however, the Government decided to retain modified capital rules in the case of the Pension Credit, citing the advantages in terms of simplicity of allowing a lower threshold below which all savings were ignored.³⁰ In practice, however, it may equally have been

²⁹ DSS (2000) for Pension Credit; Inland Revenue (2001) for new tax credits.

³⁰ DWP (2001)

affected by the consideration that a policy which abolished capital limits while means-testing all interest income would provide a strong incentive not to annuitise wealth, which would have run counter to the aim of promoting stakeholder pension take-up.³¹ Instead of abolishing the rules, therefore, the Government made them more generous: each £500 (instead of £250) of capital in excess of the lower limit will in the future be deemed equivalent to £1 of weekly income. The capital upper limit will be abolished entirely. (Although, rather surprisingly, it is being maintained for council tax and housing benefits for pensioners).

For those with assets exceeding the lower capital limit, the new capital rules should certainly help make holding financial capital more attractive.³² In theory, the abolition of similar rules in the new tax credits will have a similar effect. One must be careful, though, before concluding that this means that abolishing capital rules will encourage significant extra saving. Although significant numbers of households (in excess of 10 million) will fall within the remit of the benefits in question, few hold assets in excess of the current capital limits. Using FRS data we estimate that of the 4 million or so pensioner families that would be eligible for the Pension Credit, fewer than 300,000 have assets exceeding £12,000 in value. There might be more households with small amounts of assets below the current lower capital limits, but for these households the incentive to hold capital might actually be reduced if all income from assets is counted in the means-tests for the new benefits. It is also possible that the incentive effects of abolishing capital rules will have a more

³¹ See Clark (2001) for more on this.

³² In theory, however, there is an offsetting income effect – analogous to that we considered in the case of the Pension Credit. The reform of the capital rules makes expected income support receipt higher for any given level of financial capital. To this extent it makes people better off and so reduces the urgency with which they save.

significant impact on the type of assets that people hold rather than on the value of assets held.

The numbers of families with children receiving WFTC who report capital in excess of £3,000 is only 19,600. Families with children on income support will also see the capital test removed from their child support with the move over to the new tax credits, although the old means-test will continue to apply on that part of the benefit which is notionally paid in respect of the parents, which will continue to be channelled through income support. The small numbers of families with children who currently face any marginal consequence from the capital rules might well be expected to limit their behavioural significance.

3.2.2 Asset based welfare

The second step of welfare reform to promote saving, suggested in the 2001 election manifesto, was to provide positive incentives for low-income families to save. The principal proposed instrument is the Savings Gateway, a new form of savings account available to lower-income families (or adults in lower-income families). Account-holders will be encouraged to put money into their accounts by the fact that their contributions will be matched at some fixed rate (probably pound-for-pound) by the Government.³³

³³ A closely associated policy – which also falls under the heading of ‘asset-based welfare’ – is the Child Trust Fund. In practice this will not affect the rate of return for saving except for taxpayers, so we will not consider it here. For more on Labour’s asset-based welfare policies see Emmerson and Wakefield (2002).

There might be particular market failures which could justify this type of intervention. But it is important not to lose sight of the fact that the relatively low saving rate of poorer people is at least in part owing to the high premium that they put on current expenditure, something which seems rational given the constraint that a low income places on consumption. If saving amongst the poor were excessively subsidised, then incentives would be changed in a way which could encourage undesirable reductions in already low levels of consumption (see Emmerson and Wakefield, 2002, although note that the size of the target group is not yet known, nor is the Government committed to rolling out the policy nationally).³⁴

4. Incentives affecting family structure

Because means-tested benefits are assessed for the family as a whole, they affect the financial incentive to cohabit, or at least to inform the authorities about cohabitation. We consider what effect Labour's changes have had on incentives to cohabit, and then examine how support for children – and so the incentive to have children – has changed in the tax and benefit system.

4.1 Incentives to partner

Any system of joint assessment of incomes for couples potentially alters the financial incentives to start, or to admit to, cohabiting as it is not possible to have progressive

³⁴ Again, in theory there is a potential offsetting income (or wealth effect). This is especially likely to be a concern for people who already hold savings.

tax, joint assessment and neutrality to the presence of a partner.³⁵ Much of the political debate in the UK around joint assessment focuses on whether income taxation is individual. Before the introduction of individual taxation in the UK in 1990, the income of a woman in a couple was treated and taxed as if it were her husband's. Since that date, women have been taxed as individuals in their own right. There are, though, a range of ways of assessing couples' incomes in the tax and benefit system, and some of these are summarised in Table 9.

Table 9. A range of possible tax and benefit treatments of families

Tax type	Information required on partner	Example
Fully independent	None	Tax system for families without children since 1990
Independent with full transferable allowance	Whether married or have children	Married couple's allowance (1990–99)
Independent with selective transferable allowance	1. Whether a higher-rate taxpayer 2. Whether engaged in unpaid caring or with children under 11	Children's tax credit Conservatives' semi-transferable personal allowance for married couples
Fully joint	Income	Pre-1990 system for taxing couples All means-tested benefits Pension credit Working tax credit Child tax credit

Whether one is in favour of joint assessment depends partly on how couples share their income. Joint assessment is more appropriate if the combined income of a couple is more closely related to their actual standard of living than an individual's own income: if couples do not share their income, then this is less likely to be the case. Joint assessment also means that families have to provide government agencies

³⁵ In the UK tax and benefit system, cohabiting and married couples are treated identically, so we do not talk about the "marriage penalty", unlike the US literature (see, for example, Eissa and Hoynes,

with details of their relationships and be prepared to have these investigated, and that individuals in a couple have to share information on their incomes with each other: this could exacerbate any existing gender imbalances of power within a relationship. What matters for our purposes is that, depending on the precise way in which joint assessment is implemented, it can affect the incentives for two single people to cohabit, because benefit of poor person A is reduced in respect of rich partner B. In addition, in the specific case of UK means-tested benefits, entitlement is lower for two individuals when they cohabit (or declare that they are doing so) because benefit rates recognise that economies in living expenses arise from cohabitation.

The Government's view is that "a key objective of the new [tax credits system is] to target support to families on the basis of need. That means that entitlement to tax credits must take account of family, rather than individual, circumstances" (Inland Revenue, 2001b, para. 14). The alternative to using joint income would be to pay tax credits on the basis of individual income, which would be substantially more expensive than using joint incomes, because there are many individuals with low personal incomes with partners with high personal incomes who would benefit from a system based on individual income.

Labour's reforms will have affected the number of couples facing some form of joint income assessment. There are three main effects. First, all the new credits to be introduced by Labour will all be jointly assessed. Second, increasing existing means-tested benefits has extended joint assessment up the income distribution (although actual caseloads have risen by less than micro-simulations would suggest:

see Brewer, Clark and Wakefield, 2002). Third, the replacement of the married couple's allowance with the children's tax credit has removed a form of joint income assessment for couples without children, and altered the form for those with children. Looking forward, Brewer, Clark and Myck (2001) suggested that around 4 million couples with children might be entitled to the child tax credit, but around 1.3 million of these are already jointly assessed through the benefit system or WFTC, and most of the remainder are facing a form of joint income test in the children's tax credit. The working tax credit for people without children will represent an extension of joint assessment for the 175,000 couple families who might be eligible, slightly increasing the existing (small) financial disincentive to cohabit for low-income people without children.

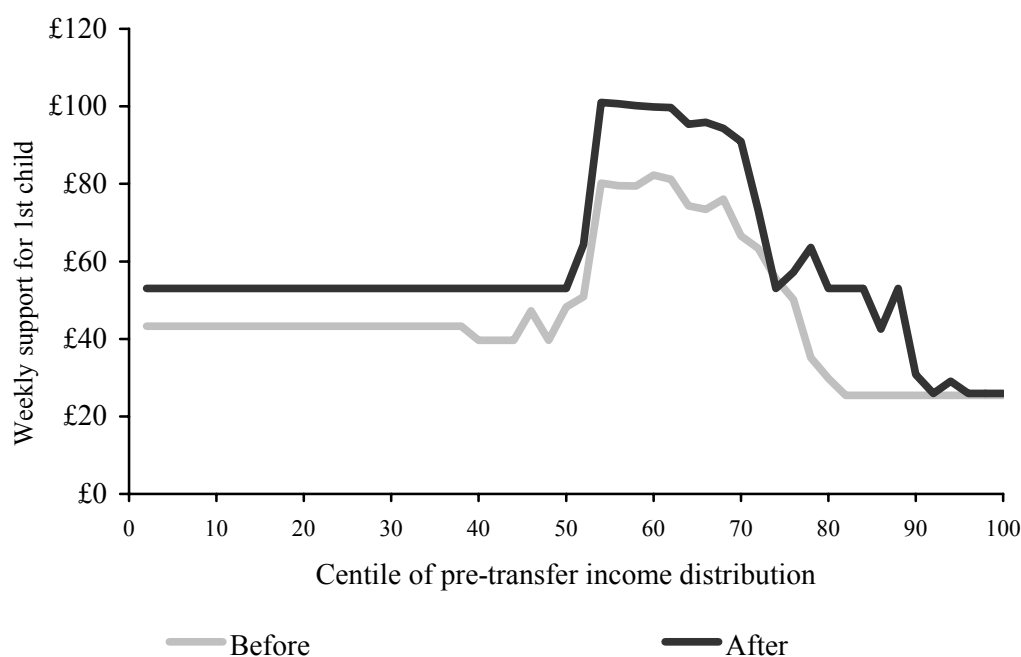
We do not attempt to quantify the impact of Labour's change on the financial incentive to (admitting to) cohabit, though. While it is possible to calculate how much more tax and less tax credits two hypothetical people would pay/receive if they cohabited, it is difficult to know how to apply such a methodology across the actual population, as has been our preference elsewhere in this paper.

4.2 Changing financial effects of having children

Any system that gives families additional money because they have children will alter the financial incentives to have children. However, in the UK, there is not enough natural variation either across individuals or over time to allow one to examine the impact of welfare and tax systems on fertility. As a simple starting point, and in line with our treatment of incentives to work, Figure 8 and Figure 9 estimate

the amount of tax and benefit income that families with children would lose if there were no extra allowances for families with children in the UK tax and benefit system (i.e. if child benefit, the new tax credits, WFTC/FC and the child allowances or deductions in benefits were set to zero or abolished.)³⁶. The amount of direct financial support that families receive from the government for their children has increased markedly in the UK since 1997, as a result of considerable increases in support for children for out-of-work families, increases in child benefit affecting all families, and the child tax credit (the Figures are just for the first child: similar results are true for families with more than one child).

Figure 8. Support for first child implicit in the UK transfer system, lone parents

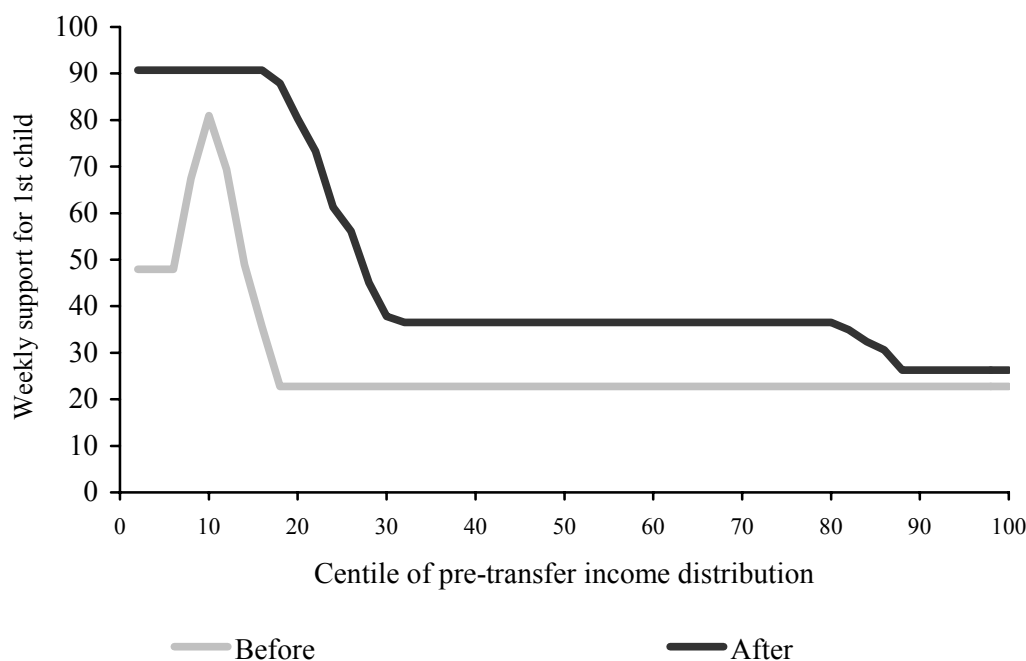


Source: authors' calculations from FRS 1997/8 and 2000/1 and TAXBEN.

³⁶ This uses a similar methodology to that used elsewhere in this paper: families are placed into cells depending on their position in the gross income distribution of families of that type, and the median child support is calculated for each cell. "Child support" is defined as the loss in disposable income if all explicit and implicit child-related transfers are set to zero.

Note: Figures grossed up using FRS weights. Pre-transfer income includes earned and non-earned income, but not benefit income. Income distribution for lone parents divided into 50 equal-sized cells.

Figure 9. Support for first child implicit in the UK transfer system, couples



Source: authors' calculations from FRS 1997/8 and 2000/1 and TAXBEN.

Note: Figures grossed up using FRS weights. Pre-transfer income includes earned and non-earned income, but not benefit income. Income distribution for lone parents divided into 50 equal-sized cells.

This might lead to a concern that families with children are being supported at the expense of those without children. Certainly the relative generosity of income support for families with and without children is very different from that implied by the official UK equivalence scale (see Banks and Brewer, 2001).

5. Conclusions

Labour has expanded means-testing in order to redistribute money to its preferred groups (pensioners and children: see Brewer, Clark and Wakefield, 2002) at minimal

cost, but has attempted to do so in a way which will avoid some of the incentive problems traditionally associated with social security system that tightly target support on the basis of financial need. The emphasis on work-focussed benefit administration (see Brewer, Clark and Wakefield, 2002) is one aspect of policy designed to ameliorate these problems. This paper, however, has focussed on the *structure* of benefits, and in this regard the main respect in which the Government has sought to offset the incentive problems of means-testing has been through increases in in-work support and reductions in the rate of benefit withdrawal. In particular, increased in-work support has been achieved principally by making first the WFTC and then the new tax credits far more generous than their predecessor, Family Credit. Reduced taper rates are evident in the new tax credits (which are withdrawn much more slowly than family credit was), and the Pension Credit (which means that income support for many pensioners recipients will now be withdrawn at 40% instead of 100%).

The effect on the incentive to enter work is mixed. In general, increased in-work support and targeted tax cuts mean primary earners now face more of an incentive to work than was previously the case. On the other hand, the extension of means-testing to many families who would previously have been too rich to qualify means that second earners in couples now face weaker incentives to enter work than previously. And the improvement in net incomes for primary earners means that individuals in couples need to work less to achieve a given level of joint income. Whether these changes are seen as beneficial will depend on the extent to which the Government cares about reducing the number of workless households as against increasing the total level of workforce participation.

The taper reductions have had a mixed effect on effective marginal tax rates across the population. In the case of pensioners the reforms seem to have reduced the numbers facing the very highest effective rates. On the other hand, lower effective tax rates (especially when combined with increases in maximum eligibility) mean higher incomes are required to exhaust benefit entitlement, so, unsurprisingly, the numbers facing moderately high effective tax rates have increased and look set to continue to increase in the future. In the case of working-age adults, the effect of the increasing numbers facing means-tested benefits or tax credits of some kind – and therefore benefit withdrawal – is quantitatively more important than the fact that the taper rate has been reduced, and so effective marginal tax rates have tended to increase. Some of the other implications for incentive associated with means-tested social security benefits – such as the incentive for low-income people to remain single, to have children or to deceive the benefit authorities about one’s cohabitation – have certainly been exacerbated by Labour’s reforms.

In summary, although Labour has sought to expand means-testing whilst ameliorating some of the disincentive effects it gives rise to, it has had only limited success. Labour has failed to find policies to offset some the effects we have identified – e.g. the income effect of higher means-tested pensions, and the growing cohabitation penalty in the benefit system – so its policy in this regard amounts to accepting these effects. In other respects, though, it has been more pro-active – the worst cases of the poverty trap have been alleviated through taper rate reductions, and increased in-work support has sometimes increased the cash gain from working. Such responses, however, will not abolish the trade-off between keeping incentives sharp

and increasing means-tested benefit rates, rather they merely transform the trade-off available. For example, lower taper rates mean a less acute poverty trap, but one which affects more people. But, of course, it is important not to lose sight of the fact that any negative effect of Labour's reforms on incentives might be justified in terms of other consequences of policy – for example, the ability to reduce poverty in a manner which contains the Government's liabilities.

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Appendix A: estimating wages for non-workers

To calculate RRs and ATRs for non-workers, wages were imputed from a wage equation. A (log) wage equation was estimated on employees in the FRS 1999/0, with regressors: age, age squared, age cubed, housing tenure, region, number of children, education. One equation was estimated for men, and four were estimated for women, according to whether or not they had a partner or children. Wages for non-workers were predicted straight from the coefficients, with no Heckman-style correction.³⁷ A normal random component error with standard deviation equal to the estimated standard deviation of the regression error was added to all wage predictions (this attempts to preserve the shape of the distribution of wages amongst the nonworkers). Full results are available on request from the authors.

³⁷ A Heckman-style wage equation was attempted, but performed poorly (except for lone mothers), and so was not pursued.