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# ***Child Support Reform: Some Analysis of the 1999 White Paper***

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## ***Abstract***

This paper uses a sample of lone mothers (and former lone mothers who are now repartnered) drawn from the 1997 Family Resources Survey to analyse the potential effects of reforming the UK system of child support. The main deficiency of the data is that non-resident fathers cannot be matched to the mothers in the data, and this is overcome by exploiting information from another dataset which gives the joint distribution of the characteristics of separated parents. The effects of reforming the child support system are simulated for the amount of maintenance liabilities, the amount paid and the net incomes of households containing mothers-with-care and of households containing non-resident fathers. The likely effects of the reform are simulated at various levels of compliance. The analysis highlights the need for further research into the incentive effects of child support on individual behaviour.

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## **I. INTRODUCTION**

Child support reform has attracted considerable attention in the UK, the US and elsewhere in recent years. The original motivation for reform in both the UK and the US came from the growing number of lone parents and their increasing

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reliance on welfare payments. In spite of the importance of the issue, there is little research that analyses the impact of child support reform on the level of child support paid or on other aspects of behaviour. In the US, research reported in Garfinkel et al. (1999) looks at the effects of child support on a variety of aspects of the behaviour of non-resident fathers but has little to say about the simple distributional effects of reforms.<sup>1</sup> US Census Bureau (1991), Bianchi, Subaiya and Khan (1997) and Bartfeld (1998) provide some analyses of the effects of child support payments on net incomes. In the UK, Bingley, Lanot, Symons and Walker (1995), Bingley, Symons and Walker (1995) and Preston and Walker (1999) investigate the impact that child support has on the labour supply behaviour of lone mothers through its effect on the budget constraints that they face but are silent on child support behaviour itself.

Widespread discontent with the way in which earlier UK reforms in 1993 have worked has renewed pressure for further change, and the government's proposals are now detailed in a recent White Paper (Department of Social Security, 1999). The present paper is a first step towards analysing the effects of the proposed reforms against four central objectives: first, to raise the degree of compliance of child support payments with the level of assessed liability; second, to shift some of the burden of support of the children of lone mothers from benefit payments to the non-resident fathers; third, to reduce the work disincentives implicit in the current child support formula and the associated child support disregards in the benefit system; finally, and as a consequence of the first three goals, to lower the incidence of poverty among children. There are also important questions concerning the impact on other aspects of behaviour, such as fertility and partnership decisions, which are not directly addressed here.<sup>2</sup>

The reform itself is complex and the effects on household net incomes reflect the interactions between projected changes in child support payments and the welfare system. This analysis is based on detailed modelling of the changes on recent sample survey data that are reasonably representative of the population.<sup>3</sup> The principal data source is a sample of lone mothers (and former lone mothers who are now repartnered) drawn from the 1997 Family Resources Survey.<sup>4</sup> The

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<sup>1</sup>See also Hu (1999) for an analysis of the effects of child support on work incentives in the US. Corden (1999) provides an outline comparison of child support systems across European countries.

<sup>2</sup>These issues will be addressed in future work that is being funded directly by the Nuffield Foundation.

<sup>3</sup>The White Paper contains some predictions that have been obtained from applying the reforms to administrative Child Support Agency (CSA) data. While these administrative data provide information on the non-resident father that is not available in the Family Resources Survey (FRS) data used here, the cases dealt with by the CSA are not a random sample of all lone parents. For example, the CSA deals with all those cases where the parent-with-care is on income support (or housing benefit or family credit) and those not on income support who ask for the CSA's assistance. Thus it seems likely that the typical CSA client will have a substantially lower level of child support entitlement than the average individual eligible for child support.

<sup>4</sup>The number of lone fathers in the data who have custody of children is too small to facilitate reliable statistical analysis.

main deficiency of the data is that it is not possible to match non-resident fathers to the mothers in the data, but this is overcome by exploiting information from another survey on the joint distribution of the characteristics of separated parents. The analysis also allows for other important changes that are likely to affect the impact of the reform, including the recent imposition of a minimum wage and the extension of the main in-work transfer programme (family credit, now known as the working families' tax credit).

We simulate the effects of the child support reforms on the size of maintenance liabilities, the amount paid and the net incomes of both the household containing the mother-with-care and the household containing the non-resident father. Since the reform specifically aims to promote compliance, the likely effects of changes in liability on compliance are examined. Another mechanism for promoting compliance is to be a disregard for child support in the income support system, which will give the parent-with-care a positive financial incentive to co-operate with the Child Support Agency (CSA). The downside of such a disregard is that it may have adverse effects on work incentives. Thus, in addition to looking at the impact on net incomes, the effect of the reform on work incentives is examined using a simple labour supply model.

The main conclusion is that compliance effects are likely to be very important. On average, child support liabilities are lower under the proposed reforms and actual payments will decline unless there is a considerable offsetting rise in compliance. But the effects of the reform on child poverty are beneficial. This result is driven by the removal in the reforms of any exemptions to making a minimum payment and the introduction of an income support disregard which will allow the majority of mothers-with-care (those receiving income support) to see some gain in net income from child support payments.

The plan for the remainder of the paper is as follows. The main features of the reform are outlined in Section II. Section III examines the motives behind the reform and argues that the effects are theoretically ambiguous and hence demand empirical investigation. We review the existing empirical work from the US and the UK in Section IV. In Section V, we explain the nature of the data that we use in Section VI to model compliance behaviour in the UK. In Section VII, we exploit our compliance modelling and earlier research on the effect of welfare on work incentives for single mothers to simulate the likely effects of the reform options on net incomes, child poverty and labour supply. Section VIII concludes by emphasising the importance of compliance in evaluating the effectiveness of the reform.

## **II. THE REFORM**

The contrast with the US is interesting. US states have always been able to design their own specific child support mechanisms and states have divided into two broad camps. In the *income-shares* camp, child support is a proportion of the

combined incomes of both natural parents. The current UK system broadly falls into this category, with the liability of the non-resident parent prorated between the parents according to each share of their combined incomes. In contrast, the proposed reformed system falls into the *percent-of-income* camp, where child support is a percentage of the non-resident parent's income, with the percentage varying with the number of children.

The existing system of child support is described in some detail in Child Poverty Action Group (1999) and the notation used there is used here to facilitate comparison between our summary exposition and the fine details. The steps in the formula can be compressed into the following single relationship, which is broadly based around the 'proposed amount',  $P$ , for the parent-with-care and non-resident parent:

$$P = 0.5 \times F \quad \text{if } F + G < 2A$$

$$P = c \times F + (1 - 2 \times c) \times A \times (F/[F+G]) \quad \text{if } F + G \geq 2A$$

where:  $F = D - B$  ( $= 0$  if non-resident parent or new partner on income support (IS) or jobseeker's allowance (JSA)) where  $D$  = net income for the non-resident parent and  $B$  = exempt income for the non-resident parent;  $G = E - C$  ( $= 0$  if parent-with-care or new partner on IS, JSA, disabled worker's allowance (DWA) or the working families' tax credit (WFTC)) where  $E$  = net income for the parent-with-care and  $C$  = exempt income for the parent-with-care;  $A$  = maintenance requirement; and  $c = 0.15, 0.20$  and  $0.25$  for one, two and three or more qualifying children respectively. Since net income is set to zero for the listed benefit recipients and also excludes several other types of benefits, it mainly captures net earnings and investment income.<sup>5</sup> Exempt income includes an allowance for supporting qualifying and new children<sup>6</sup> in the household, but this is reduced if a new partner has sufficient income to help support any new children. Exempt income also includes housing costs and travel-to-work costs. The maintenance requirement depends on the number and ages of the qualifying children. Note that non-resident parents on IS or JSA have a zero proposed amount.

In addition, the final liability,  $L$ , is subject to three separate maxima, partly to ensure that non-resident parents are left with adequate resources to support themselves and their families:

$$L = \max \{P, J, 0.3 \times D, 0.85 \times (R - V)\}$$

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<sup>5</sup>It also includes the income of own children (qualifying or new).

<sup>6</sup>Qualifying children are the natural children of the separated parents. New children are defined as children of one of the parents and a new partner. Stepchildren are defined as natural children only of the new partner of one of the parents.

where:  $J$  = maximum dependent on modified values of  $A$ ,  $F$  and  $G$ ;  $R$  = family income for the non-resident parent; and  $V$  = protected income for the non-resident-parent family. The family income for the non-resident parent includes all income except certain benefits for the non-resident parent, any new partner and any dependent children. The protected income includes an allowance for family size and ages of children, housing costs, net council tax and travel-to-work costs. There is also a minimum liability of roughly 10 per cent of the current IS rate for a single person, which currently stands at £5.20 a week. Those exempt from this minimum have a zero liability if  $L$  is below this minimum.<sup>7</sup>

To summarise the current system, liability depends primarily on the net income of both natural parents. Exemptions from this income include allowances for new children, which may be partially offset if the new partner has sufficiently high income. For the non-resident parent, the presence of stepchildren and the income of a new partner also affect the maximum and minimum levels of liability.

The relationship between the liability and non-resident-parent income has three steps. At low levels of income, the liability is fixed at the minimum or at zero depending upon whether the non-resident parent is exempt. Past the point where income is sufficiently high for  $L$  to exceed £5.20, the liability rises at a rate of 50 per cent with any additional income. If income is higher than the point where the children's needs are deemed to have been met ( $F+G \geq 2A$ ), the liability rises at a lower rate with income to allow the children to share in the good fortune of a high-income non-resident parent. The income of the parent-with-care affects the liability only in the third of these steps and in determining the point where the third step begins. The higher the income of the parent-with-care, the lower the amount of non-resident-parent income at which the third step begins and the slower the increase in the liability with non-resident-parent income in the step. Hence, increases in parent-with-care income reduce the liability but in a non-linear fashion.<sup>8</sup> The number of qualifying children influences the liability both directly in the third step for non-resident-parent income and indirectly by increasing the exempt income for the parent-with-care. Finally, a rise in the non-resident parent's housing or travel-to-work costs reduces the liability through its impact on exempt income. Similarly, a rise in the parent-with-care's housing or travel-to-work costs increases the liability. Hence, there are incentives to increase spending on either of these items.

In contrast, the liability calculation proposed in the reform is simply a proportion of the non-resident parent's earnings:

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<sup>7</sup>Exemptions include those non-resident parents with any dependent children in their new family, those receiving certain disability benefits, those under the age of 16, those under the age of 19 and in full-time education, and those with net income below the minimum.

<sup>8</sup>In addition, the higher the parent-with-care income, the lower the maximum liability level incorporated in  $J$ .

$$\begin{aligned}
 L &= d \times N && \text{if } N \geq \text{£}200 \\
 L &= e \times N && \text{if } \text{£}100 < N < \text{£}200 \\
 L &= \text{£}5 && \text{if } N \leq \text{£}100
 \end{aligned}$$

where:  $N$  = net earnings of non-resident parent if there are no new children or stepchildren,  $0.85 \times$ (net earnings of non-resident parent) if there is one new child or stepchild,  $0.80 \times$ (net earnings of non-resident parent) if there are two new children or stepchildren, and  $0.75 \times$ (net earnings of non-resident parent) if there are three or more new children or stepchildren; and  $d = 0.15, 0.20$  and  $0.25$  for one, two and three or more qualifying children respectively. The rate  $e$  gradually rises over the middle income band, from  $0.05$  at  $\text{£}100$  to equal the rate  $d$  at  $\text{£}200$ , which generates a marginal rate for each additional pound between  $\text{£}100$  and  $\text{£}200$  of  $0.25, 0.35$  or  $0.45$  for one, two or three (or more) qualifying children. There are no exemptions to the  $\text{£}5$  minimum. The net earnings of the non-resident parent include WFTC payments.

In summary, under the proposed reformed system, the liability depends only on the non-resident parent's earnings, the number of qualifying children and the number of the non-resident parent's new children and stepchildren with a new partner. Any other information about the parent-with-care is ignored, as is any information about any new partner of the non-resident parent. As in the current system, the relationship between liability and non-resident-parent income has three steps. At low levels of earnings, the liability is constant at the minimum  $\text{£}5$  payment. In the second step, it increases at a rate of 25 per cent, 35 per cent or 45 per cent with additional earnings if there are one, two or three (or more) qualifying children respectively.<sup>9</sup> Above  $\text{£}200$  of net earnings, the liability rises at rates of 15 per cent, 20 per cent and 25 per cent respectively. The reduction in the percentage for second families allows the non-resident parent to give marginally more support to new children and stepchildren. For example, with one qualifying child and one new child, 15 per cent of non-resident-parent earnings is allowed for the new child and 12.75 per cent ( $= 0.85 \times 15$  per cent) for the qualifying child.<sup>10</sup> Note that the formula makes no distinction between natural new children and stepchildren in the second family, whereas the current formula only allows for new children, presumably on the grounds that stepchildren should be receiving support from *their* non-resident parent.<sup>11</sup>

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<sup>9</sup>These are the marginal rates within the second step bounds, but the average liability rate gradually rises from 5 per cent at  $\text{£}100$  to the respective 15 per cent, 20 per cent or 25 per cent at  $\text{£}200$  of net earnings.

<sup>10</sup>This is not to say that the non-resident parent may not contribute more or less than the designated percentage to the support of the new child.

<sup>11</sup>Thus there is a 'double dividend' for stepchildren in the proposed reforms. Not only do the reforms benefit second families with stepchildren by allowing this new reduction in liability, but also the increased compliance and the removal of the parent-with-care income from the liability calculation should raise the child support received for them by the family.

The way in which child support interacts with the tax and welfare system is also important. A second major part of the reform deals with the benefit disregards for receipt of child support. The White Paper proposes the introduction of a £10 disregard for income support and also proposes increasing the current family credit disregard of £15 such that the working families' tax credit will disregard all child support payments, no matter how large. The White Paper indicates no change to the current £15 disregard in the assessment for housing benefit.

There is no change proposed to the current tax treatment of child support receipts and payments. Receipts are free from National Insurance and tax liability. Child support payments qualify for tax relief for the non-resident parent if the parents are or were married to each other. The tax relief is limited to the size of the married couple's allowance and currently operates at a rate of relief of 10 per cent. The relief ceases if the parent-with-care remarries.

### **III. THE OBJECTIVES OF THE REFORM**

One of the major objectives of the reform is to raise the degree of compliance of child support payments closer to the level of assessed liability. The White Paper suggests that 'the new simpler rules, tougher sanctions and better enforcement of maintenance will mean that at least 80% of maintenance due will be paid under the new scheme'.<sup>12</sup>

The popular conception of the proposed reforms is that the present system deters compliance because liability is determined by a complicated function of both parents' incomes and many other factors such as housing costs, the number of children of the partnership and any income of the non-resident parent's new partner. The reform is portrayed as replacing this complicated relationship by a simple linear function of the non-resident parent's income and the number of children in both families. In fact, the reform also makes the relationship between liability and non-resident-parent income non-linear, but the new formula requires less information from both parents and involves only two mathematical operations.<sup>13</sup> Thus it will be easier for the parties concerned to understand how the liability has been determined and easier for the CSA to determine the information required to make the computation. In addition, the relative stability of the factors entering the assessment reduces the opportunities for parents to request a reassessment of the liability due to changed circumstances.<sup>14</sup>

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<sup>12</sup>Chapter 2, paragraph 24.

<sup>13</sup>The White Paper proposes that tables will be made widely available showing the liability for any given band of non-resident-parent income, dependent upon the number of qualifying children and the number of children in the non-resident parent's second family.

<sup>14</sup>Indeed, the only apparent grounds for a reassessment are if either the number of children changes or there is a variation in the non-resident parent's earnings of more than 5 per cent.

While the White Paper suggests that this simplified formula will promote compliance, it is by no means clear why this should be so.<sup>15</sup> On the one hand, less information is required, but, on the other hand, the liabilities that are generated may be less closely related to the needs of the children and the resources available to them. For example, it seems likely that if the income of the parent-with-care is not sufficient to meet the needs of the children, this would be a motivation for compliance, but this parent's income no longer enters the formula.

It has also been suggested that lower levels of liability will enhance compliance, possibly because lower liabilities will be perceived as fairer by non-resident parents.

The proposed introduction of a £10 disregard for child support into IS assessments and the raising of the WFTC disregard from £15 to a full disregard are also both intended to promote compliance. The enhanced disregards give parents-with-care receiving IS or WFTC a greater financial reward for co-operating with the CSA (those on IS without a child support agreement already face a £20 benefit penalty for failing to co-operate without good grounds). In addition, a non-resident parent whose corresponding parent-with-care is on either benefit may be encouraged to pay (or pay more) since it increases the income available to their children more than under the existing system.<sup>16</sup>

A second objective of the reform is to shift some of the burden of supporting the children of lone (and some remarried) mothers from benefit payments to the non-resident fathers, but the potential impact of the reforms on government spending on benefit payments is ambiguous. Although any new child support payment above the disregard level reduces government spending on welfare payments, the higher disregards themselves will increase benefit spending for any already-existing payments below that level.

A third objective of the reforms is to reduce some of the work disincentives implicit in the current child support formula and the benefit disregards for child support. Work incentives are improved for non-resident parents through the lowering of the child support taper on their earnings (although the 'income effect' arising from their lower liabilities could lead to lower hours of work), while the return to working is also improved for the non-resident parent's new partner since the partner's earnings would no longer enter the formula. The incentives for the parent-with-care are also improved through the removal of their income from consideration by the formula.

The rationale for the current child support disregards in the WFTC and housing benefit programmes, but not in IS, is a work incentive one: by making

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<sup>15</sup>The Australian child support system is similar in structure to the existing UK system in that it is of the income-shares type, and it achieves a compliance rate of more than 80 per cent. See <http://www.csa.gov.au/scheme/FF4.DOC>.

<sup>16</sup>However, the enhanced disregards may increase formal child support payments at the cost of reducing informal payments and payments-in-kind.



child support effectively an in-work transfer, the current system aims to promote the incentive to work. It has been explicitly recognised that the introduction of a disregard for IS may be a considerable discouragement for working for parents-with-care and the raising of the WFTC disregard is specifically aimed to counterbalance this negative impact. However, the net impact can only be judged using empirical evidence.

Finally, and as a consequence of the first three goals, it is hoped that the reforms will ensure greater financial resources for those children most in need. Whether the proposed reforms will help to reduce the incidence of poverty among children depends upon a complicated interaction between changes in liabilities, compliance and working behaviour. Lower liabilities for non-resident parents with second families may help in protecting the children in these second families from poverty. On the other hand, children living with parents-with-care may suffer from the lower levels of liabilities, although the £10 IS disregard and improved work incentives may help, in particular, the poorest parents-with-care. The White Paper itself contains very few figures and rather crudely points out that the average amount actually paid under the existing system with its low compliance rate would be close to the average amount that would be expected to be paid under the new system if compliance increased to 80 per cent. However, the effects of the proposed reforms on child support liabilities and on the net incomes of the caring and non-resident parents have not been investigated at all.

There are no clear-cut, a priori, conclusions on the potential outcomes of the reforms as there are forces operating in opposing directions. Empirical evidence on the relative sizes of these counterbalancing pressures is required to assess the likely effects of the changes.

#### **IV. EXISTING EVIDENCE**

Since the 1996 welfare reforms in the US, some states have chosen systems similar to the current UK system while others have chosen schemes similar to those proposed in the reforms. These differences ought to be informative about the likely effects of the changes, but it is too early for any quantitative analyses of the effects of the US changes. Some analysis of child support based on data that pre-date the Clinton welfare reform can be found in US Census Bureau (1991), Bianchi, Subaiya and Khan (1997) and Bartfeld (1998), who all look at dissolved partnerships in US Survey of Incomes and Program Participation (SIPP) data.

Existing empirical research on the determinants of compliance provides only a vague indication of the likely impact of different aspects of the reform. There is some evidence that greater enforcement resources do significantly improve compliance. For example, Freeman and Waldfogel (1998) estimate that, for every additional \$100 per non-resident father that is spent per annum on enforcement activity, there is a 1 per cent rise in the proportion of never-married

families receiving child support. However, while statistically significant, this is not a very large effect and it is not clear that enforcement is effective in a cost-benefit sense. In addition, the fairness of the system may also be important. Lin (1997) uses US data that record the non-resident fathers' perceptions of the fairness of the child support award and finds that perceived unfairness has a strong and statistically significant negative correlation with compliance.<sup>17</sup> The proposed IS disregard for the UK is very similar to the \$12.50 (approximately £8) weekly disregard that was a feature of the AFDC system (the US equivalent to IS for lone mothers) funded by the US federal government from 1984 to 1996. Since 1996, each state has had the freedom to continue to fund this exemption but many have not, despite the imposition of federal mandated targets to increase child support compliance. There have also been a number of US studies<sup>18</sup> that have investigated the determinants of compliance, but none has identified a statistically significant effect of the disregard on compliance.

Evidence on the effectiveness of the existing child support system in the UK in promoting work incentives can be found in Bingley, Lanot, Symons and Walker (1995), Bingley, Symons and Walker (1995) and Preston and Walker (1999). In this paper, the existing estimates of the determinants of labour supply behaviour from that last paper are used to simulate the impact of the proposed reforms on the employment choices of mothers-with-care.

The evidence from the US on the potential for child support to reduce poverty amongst children is fairly unambiguous. Indeed, a particular emphasis in the US research has been the positive role for child support in lifting children in lone-parent-headed households out of poverty, while not being sufficiently onerous to drop children in second families into poverty. For example, US Census Bureau (1991) finds that the mean ratio of income to household 'needs' fell from 2.43 before the father's departure to 1.79 just four months after, while the share of children in poverty increases from 18.5 per cent to 35.5 per cent. Other US work, by Meyer and Hu (1997) and Meyer (1995), finds that child support plays an important role in lifting children in lone-parent-headed households out of poverty (5 per cent fewer children in poverty when one allows for child support transfers) and had little effect on the poverty rates of children in second families headed by a non-resident father. Similar findings are given by Bartfeld (1998), who looks at the ratio of income to poverty level and finds that it rose from 3.04 to 3.31 for separating fathers and fell from 3.04 to 1.63 for separating mothers. Thus separation resulted in a rise in living standards for fathers and a dramatic fall for mothers, on average. However, it is not clear whether the underlying

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<sup>17</sup>Lin interprets his evidence as implying that fairness would promote compliance. However, perceptions of fairness are likely to be based on characteristics, such as altruistic attitudes, that themselves are correlated with compliance. Thus it is unclear that a causal connection can be inferred from this paper.

<sup>18</sup>Quantitative results are available in Garfinkel and Robins (1994), Meyer (1993), Beron (1990, 1988a and 1988b), Garfinkel et al. (1999), Garfinkel, Robins, Wong and Mayer (1999), Garfinkel and Oellierich (1989), Lin (1997) and Freeman and Waldfogel (1998).

relationship between the economic resources available to the parent-with-care and those available to the non-resident parent driving these conclusions for the US can also be readily applied to the case of the UK. Moreover, the evidence says nothing about whether a child support system of the type proposed in the UK reforms is better or worse in redistributing the resources than the current system.

## **V. DATA**

Data of the type required for an analysis of the proposed child support reforms are not readily available. Unlike the US, where the Survey of Incomes and Program Participation (SIPP) contains information on non-resident parents, the UK has no dataset that combines information on non-resident parents and parents-with-care. The existing child support liability formula requires extensive income information for the households of both parents, as well as information on family structures, housing costs and other factors. In addition, in order to compute the net incomes of both parents, information that is relevant to the assessment of welfare payments is required. This includes data on childcare costs (for family credit / WFTC and housing benefit) and hours of work (for IS and family credit / WFTC). Moreover, since any separated parents may apply to the CSA for a child support agreement, it is important to assess the effects of reform for the entire potential population rather than just for those who are obliged to use the CSA because they are in receipt of welfare benefits.

It is necessary therefore to combine information from two surveys. The Family Resources Survey (FRS) is a continuous survey that has been in the field since October 1992. It has a large sample size of approximately 25,000 households each year and a response rate of approximately 70 per cent. Data on 1,904 mothers-with-care (including lone mothers and those who have repartnered) were available for 1997, this being the only survey year that identifies stepchildren. While all the appropriate data exist in this latest survey, it is not possible to identify non-resident parents in the data (except for those who are observed to pay child support, which provides only a censored view of non-resident parents). Moreover, it is important that mothers-with-care are matched appropriately with different types of non-resident fathers, for there are likely to be strong correlations in terms of such factors as their likelihood of repartnering, work behaviour, wage levels and housing costs.<sup>19</sup>

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<sup>19</sup>To the best of our knowledge, none of the major population surveys provides direct information on parents-with-care and matched non-resident parents or permits an accurate identification of non-resident parents even independently of the corresponding parent-with-care. Although the British Household Panel Survey (BHPS) collects information on fertility histories for men and women, Rendall et al. (1999) investigate the extent to which BHPS fathers deny their paternity post-separation and find it to be high.

TABLE 1  
**BHPS and FRS Sample Characteristics**

	Mothers-with-care		Non-resident fathers	
	<i>BHPS</i>	<i>FRS</i>	<i>BHPS</i>	<i>FRS</i>
<i>Percentage with:</i>				
one qualifying child	39.7	49.1		
two qualifying children	43.0	35.0		
three or more qualifying children	17.3	15.9		
<i>Percentage with youngest qualifying child:</i>				
aged less than 5	25.3	34.7		
aged 5 to 10	47.7	37.0		
aged over 10	27.0	28.3		
Average age	31.9	33.9	34.9	36.3
<i>Percentage left education:</i>				
aged 16 or less	50.9	71.0		
aged 17 to 18	30.3	19.7		
aged over 18	18.8	9.4		
Percentage in London and south-east	31.1	31.7		
<i>Percentage in housing type:</i>				
owned or mortgaged	47.6	32.0	54.6	50.3
local authority or housing association rented	38.6	54.4	18.2	22.4
private rented	13.8	13.6	27.3	27.3
Percentage with partner	19.3	14.0	31.0	31.8
Percentage with stepchildren or new children			18.3	20.8
Percentage with stepchildren			14.7	16.5
Percentage with new children			4.7	5.4
Percentage working	48.5	45.2	82.0	79.3
Percentage of partners working	71.1	81.6	52.7	51.1
<i>Average hours:</i>				
if working	25.8	27.8	47.7	46.9
for working partner	46.2	47.3	35.1	35.1
<i>If working:</i>				
average wage	6.7	6.1	9.0	9.0
average wage with minimum	6.9	6.2	9.1	9.2
average estimated wage		6.5		
average estimated wage with minimum		6.5		
<i>If partner working:</i>				
average wage	7.3	8.8	6.7	5.7
average wage with minimum	7.3	8.8	6.8	6.0
Sample size	300	1,904	300	1,904

Note: Stepchildren are children of the non-resident father's new partner but not of the non-resident father, while new children are children of the non-resident father and his new partner.

In order to estimate the likely characteristics of the non-resident fathers corresponding to each of the observed mothers-with-care in the FRS, a second survey — the British Household Panel Survey (BHPS) — was exploited. The BHPS originally surveyed approximately 5,000 households in 1991. Being a panel that follows all adults interviewed in this first wave, the BHPS implicitly provides continuing information on both parents who separate some time after the first wave. The drawback of this data source is that it provides a very small sample size (only 300 observations) and it may not be typical of parents not living together in the sense that it only contains those who have recently been married or cohabited. It therefore excludes lone mothers who have never had a cohabiting relationship. One immediate consequence is that the proportion of non-resident fathers estimated to have second families is much lower than estimates from other sources, and non-resident fathers with second families were analysed as a separate group for this reason.

However, there is little information from other sources to check the extent to which these deficiencies induce bias in the analysis. It seems likely that these data will give a reasonably accurate view of the correlations between the necessary information on the parents, especially when the relationships observed in the BHPS are used to estimate the likely characteristics of non-resident fathers for the mothers-with-care in the larger and more representative FRS sample.

Thus the BHPS data are exploited to identify the correlations between the characteristics of mothers-with-care in the FRS and their corresponding non-resident fathers. For example, the correlation between the incomes of non-resident fathers and other characteristics such as age and education, working behaviour and the incomes of the ex-partners can be estimated. Similarly, the relationship between the non-resident fathers' housing costs and the extent to which they have repartnered or have new children or stepchildren are estimated. These estimated characteristics also allow for the observed random variation in the non-resident-father variables. That is, we adjust the simulated distribution of these non-resident-father characteristics to ensure that the variance in those characteristics is retained in our simulated data. Such simulation of the characteristics of non-resident fathers to match the lone mothers is common practice in the US analyses, with the exception of Bartfeld (1998), who uses the SIPP panel which, like the BHPS, allows the partners to be followed after partnership dissolution.

Some summary statistics for both the FRS and the BHPS data are presented in Table 1. The first three columns of figures show the observed data, while the final column presents the results of the simulated characteristics of non-resident fathers in the FRS data. There are differences in the characteristics of the mothers-with-care between the two samples, although the basic employment and wage statistics are very similar. For example, there are more and older qualifying children in the BHPS than in the FRS, while the mothers are slightly younger and more highly educated. These differences result in different mean

characteristics for the non-resident fathers across the two surveys: for example, BHPS fathers are younger and are more likely to be owner-occupiers.

## VI. COMPLIANCE

The BHPS data are also used to model compliance by estimating the relationship between individual compliance (defined as the ratio of child support paid to the child support liability), the level of liability and the characteristics of the mother-with-care (and the estimated characteristics of the non-resident father). The definition of compliance is somewhat wider than that used in the White Paper as it reflects the difference between the sum of both formal and informal financial transfers made from the non-resident father to the children relative to the amount that they would be liable to pay under the CSA formula. The sample size is 199 and consists of all the observations on separated couples who had positive child support liabilities in the BHPS pooled over all available years since 1992.<sup>20</sup> The compliance estimation contained two stages. First, the probability of paying any child support at all was modelled using a logit framework. Second, an ordinary least squares (OLS) regression was used to estimate compliance, conditional on paying something.

The results are presented in Table 2. The logit results that determine the probability of paying anything are rather imprecise with the exception that the child support liability is positively correlated with compliance. Note that this is at odds with the hopes expressed in the White Paper that lower liabilities encourage compliance. In addition, younger non-resident fathers, and those not in work, are less likely to pay any child support than older and working non-resident fathers. The effect of the liability on the level of compliance conditional on paying something, however, is not statistically significant and is small. For the level of compliance, the ages of both the mother-with-care and the non-resident father are important, as is whether the mother-with-care is working or whether the mother-with-care has a new partner. It is noticeable that none of the variables for the non-resident father's second family is significant in the compliance estimation, although this may be due to the small number of such second families in the sample.

These results were used to estimate the likely 'current' compliance rates, defined as the ratio of actual payment in the FRS to the calculated entitlement, facing the parents-with-care.<sup>21</sup> A comparison of these current compliance rates (conditional on those paying anything) for the BHPS and the FRS data is shown in Figure 1. In the BHPS sample, 49.6 per cent of those with a positive liability

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<sup>20</sup>Similar estimation has been done by Beron (1990) in the US using similar methods.

<sup>21</sup>The compliance estimation requires a liability level to be calculated for the FRS data. The liability level used is that calculated for the baseline scenario for the current child support system described in Section VII.

TABLE 2  
Compliance Estimation using BHPS Sample

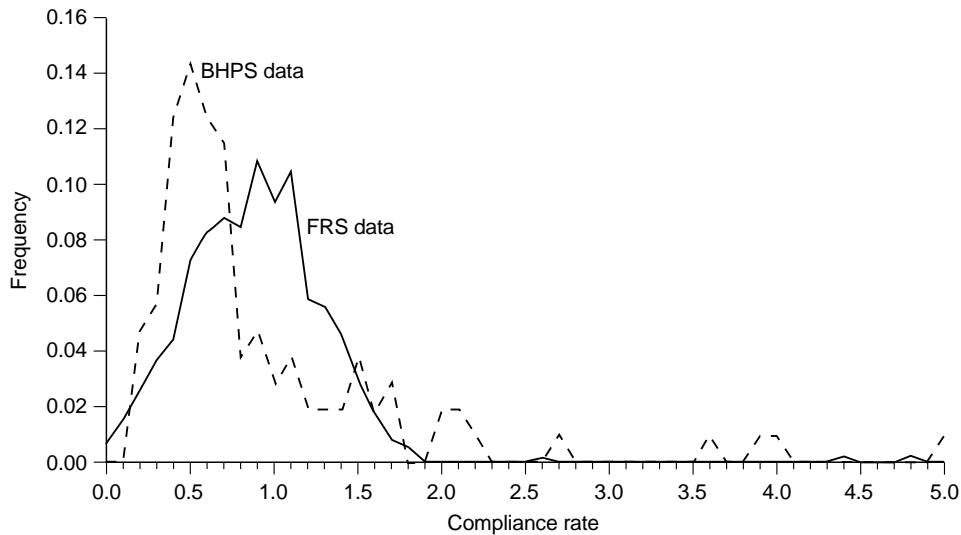
	Logit probability model		OLS for proportion paid	
	<i>Coefficient</i>	<i>Standard error</i>	<i>Coefficient</i>	<i>Standard error</i>
Child support liability (£ p.w.)	0.027	0.007	-0.004	0.003
<i>No. of qualifying children:</i>				
one	0.657	0.612	-0.071	0.253
two	-0.623	0.552	0.042	0.247
three or more	—	—	—	—
<i>Age of youngest child:</i>				
less than 5	-0.053	0.733	0.155	0.341
5 to 10	0.291	0.518	0.041	0.238
over 10	—	—	—	—
<i>MWC age:</i>				
under 30	0.133	0.659	-0.670	0.306
30 to 34	0.103	0.491	-0.340	0.234
over 34	—	—	—	—
<i>MWC age left education:</i>				
under 17	0.277	0.570	-0.018	0.267
17 to 18	0.384	0.602	0.216	0.260
over 18	—	—	—	—
MWC partner	0.472	0.487	-0.442	0.185
MWC work	0.431	0.395	0.327	0.173
<i>MWC housing type:</i>				
owned or mortgaged	0.155	0.661	-0.414	0.354
LA or HA rented	0.191	0.689	-0.545	0.375
private rented	—	—	—	—
MWC in south-east or London	-0.499	0.420	0.353	0.193
<i>NRF age:</i>				
under 30	-1.334	0.738	0.362	0.364
30 to 34	-0.119	0.544	0.500	0.252
over 34	—	—	—	—
NRF work	1.933	0.916	-0.502	0.619
NRF self-employed	-1.351	0.735	-0.072	0.326
NRF partner	0.631	0.721	0.344	0.347
NRF partner work	-0.348	0.669	-0.348	0.339
NRF second family <sup>a</sup>	-0.952	0.667	-0.165	0.298
Constant	-3.545	1.283	1.952	0.788
Pseudo R <sup>2</sup> or R <sup>2</sup>	0.213		0.199	
Number of observations	199		105	

<sup>a</sup>Second family refers to the presence of new children or stepchildren in the non-resident father's family.

MWC refers to the mother-with-care.

NRF refers to the non-resident father.

FIGURE 1  
Compliance Rates



were found to pay something, and those who paid anything paid an average 94 per cent of the liability. The estimated corresponding figures for the FRS sample were 41.9 per cent and 87.3 per cent. However, the graph suggests that compliance is not a simple all-or-nothing relationship, with a wide distribution of compliance rates, distinctly skewed to the left. To conduct the simulation work at different levels of compliance, the estimated compliance equation was used to compute a compliance index that indicates the propensity to comply. Parents in the FRS were then ranked from those with the highest score to those with the lowest. For a compliance rate of  $x$  per cent, the top  $x$  per cent with the highest compliance index were then assigned to pay their full liability while the remainder were assigned to pay nothing.<sup>22</sup> Hence, the White Paper's 80 per cent target is modelled as 80 per cent paying the full liability and 20 per cent paying nothing.<sup>23</sup>

<sup>22</sup>Alternative ways of defining compliance will be pursued in future work.

<sup>23</sup>It is not clear what the 80 per cent target means precisely. It could mean the 'binary' type of compliance used here, or it could mean that everyone pays a straight 80 per cent of their liability. This second, 'proportional', interpretation was also analysed and the outcomes found to lie somewhere between the effects at current compliance and the effects from the 80 per cent binary compliance.



## VII. SIMULATION

As a baseline to judge the impact of the reforms, the levels of child support payments and net incomes were calculated under the current child support system at current compliance levels, with wages and prices indexed to 1999 levels. In addition, it was assumed that the minimum wage legislation increases wages below the minimum to the minimum level. Net income consists of net earnings plus calculated benefit payments (covering IS, WFTC and housing benefit<sup>24</sup>) plus child support payments for mothers-with-care and minus the payment for non-resident fathers. The net income figures reported in the tables are equivalised to a single adult person so that they roughly measure the income per person in the family. A family is deemed to be in poverty if income is below the HBAI (*Households Below Average Income*) poverty line, indexed to the 1999 level for a single person at £94. An approximate measure for government net revenues was calculated as the total income tax and National Insurance receipts minus benefit payments, grossed up by 52 to obtain an annual figure and then by 1,000 as the FRS is a 1 in 1,000 survey.

### *1. The Potential for Poverty Reduction*

One initial question that has been raised is to what extent non-resident fathers have the resources to provide reasonable levels of financial support for all of their children. Table 3 presents benefit receipt and employment for the FRS sample under the baseline scenario. It shows that some 73.8 per cent of mothers-with-care (MWCs) are eligible for benefits, compared with 26.4 per cent of non-resident fathers (NRFs). In addition, only 47.3 per cent of MWCs are in a household where anyone works, compared with 79.5 per cent of NRFs. Hence, it appears that non-resident fathers may be in a better position than the mothers-with-care to provide support.

One way of addressing this question is to ask whether the combined income of both families can be redistributed between them to reduce the incidence of poverty — assuming that such redistribution does not affect the total amount available. The results of two such hypothetical redistributions are presented in Table 4, where income is simulated under the baseline scenario. In this sample, some 29.6 per cent of all MWC and NRF families are in poverty if there are no child support payments. But child support payments under the current system with current compliance rates serve to reduce this to 21.3 per cent. If the income were distributed equally between the two households in proportion to family size, the fraction in poverty would fall to 12.3 per cent. If, instead of distributing the joint net incomes across the two households equally, we ensured that just

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<sup>24</sup>As a reasonable approximation to the observed take-up rates, we assumed full take-up for IS and housing benefit and 65 per cent take-up (from the FRS family credit information) for WFTC.

TABLE 3  
**Current Benefit Receipt and Employment in the FRS Sample**

	<i>Per cent</i>	
	<i>Percentage of mothers-with-care</i>	<i>Percentage of non-resident fathers</i>
<i>Single</i>		
IS, no work	45.3	15.2
IS, work	3.7	0.4
WFTC	19.7	—
Not eligible for benefits, no work	5.4	—
Not eligible for benefits, work	13.4	52.8
<i>Repartnered, without children</i>		
IS, no work	—	1.8
IS, one worker	—	0.1
WFTC, one worker	—	—
WFTC, two workers	—	—
Not eligible for benefits, one worker	—	2.7
Not eligible for benefits, two workers	—	6.4
<i>Repartnered, with children</i>		
IS, no work	2.0	3.5
IS, one worker	0.2	0.1
WFTC, one worker	2.2	4.8
WFTC, two workers	0.7	0.5
Not eligible for benefits, one worker	1.0	5.0
Not eligible for benefits, two workers	6.4	6.8

Notes: The figures are estimated using the current baseline assumptions — that is, the current child support system, WFTC with 65 per cent take-up, a minimum wage, child support payments under current compliance, and all prices, wages and benefit levels indexed to 1999 levels. ‘Children’ refers to dependent children living in the household of the mother-with-care or non-resident father. By definition, there are no mothers-with-care without children. Single non-resident fathers have no children in the same household. Those families defined as ‘IS’ do not contain any person working 16 or more hours and have net income below the IS cut-off. Those families defined as ‘WFTC’ contain at least one person working 16 or more hours and have net income below the WFTC cut-off. Those families defined as ‘not eligible for benefits’ either have net income in excess of the WFTC threshold if they contain one person working at least 16 hours or have net income in excess of the IS threshold if there is no one working at least 16 hours. For the families of mothers-with-care with no one working, the latter implies child support payments in excess of the IS threshold.

sufficient income were allocated to the smaller of the two families to move it out of poverty and the remaining resources allocated to the larger family, this would generate the lowest possible poverty rate, of 6.2 per cent.

Hence, the current child support system makes a significant contribution to reducing the incidence of poverty and it appears that there might be considerable

TABLE 4  
**Scope for Poverty Reduction**

<i>Percentage of families in poverty ...</i>	<i>MWCs</i>	<i>NRFs</i>			<i>Per cent</i>
		Single	Repatriated, without children	Repatriated, with children	
... currently, with no child support payment	Single	30.1	35.3	32.4	31.1
... currently, with current child support payment		19.4	27.8	28.1	22.0
... if income redistributed equally		10.7	17.8	18.5	13.0
... if income redistributed to minimise poverty (Percentage of MWCs and NRFs in each cell)		5.3 (60.6)	8.9 (9.6)	9.3 (17.3)	6.5 (87.5)
... currently, with no child support payment	Repatriated	17.9	14.0	23.4	19.0
... currently, with current child support payment		15.2	8.0	21.9	16.2
... if income redistributed equally		5.5	0.0	15.6	7.7
... if income redistributed to minimise poverty (Percentage of MWCs and NRFs in each cell)		2.8 (7.8)	0.0 (1.3)	7.8 (3.4)	3.8 (12.5)
... currently, with no child support payment	All	28.7	32.3	30.9	29.6
... currently, with current child support payment		18.9	25.4	27.1	21.3
... if income redistributed equally		10.1	15.6	18.0	12.3
... if income redistributed to minimise poverty (Percentage of MWCs and NRFs in each cell)		5.0 (68.3)	18.2 (11.0)	9.0 (20.7)	6.2 (100.0)

scope for further reductions. However, the second method of redistribution is unrealistic in that it might leave the larger family with no income. Moreover, large-scale redistribution would have an impact on the total amount of income available, both through the adverse work incentives and the fact that benefit payments are means-tested on a family basis.<sup>25</sup> Thus the possibilities may be severely limited by behavioural responses. In addition, the hypothetical redistributions suggested in these scenarios do not use a specific formula that could be applied equally to all separated parents. In the real world, redistribution between parents has to use a specific formula and this limits the extent of redistribution that can take place. In particular, such a formula needs to be based on observable characteristics. Thus, having established that there are, in principle, sufficient resources for redistribution to make a large impact on child poverty, below we return to the practical case of the White Paper proposals to see their effect in practice.

## *2. Simulated Effects with Labour Supply Fixed*

The impact of the child support reform is summarised in Table 5. For now, it is assumed that work decisions are unaffected by the reforms. The table shows four cases: the current system prior to the introduction of the minimum wage and WFTC, the baseline scenario, the reformed system with current levels of compliance and the reformed system with 80 per cent compliance. The first two columns of figures in Table 5 show that the introduction of WFTC and the minimum wage have the greatest impact for this sample in reducing the incidence of poverty among non-resident fathers and their second families. Indeed, the poverty rate falls from 26.4 per cent for children living with non-resident fathers to 21.4 per cent. Otherwise, the effect of WFTC and the minimum wage has been limited, with very few gainers and losers.

Without any change in compliance, the child support reforms substantially reduce the average payment from £35.92 to £26.27. However, the welfare system ‘cushion’ ensures that the average income for mothers-with-care is barely affected, while non-resident fathers see a considerable rise in their net income. The difference is made up by the taxpayer, as annual net government revenue falls by over £800 million.

But if compliance improves to 80 per cent, the outcome is quite different. The average child support payment now *rises* to £40.71 and mothers-with-care experience an average rise in net income from £133.54 to £136.18. The child poverty rate for mothers-with-care falls by over 3 percentage points. On the other hand, non-resident fathers witness a fall in their income, with the child poverty rate rising from 21.4 per cent to 25.6 per cent. Since there are 4.7 times as many

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<sup>25</sup>It is also true that changes in the total amount available might affect the incidence of poverty for the ‘no child support’ starting-point.

TABLE 5  
**Summary of the Effects of the Reforms**  
**(no change in behaviour)**

	Current CS System		Reformed CS System	
	Family credit and no minimum wage <i>Current compliance</i>	WFTC and minimum wage <i>Current compliance</i>	WFTC and minimum wage <i>Current compliance</i>	WFTC and minimum wage <i>80% compliance<sup>a</sup></i>
Average weekly CS paid (£)	35.49	35.92	26.27	40.71
Average weekly income (£): <sup>b</sup>				
MWCs	131.74	133.54	132.89	136.18
NRFs	209.28	213.49	221.97	210.50
% of families in poverty:				
MWCs	28.1	27.2	26.8	23.3
NRFs	18.3	15.4	15.3	16.4
% of children in poverty: <sup>c</sup>				
MWCs	34.5	33.4	33.8	30.1
NRFs	26.4	21.4	20.6	25.6
% of gainers / % of losers:				
MWCs	4.1 / 19.1	base	27.2 / 26.7	59.9 / 22.4
NRFs	1.5 / 14.6	base	45.2 / 2.8	32.1 / 47.9
Change in annual net government revenue (£ billion) <sup>d</sup>		base	-0.83	-0.00

<sup>a</sup>'80% compliance' assumes that 80 per cent of non-resident fathers pay the full liability while 20 per cent pay nothing.

<sup>b</sup>Average weekly income is net income plus child support payments for mothers-with-care and minus child support payments for non-resident fathers, equivalised to the equivalent level for a single-person household.

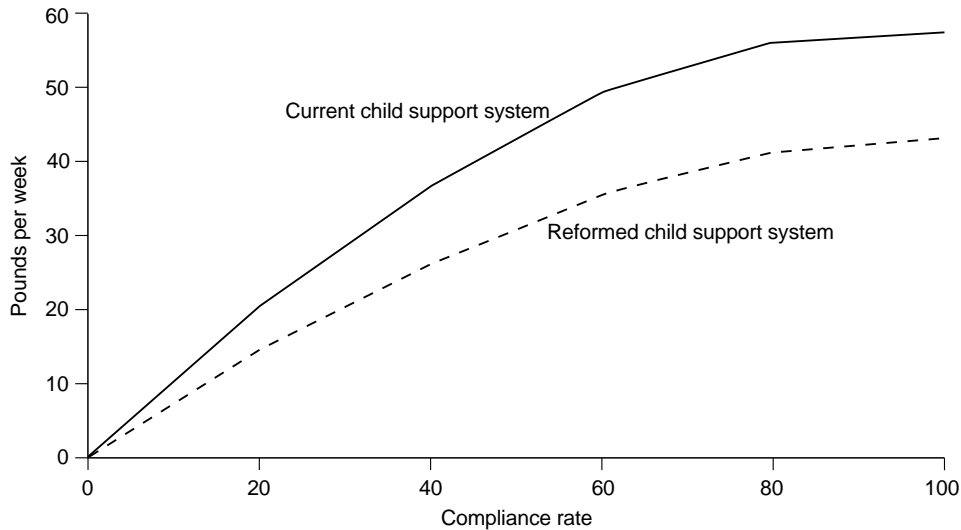
<sup>c</sup>Since there are 4.7 times more children living with mothers-with-care than with non-resident fathers, the overall average poverty rate among children should allow the MWC rate a 4.7 weight.

<sup>d</sup>Total tax and National Insurance revenues minus benefit payments for both the mothers-with-care and the non-resident fathers, multiplied by 52 and then by 1,000 as the FRS is a 1 in 1,000 survey.

children living with mothers-with-care as living with non-resident fathers, the *overall* child poverty rate falls slightly from 31.3 per cent prior to the reform to 29.3 per cent post-reform. The cost to the government of the reform is basically neutral if compliance improves to 80 per cent.

Clearly, any change in compliance will be extremely important. In Figures 2 to 4, the effects of the reform on the average child support payment, net incomes and child poverty rates are graphed for a range of compliance rates. The 100 per

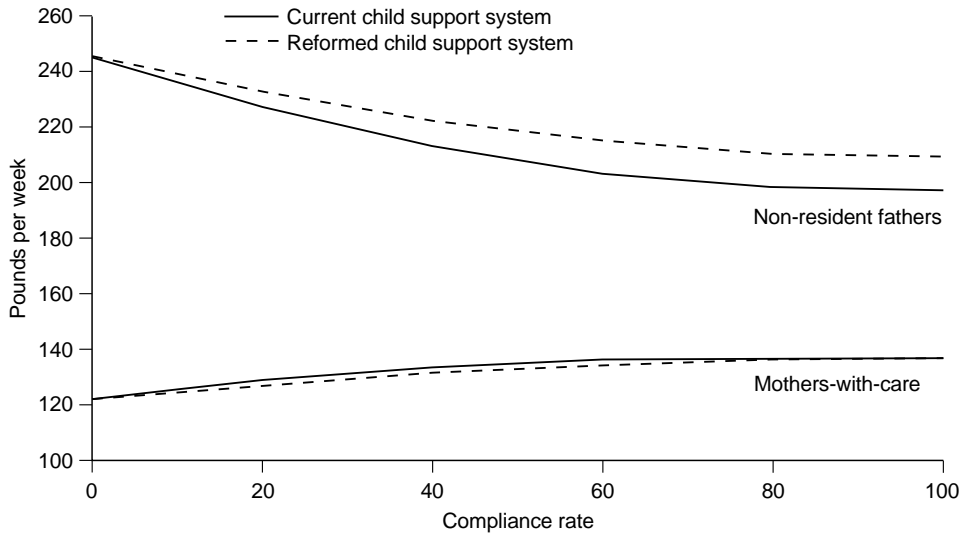
FIGURE 2  
Average Child Support Payment



cent compliance points in Figure 2 reflect the fall in average liability from £57.55 under the current system to £42.47 under the reformed system. Current compliance rates roughly correspond to the 40 per cent compliance point and an average payment of £35.92. As illustrated in the graph, compliance would need to rise to around 65 per cent under the reform for the average payment not to fall below its current level. The graph also shows how increasing compliance generates diminishing returns in increases in the average payment, due to the fact that those with lower liabilities are less likely to comply. If increasing compliance becomes more difficult and more costly at higher levels of compliance, there may be a clear crossing-point above which the cost outweighs the gain in payment increase.

Figure 3 shows how little the child support reform or changes in compliance will affect the average net income for mothers-with-care. Most of the gain from rising compliance is felt at very low levels: the first 40 per cent of compliance increases the average income from £122 to £132, but average income only rises to £137 with complete compliance. Increasing compliance at higher levels draws in those who, on average, have the characteristics associated with having lower liabilities. These tend to be non-resident fathers matched with mothers-with-care who are receiving benefits and derive little gain in net income from increased child support payments. Moreover, at all levels of compliance, the reform generates a change in the average income of less than £2 per week. This reflects

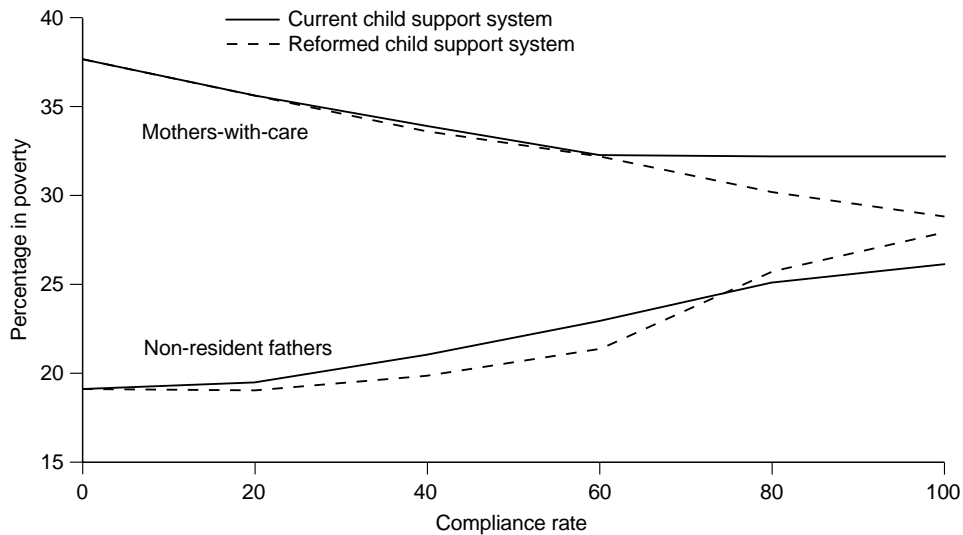
FIGURE 3  
Average Net Income



the balancing of two contrary forces: the fall in child support payments (and thereby net incomes) for those who are not on benefits versus the increase in net income from the reformed benefit disregards for those who are on benefits. For non-resident fathers, net income falls steadily as compliance increases, although at a decreasing rate, and the reform unambiguously increases average net income at each compliance level. The ‘break-even’ level of compliance for both mothers-with-care and non-resident fathers is just under 60 per cent. Below this compliance point, mothers-with-care experience a fall in average income relative to the current system, while non-resident fathers experience a gain. Above it, mothers-with-care enjoy an average gain while non-resident fathers suffer an average loss.

Figure 4 shows the impact of compliance and reform on child poverty rates and captures the impact on the lower end of the income distribution. For mothers-with-care, increasing compliance steadily reduces poverty under either child support system until compliance reaches 60 per cent. Thereafter, increasing compliance tends to benefit mothers-with-care on IS, who gain little under the current child support system but do benefit from the disregards under the reformed system, allowing increasing compliance to reduce poverty. For non-resident fathers, the poverty rate increases steadily with compliance under the current child support scheme, but jumps sharply between 60 and 80 per cent compliance under the reformed scheme. Only when the most reluctant non-

FIGURE 4  
**Child Poverty Rates**



resident fathers, who are the poorest ones, are brought to comply does compliance begin to reduce poverty. The impact of reform on non-resident fathers with second families is discussed in more detail below.

The importance of child support in reducing child poverty requires a balancing of the reduction in poverty for mothers-with-care against the increase for non-resident fathers. Using the suitably weighted average, the proportion of children in poverty is 33 per cent at zero compliance or no child support payments. At current levels of compliance, the combined child poverty rate under reform is 31 per cent, falling to 29 per cent at 80 per cent compliance and to 28 per cent if all liabilities are paid. Hence, child support payments clearly play an important role in lifting children out of poverty.

Table 6 considers the impact of different IS disregards for the sample of mothers-with-care potentially eligible for IS. It also highlights the effect of the reforms on the main component of the CSA client group. For this group, the effect of the reform is to reduce the average child support payment from £22.53 to £15.76 if there is no change in compliance and to raise it to £33.87 if compliance rises to 80 per cent. However, even in the absence of a compliance change, net income rises slightly due to the new £10 disregard, and poverty declines slightly. If compliance rises to 80 per cent, the size of the disregard becomes very important. A £10 disregard reduces child poverty from 49.7 per cent under the current system to 44.3 per cent under the reform, while a £15 disregard reduces it further to 41.9 per cent. In terms of net government revenue,



there is a broad relationship that each 1 percentage point reduction in child poverty achieved through the disregard costs approximately £100 million a year.

The effects of the WFTC disregard on mothers-with-care who are potentially eligible for WFTC are presented in Table 7. The increase in the disregard from £15 to the full child support payment under the proposed reforms raises average income for this group from £129.70 to £132.99 under current compliance and from £134.40 to £140.13 under 80 per cent compliance, but this has little impact on poverty. However, increasing WFTC take-up from 65 per cent to 95 per cent (under the reform with 80 per cent compliance) reduces the rate of child poverty for this group from 11.3 per cent to 4.4 per cent.

TABLE 6

**Impact of Reform on Mothers-with-Care Potentially Eligible for Income Support<sup>a</sup>  
(CSA client group)**

	Current CS system	Reformed CS system	
	<i>Current compliance</i>	<i>Current compliance</i>	<i>80% compliance</i>
Average weekly CS paid (£)	22.53	15.76	33.87
<i>Average weekly income (£):</i>			
without IS disregard	100.82	99.83	99.85
with £10 IS disregard	—	101.75	103.98
with £15 IS disregard	—	102.68	105.94
<i>% of families in poverty:</i>			
without IS disregard	42.7	43.9	43.4
with £10 IS disregard	—	40.9	36.0
with £15 IS disregard	—	40.0	33.7
<i>% of children in poverty:</i>			
without IS disregard	49.7	51.5	50.8
with £10 IS disregard	—	49.1	44.3
with £15 IS disregard	—	48.3	41.9
<i>% of gainers / % of losers:</i>			
without IS disregard	base	3.0 / 12.6	7.9 / 12.0
with £10 IS disregard	—	26.9 / 6.8	65.8 / 6.7
with £15 IS disregard	—	27.6 / 6.1	66.5 / 6.1
<i>Change in annual net government revenue (£ billion):</i>			
from adding £10 disregard	—	-0.28	-0.64
from adding £15 disregard	—	-0.42	-0.94

<sup>a</sup>Includes families eligible for IS and the 5 per cent of families with no one working but not eligible for IS due to child support received under the baseline scenario with the current child support system.

TABLE 7  
Impact of Reform on Mothers-with-Care Potentially Eligible for WFTC<sup>a</sup>

	Current CS system <i>Current compliance, current WFTC take-up</i>	Reformed CS system		
		<i>Current compliance, current WFTC take-up</i>	<i>80% compliance, current WFTC take-up</i>	<i>80% compliance, 95% WFTC take-up</i>
Average weekly CS paid (£)	38.48	26.57	40.21	40.32
<i>Average weekly income (£):</i>				
with £15 WFTC disregard	133.44	129.70	134.40	143.78
with full WFTC disregard	—	132.99	140.13	149.80
<i>% of families in poverty:</i>				
with £15 WFTC disregard	11.6	12.0	10.6	4.0
with full WFTC disregard	—	12.0	9.2	4.0
<i>% of children in poverty:</i>				
with £15 WFTC disregard	13.3	14.5	13.0	4.2
with full WFTC disregard	—	14.1	11.3	4.4
<i>% of gainers / % of losers:</i>				
with £15 WFTC disregard	base	22.9 / 48.8	47.9 / 42.7	62.7 / 27.1
with full WFTC disregard	—	37.3 / 40.3	60.0 / 35.4	78.3 / 11.8
<i>Change in annual net government revenue (£ billion):</i>				
due to full WFTC disregard	—	-0.53	-0.95	-1.01

<sup>a</sup>Those eligible under the baseline scenario with the current child support system.  
Note: WFTC take-up is currently estimated as 65 per cent of those eligible.

One final area of special interest is the impact of the reform on non-resident fathers with second families. A separate analysis for this group is presented in Table 8. Average child support payments fall from £20.58 to £13.31 with reform if compliance is unchanged, but rise to £32.72 if compliance rises to 80 per cent. Correspondingly, average income rises from £149.75 to £153 with no change in compliance and falls to £144.90 with 80 per cent compliance. Child poverty declines only slightly if compliance is unchanged, but rises from 21.4 per cent to 25.6 per cent (as shown in Table 5) if compliance rises to 80 per cent. Because low-income non-resident fathers with second families are currently exempt from any minimum payment, concern has been expressed that they might be particularly adversely affected by the new £5 minimum proposed in the reforms. However, this minimum payment has virtually no effect on the second families in the sample studied here. The analysis also considered the effect of the

TABLE 8  
**Impact of Reform on Non-Resident Fathers with Second Families**

	Current CS system	Reformed CS system	
	<i>Current compliance</i>	<i>Current compliance</i>	<i>80% compliance</i>
<i>Average weekly CS paid (£):</i>			
current or full reforms	20.58	13.31	32.72
reform without £5 minimum	—	13.31	32.60
reform excluding stepchildren	—	15.75	39.71
<i>Average weekly income (£):</i>			
current or full reforms	149.75	153.00	144.90
reform without £5 minimum	—	153.00	144.96
reform excluding stepchildren	—	151.96	142.00
<i>% of families in poverty:</i>			
current or full reforms	19.1	18.6	23.2
reform without £5 minimum	—	18.6	23.2
reform excluding stepchildren	—	18.8	24.7
<i>% of children in poverty:</i>			
current or full reforms	21.4	20.6	25.6
reform without £5 minimum	—	20.6	25.6
reform excluding stepchildren	—	21.0	27.4
<i>% of gainers / % of losers:</i>			
current or full reforms	base	25.3 / 1.5	17.0 / 55.7
reform without £5 minimum	—	25.3 / 1.5	17.0 / 53.1
reform excluding stepchildren	—	24.2 / 2.6	14.2 / 58.5
<i>Change in annual net government revenue (£ billion):</i>			
due to £5 minimum	—	0	0
due to including stepchildren	—	-0.08	-0.40

Notes: 'Second families' refers to the presence of new children or stepchildren in the non-resident father's family. The reform without a £5 minimum payment assumes that non-resident fathers with net income below £100 a week pay no child support. The reform excluding stepchildren assumes that non-resident fathers can only deduct an initial proportion of their net income for new children and not for stepchildren.

inclusion of stepchildren in the non-resident father's allowance for children in a second family. The inclusion of stepchildren reduces the average child support payment by around £2 under current compliance and £7 under 80 per cent compliance, but has a relatively small impact on net incomes and poverty rates. The inclusion costs the government around £80 million a year under current compliance and £400 million under 80 per cent compliance.

### *3. Simulated Effects with Labour Supply Variable*

The effect of the reform on employment choices is also analysed. The simulated labour supply effects are based on estimates of a discrete choice model of labour market status which models the probabilities of each individual being a full-time worker, a part-time worker or a non-participant as a function of observed characteristics (the number of children in each of three age ranges) and the net incomes that individuals would expect to command in each status. The modelling assumes a specific form for preferences that correspond to a labour supply function that would be linear in the net wage rate and the level of unearned income. The methodology is outlined in Moffitt (1984) and allows the recovery of estimates of the parameters of individual preferences over hours of work and net income. These parameters permit the probabilities of choosing each labour market state to be simulated using the calculated net incomes in each state and the number of children in each age range. Using estimates from Preston and Walker (1999), based on the 1994 Family Expenditure Survey, the employment outcomes for mothers-with-care<sup>26</sup> can be simulated for the 1997 FRS data, both for the existing system and for any alternative welfare and child support systems chosen.

While the Preston and Walker estimates are obtained from an earlier and smaller dataset, we find that they replicate the observed distribution of labour supply status in the FRS 1997 data.<sup>27</sup> However, the estimates do suffer from four important deficiencies. First, they assume that unobservable characteristics associated with participating in welfare programmes — for example, self-confidence — are uncorrelated with labour market status. That is, family credit participation is assumed to be statistically exogenous. This is potentially important in the context of participation in family credit where the programme participation rate is significantly less than 100 per cent, and the estimates reported in Bingley and Walker (1997) suggest that this correlation is statistically significant.<sup>28</sup>

Second, the unobservable characteristics associated with being in receipt of child support — for example, assertiveness — are also assumed to be uncorrelated with labour market status. There is no UK evidence on this issue, but Hu (1999), using US data, suggests that there may be such a correlation.

Third, the estimates assume that all that matters for determining labour market status choices is the levels of net income corresponding to each choice and not the composition of that net income. Welfare payments may well be a more *reliable* source of income than earnings and, in particular, more reliable

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<sup>26</sup>Since male labour supply is generally held to be inelastically supplied (see Blundell and MaCurdy (1999)), ignoring the effect of child support on the non-resident fathers' labour supplies seems reasonable.

<sup>27</sup>Future work will be based on new estimates from the FRS datasets.

<sup>28</sup>See also work by Keane and Moffitt (1998) for US data.

than child support payments from the ex-partner.<sup>29</sup> If this is so, behaviour may be expected to be more sensitive to a given variation in welfare entitlements than to the same variation in net income resulting from child support changes. Similarly, welfare payments may be stigmatised, so that £1 of welfare is not worth the same, to the household, as £1 of earned income or child support and hence would have a smaller effect on behaviour. The UK evidence on this in Bingley and Walker (1998) also suggests that the simple assumptions embodied in the Preston and Walker estimates are unlikely to be true: behaviour does appear to be significantly affected by the source of income as well as its level.

Finally, our modelling is based on a discrete choice methodology and, in simulation, we assign individuals to the labour market status that the estimates imply have highest utility. This loses some of the fine detail that modelling labour supply as a continuous variable would have allowed. On the other hand, there are considerable technical difficulties in modelling hours of work in this way in the face of highly complex budget constraints. Thus the estimates used here are unlikely to be unbiased and therefore the resulting simulations should be regarded as indicative rather than definitive. However, while these estimates are suspect, theoretical considerations give no clues as to either the direction or the magnitude of the bias. Moreover, the technical difficulties associated with dealing with these sources of bias are considerable and overcoming them is likely to require more detailed data than are currently available. Thus, until such data are available, these estimates are the only ones available in the UK literature that allow us to simulate behaviour by making explicit comparisons of household welfare in different labour market states.

One important point to note in this analysis is that the modelling that allows for behavioural change is based on predicted wages — that is, wages that we expect individuals to be able to command in the labour market as predicted by an estimated equation that relates the wages of workers with their observed characteristics.<sup>30</sup> Thus the levels in Tables 9 to 11 are not strictly comparable with those in the earlier tables. However, the changes across rows are broadly comparable between the two sections.

A summary of the impact of child support reform, allowing for a work response by mothers-with-care, is presented in Table 9. Note that the inclusion of labour supply effects does not alter the child support payment under the reformed system, so that the income outcomes for non-resident fathers are unaltered from the analysis with fixed labour supply and need not be repeated in this section.

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<sup>29</sup>See Jenkins and Millar (1989).

<sup>30</sup>It turns out that there is some ‘negative selectivity’ in our results — that is, the predicted wages of non-workers are higher than of those observed to work. This finding is not uncommon in the UK literature, but it is something deserving of further research.

TABLE 9  
**Summary of the Effects of the Reform on Employment Responses**

	Current CS System		Reformed CS System	
	Family credit and no minimum wage <i>Current compliance</i>	WFTC and minimum wage <i>Current compliance</i>	WFTC and minimum wage <i>Current compliance</i>	WFTC and minimum wage 80% <i>compliance</i>
Average weekly CS paid (£)	36.44	36.59	26.27	40.71
<i>% of MWCs:</i>				
not working	57.5	56.2	55.1	53.3
working part-time	22.0	22.7	23.3	25.3
working full-time	20.5	21.2	21.6	21.4
<i>Average weekly income (£):</i>				
MWCs	130.48	132.93	133.48	138.55
NRFs	212.81	212.88	221.97	210.50
<i>% of families in poverty:</i>				
MWCs	20.5	19.0	18.6	15.8
NRFs	15.7	15.3	15.3	16.4
<i>% of children in poverty:</i>				
MWCs	26.7	25.0	24.2	21.3
NRFs	23.7	21.0	20.6	25.6
<i>% of gainers / % of losers:</i>				
MWCs	8.0 / 26.0	base	30.2 / 27.6	60.1 / 22.5
NRFs	3.3 / 3.8	base	45.7 / 2.4	32.3 / 47.7
Change in annual net government revenue (£ billion)		base	-0.99	-0.30

Notes: The estimated employment choice for the mother-with-care is modelled as a discrete choice between not working (0 hours), part-time work (16 hours) and full-time work (37 hours). The employment choice for the non-resident father is assumed unchanged.

Using the estimated labour supply behaviour, 56.2 per cent of mothers-with-care are predicted not to be working under the baseline scenario of the current child support system, while 22.7 per cent work part-time and 21.2 per cent work full-time. Prior to the reform, the poverty rate of children living with mothers-with-care is estimated to be 25.0 per cent. If compliance is unchanged, the proposed package of reforms would slightly increase the proportions of mothers-with-care working part-time and of mothers-with-care working full-time, reducing the fraction not working to 55.1 per cent. If compliance rises to 80 per

TABLE 10

**Impact of Compliance and Benefit Disregards on Mother-with-Care's Employment**

	Current compliance			80% compliance		
	<i>No work (%)</i>	<i>Part-time (%)</i>	<i>Full-time (%)</i>	<i>No work (%)</i>	<i>Part-time (%)</i>	<i>Full-time (%)</i>
Raise IS disregard to £15 and reduce WFTC disregard to £15	59.3	19.1	21.6	57.1	22.0	20.9
Reduce WFTC disregard to £15	58.3	19.8	21.9	56.0	23.0	21.1
Raise IS disregard to £15	56.0	22.5	21.5	54.7	24.0	21.3
<i>Baseline reform:</i>	<i>55.1</i>	<i>23.3</i>	<i>21.6</i>	<i>53.3</i>	<i>25.3</i>	<i>21.4</i>
IS disregard = £10						
WFTC disregard = full						
HB disregard = £15						
WFTC take-up = 65%						
Raise HB disregard to full	53.7	25.4	20.9	50.8	29.3	20.0
Reduce IS disregard to £0	53.2	25.0	21.9	50.0	27.9	22.1
Raise WFTC take-up to 95%	51.8	30.8	17.5	49.4	33.7	16.9
Raise HB disregard to full, reduce IS disregard to £0 and raise WFTC take-up to 95%	48.7	34.8	16.6	43.3	42.0	14.7

cent, the proportion not working declines to 53.3 per cent and over a quarter of mothers-with-care now work part-time. In contrast to the case where employment is unchanged (see Table 5), child poverty for mothers-with-care is estimated to fall even if compliance does not improve, showing how mothers-with-care at the lower end of the income distribution may adjust their working behaviour to offset adverse income effects. The employment response also raises the net cost of the reform for the government — from £830 million to £990 million a year if compliance is unchanged, or from zero to £30 million if compliance improves to 80 per cent.

Table 10 shows the impact of reform on work choices with variations in the child support disregards for IS, WFTC and housing benefit (HB), as well as the consequence of an increase in WFTC take-up from 65 per cent to 95 per cent. Table 11 presents the corresponding figures for mother-with-care child poverty rates and government revenues. The top three rows in each table show the impact of reform variations that may reduce the propensity to work for mothers-with-care, while the bottom four rows show variations that enhance working.

TABLE 11  
**Impacts of Compliance and Benefit Disregards  
 on Mother-with-Care's Child Poverty and on Government Revenue**

	Percentage of MWC children in poverty		Impact on govt revenue (£ billion p.a.)	
	<i>Current compliance</i>	<i>80% compliance</i>	<i>Current compliance</i>	<i>80% compliance</i>
Raise IS disregard to £15 and reduce WFTC disregard to £15	25.7	21.5	-0.72	+0.06
Reduce WFTC disregard to £15	25.8	22.4	-0.61	+0.24
Raise IS disregard to £15	24.1	20.7	-1.06	-0.47
<i>Baseline reform:</i>	<i>24.2</i>	<i>21.3</i>	<i>-0.99</i>	<i>-0.30</i>
IS disregard = £10				
WFTC disregard = full				
HB disregard = £15				
WFTC take-up = 65%				
Raise HB disregard to full	24.1	21.1	-1.19	-0.66
Reduce IS disregard to £0	24.6	22.6	-0.83	+0.04
Raise WFTC take-up to 95%	21.7	18.5	-1.60	-0.98
Raise HB disregard to full, reduce IS disregard to £0 and raise WFTC take-up to 95%	21.9	18.8	-1.76	-1.25

Holding the WFTC disregard at the current level of £15 would result in a negative impact on employment choices from the reform, while the full disregard also serves to slightly reduce poverty among children living with the mother-with-care. On the other hand, the introduction of the £10 IS disregard reduces the proportion of working mothers-with-care by 2 or 3 percentage points, mostly to the detriment of part-time work. This adverse employment response is partly responsible for the relatively small impact that the disregard now has on poverty. The introduction of a full disregard for housing benefit has a theoretically ambiguous impact on work incentives but is found to increase part-time work at the expense of both not working and working full-time. It has little effect on poverty, but costs the government between £20 million and £36 million a year, depending upon compliance changes.

An alternative means for enhancing employment participation and reducing poverty is an increase in the WFTC take-up rate. Indeed, if the dual behavioural responses of increasing compliance to 80 per cent and raising WFTC take-up to 95 per cent were achieved with the introduction of child support reforms, the proportion of non-workers among mothers-with-care is estimated to fall from



56.2 per cent to 49.4 per cent, while those working part-time would rise from 22.7 per cent to 33.7 per cent. The drawback is that the proportion working full-time is estimated to fall from 21.2 per cent to 16.9 per cent. Such a change would also be very costly to government revenue.

### **VIII. CONCLUSIONS**

This analysis shows that child support payments do play an important role in lifting the children living in first families out of poverty. Moreover, the evidence suggests that child support does not raise the risk of poverty amongst the children of second families living with non-resident fathers to anywhere near the extent that it lowers the risk for children in first families. The reforms proposed in the White Paper could eliminate some of the perverse features of the existing child support system and would reduce the computational demands on the Child Support Agency to allow existing resources to be redeployed towards compliance activity. But the White Paper makes no attempt to substantiate the extent to which these changes would promote the welfare of children.

One of the main conclusions from this analysis is that changes in compliance are going to be very important for the impact of the proposed child support reform on net incomes and poverty rates and for the cost of the reform to the government. Yet there is very little evidence to make an informed estimate of the likely changes in compliance. Indeed, the White Paper's target of 80 per cent is not an estimate but a figure that is driven by the reform being required to ensure that the impact on government revenue is neutral. It is not, in any way, founded on concrete empirical evidence concerning the determinants of compliance.

Based on a sample using survey data on all parents living separately and assuming no employment responses, our analysis suggests that 80 per cent compliance is indeed about the level required for a revenue-neutral package. However, only 60 per cent compliance is the break-even point for income and poverty outcomes. Below this point, average income for mothers-with-care falls with the implementation of the reform, while above this point, average incomes and child poverty rates for non-resident fathers fall below the levels under the current system. The child poverty rates for mothers-with-care are likely to be reduced by the reform as long as there is a reasonable improvement in compliance.

Our analysis suggests that it is unlikely that any group will be substantially adversely affected by the reforms, within the plausible range of compliance changes. There are no large increases in poverty rates or dramatic falls in average net incomes under any compliance outcome, thanks, in part, to the cushioning effect of the benefit system. The income support disregard is particularly instrumental in protecting mothers-with-care against poverty, although the corresponding work disincentive could substantially mitigate the effectiveness of this protection. Overall, the proposed entire package of reforms

is unlikely to have any large adverse consequences for employment behaviour and may even raise participation rates. This is especially reassuring in light of the theoretical possibility that the negative impact of the IS disregard could have outweighed the positive effect from the increased disregard for the working families' tax credit. Increases in WFTC take-up could be an alternative means of raising employment participation and reducing poverty, although there are costs in terms of full-time employment and government revenue.

The degree of certainty about the potential effects of any reforms to the child support system is severely limited by a lack of empirical evidence on how different elements of any system affect compliance, employment responses and household formation. The White Paper could provide an opportunity to discover what works effectively, but only if it is implemented in a way that allows useful evaluation. For example, randomising the size of the IS disregard would allow the identification of both compliance and labour supply effects. Staggering the implementation might also help to introduce an 'experimental' element to the reform. Naturally, improved data would be required to assess the implications of these effects, and the regular statistical work of the CSA could play an important role. Moreover, only minor changes in the Family Resources Survey are required to allow us to identify non-resident parents, and we regard this as an essential prerequisite to effective evaluation. A more ambitious extension to the FRS would be to match parents-with-care and non-resident parents.

Regardless of the policy choices made in this current round of reform, both further research and the evaluation of the implementation of reforms are essential to enhance our understanding of how to create a fair and workable child support system that best provides an adequate standard of living for the children involved.

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