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Social Insecurity: Children and Benefit Dynamics

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Abstract

This article uses administrative data to explore benefit dynamics for children in Britain's second largest city, Birmingham, over the period January 1998 to June 1999. As the benefits in question (housing benefit and council tax benefit) are means tested, the dynamics are also informative about moves in and out of low income. The article is original in its use of quarterly data to provide a comprehensive picture of benefit dynamics, in treating the child rather than the benefit claimant as the unit of analysis, and also in including ethnic group differences in its analysis of benefit exit and re-entry. It provides a picture of substantial 'welfare dynamics': that is, movements in and out of benefit support. Living in a low-income family in receipt of benefit can be seen to be a part, and sometimes a recurring part, of the experience of a large proportion of children. It argues that policy needs to investigate and take account of the impact of insecure income as well as poverty when considering the welfare of children.

Introduction and policy context

This article uses administrative data to explore benefit dynamics for children in Britain's second largest city, Birmingham, over the period January 1998 to June 1999. As the benefits in question (housing benefit and council tax benefit) are means tested, the dynamics are also informative about moves in and out of low income. The article is original in its use of quarterly data to provide a comprehensive picture of benefit dynamics, in treating the child rather than the benefit claimant as the unit of analysis, and in including ethnic group differences in analyses of both benefit exit and re-entry. It provides a picture of substantial 'welfare dynamics': that is, movements in and out of benefit support. Living in a low-income family in receipt of benefit can be seen to be a part, and sometimes a recurring part, of the experience of a large proportion of children.

By focusing on children within benefit-claiming families, this article eschews discussions of both claimant behaviour and benefit dependency. Rather, the focus is children growing up in families with low incomes at points in time or over a period. This includes children in couple-parent as well as lone-parent families, who make up the majority of children supported by means-tested benefits, despite the policy and academic focus on benefit-recipient lone parents.

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While Böheim *et al.* (1999) and Noble *et al.* (1998) concentrated solely on lone parents' benefit dynamics, other work that has used administrative data to explore benefit dynamics more generally has, nevertheless, tended to focus on claimants (Ashworth and Walker, 1997; Ashworth *et al.*, 1997; McKay *et al.*, 1997; Shaw *et al.*, 1996). By contrast, the current approach enables us to think about the welfare of children in benefit-supported families separately from issues around incentives and disincentives to claim; and it accords with the British government's clearly stated commitment to child welfare and to eliminating child poverty (Walker, 1999; Department for Work and Pensions, 2003).

This article offers a further distinctive aspect to the analysis in that the data (described in the next section) incorporate information about ethnic group, and analysis can thus examine the association of ethnicity with children's probabilities of benefit exit.[1] Ethnic group information is not typically available in administrative sources used for longitudinal analysis; and in longitudinal sample surveys, such as the British Household Panel Survey (used by Böheim *et al.*, 1999), the relatively small numbers from individual minority ethnic groups limit exploration of ethnic group effects. By contrast, the data used here provide an exceptional opportunity for describing and evaluating ethnic group differences in probabilities of benefit exit and re-entry, and for doing so across relatively short intervals of time.

A focus on longitudinal analysis of benefit support does not deny the potential impact of even short episodes of low income on children's welfare. However, the persistence of poverty over periods of time is a critical element of our understanding of poverty (Bradbury *et al.*, 2001; Walker with Ashworth, 1994; Ashworth *et al.*, 1992). Moreover, as this article shows, taking a longitudinal perspective with short intervals between measurement points is revealing in terms of the insecurity in children's situation that it reveals. Temporary poverty and poverty persistence can both be observed, but in addition we can see that fluctuations in income are frequent (even if, presumably, short-range). In addition, a longitudinal perspective enables the exploration of characteristics associated with escaping or remaining on benefit and with benefit re-entry.

Longitudinal poverty measurement has, typically, used income measured at yearly intervals to assess poverty for a given year, and persistence is assumed where household income is below the chosen poverty line at the time of measurement for consecutive years (see, for example, Jenkins and Rigg, 2001). This has the potential to disguise the amount of income fluctuation that is actually taking place (Bradbury *et al.*, 2001).[2] While such fluctuation is likely to be short-range in the main (Jarvis and Jenkins, 1998; Hills, 1998), and is therefore unlikely to undermine general conclusions drawn from observations at annual intervals, developing our understanding of within-year movement remains important. It can draw attention to the complexity of life on a low income, where frequent income changes are commonplace. Such changes are a source of policy concern in their

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own right. Moreover, providing additional evidence of extensive intra-annual dynamics supports the claims in the poverty dynamics literature of substantial movement in and out of poverty against criticisms that such movement is an artefact of the poverty line chosen or of measurement problems (see the discussion in Jenkins and Rigg, 2001).

The main findings of this article are, first, the extensive movement above and below the benefit threshold over even the short (17-month) period covered by this analysis. Second, when looking at exits (those who 'escape'), the study identifies that children's probability of exit is enhanced if they are living in couple-parent families, if they have younger parents, if they themselves are older and if their parents are of Caribbean ethnicity. Children of Bangladeshi ethnicity and those living in families supported by income support and in local authority housing are less likely to escape benefit. The results are consistent with other research, but the information on ethnic group differences is new.

Third, analysis of benefit re-entry, an aspect of benefit dynamics less commonly investigated, reveals that living in local authority housing increases the risks of benefit re-entry as does being in a lone-parent family. The number of children in the family also increases the risk of re-entry, as do Bangladeshi, Indian and Pakistani backgrounds. Here the higher rates of couple-parent families among the South Asian groups, which might be expected to facilitate benefit exit, do not necessarily protect against benefit re-entry within a relatively short period.

The article therefore reinforces some findings from other studies and also provides new findings that add to our understanding of the complexity of the benefit dynamics of families with children. The implications – or problems – for policy of these findings are considered in its concluding section.

The data

Quarterly extracts from administrative data

The analysis in this article is based on seven quarterly cuts of housing benefit and council tax benefit administrative data extracted on c.15 January 1998, 23 March 1998, 23 June 1998, 23 September 1998, 23 December 1998, 23 March 1999 and 23 June 1999.[3] The extracts provided live cross sections of the population of benefit recipients and their dependants in Birmingham at each of the dates. Anonymised extracts covered receipt of either or both of two means-tested benefits – housing benefit and council tax benefit – and much of the information needed to assess the claim that had been collected, including the date of birth of all those in the immediate family or 'benefit unit' and their status (for example, claimant, partner, dependent child), receipt of other benefits, council tax band and housing tenure. Additionally, information on ethnic group was routinely requested and was included in these extracts. While there were some problems with the ethnic group data (see below) as it is not required for assessment of

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benefit, overall the data are extremely reliable, since they are needed for detailed and accurate calculation of benefit.[4]

The claimant and their dependants (partner, if any, and dependent children, if any) are known collectively as the benefit unit, representing the immediate family unit. Each benefit unit has a unique identification number, which is retained as long as the claim continues and is reallocated following interruption of a claim. In addition, every member of the benefit unit has a unique identification number. Again this will be retained over time if the member of the benefit unit re-appears in a future claim, even if under different circumstances (for example, at a different address, a previous partner becoming a claimant, a child living with a different parent or becoming a non-dependant or a claimant). The basis of the reallocation of identification numbers is name, date of birth, address and previous address. It is thus possible to use these unique identifiers to track both the benefit unit and the individuals in each benefit unit over time.[5] I used record-linkage based on these unique identifiers to construct a longitudinal data set of all 134,253 children who were supported by benefit on at least one of the seven time-points, along with their ages and the characteristics of the families with which they were living.

In sum, these data offer particular advantages in measuring benefit dynamics across relatively short periods. They allow regular, up-to-date extraction of the benefit population at researcher-specified dates; income information (and written evidence) is needed to support a claim; on-going checking and correction procedures exist to ensure reliability and validity of benefit payments. Moreover, administrative data encompass the total population under consideration, and they allow cases to be linked over time. Benefit data also enable access to large sample sizes at no additional expense, enabling the analysis of particular groups within the data, such as minority ethnic groups, which would be problematic with smaller sample sizes. Costs of data extraction are low and there are relatively few problems of wastage. A potential issue is that of non-take-up: the measures only capture those who actually claim these benefits rather than all those eligible through their family income. However, the numbers of families with children to whom this applies are likely to be few (see the discussion in Platt, 2001: 56). Moreover, those who successfully claim benefit on one occasion are more likely to claim it in the future: an important consideration when looking at recurrence of benefit support.

The operation of housing and council tax benefits

Housing Benefit is benefit payable to people in rented accommodation (including temporary accommodation) to meet all or part of their rent payments. Council tax benefit is payable to those responsible for council tax – that is, owner occupiers and some people in rented accommodation – to cover some or all of their local tax requirement. Housing benefit and/or council tax benefit

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(henceforth HB/CTB) is payable in two forms. It is effectively 'passported' for people on income support or income-based job seeker's allowance (henceforth referred to jointly as income support, for simplicity). That is, receipt of income support automatically entitles the claimant to HB/CTB. Around three-quarters of the benefit units with children in receipt of HB/CTB in this study were also in receipt of income support.

For people not on income support but with insufficient income to pay their rent or council tax in full, a separate claim for HB/CTB direct to the local authority is possible. For these, eligibility for benefit will depend on both an evaluation of their income against a family income standard, comparable to the amounts accorded by income support, and the amount of their rent or council tax. Those with incomes at or below the value of the income standard will have all their council tax and their rent (within certain limits) paid. For those with incomes above the value of the income standard, housing benefit payments are reduced from covering all the rent by 65 pence for every pound above the income standard that the family has, while council tax benefit is reduced by 20 pence for every additional pound. This means that families that are on HB/CTB but not on income support are likely to be better off than their counterparts on income support. How much better off they are will depend on the interaction of income with rent/council tax rates.

The incomes of those on HB/CTB

The absolute levels of HB/CTB payable are constrained by the fact that those in the highest (most expensive) council tax band are not eligible for benefit. In addition, eligible rent is limited by comparison with local reference rents and according to a judgement on whether dwelling size is proportional to family needs. In practice, while there were a small number of large amounts in payment, 90 per cent of housing benefit payments at January 1998 were below £61 per week and 75 per cent were below £48 per week. For council tax benefit the maximum payment was as high as £30.44, but 99 per cent of payments were below £16, 90 per cent were below £12 and 75 per cent were below £11.

It is also possible to use benefit rules to calculate the incomes of most of the families in the data and, equivalising their incomes in the same way as is used in the calculation of Households Below Average Income (DSS, 2000), to calculate which of them fell below the HBAI threshold of 50 per cent of mean income at any point in time. Over 90 per cent of the children in these data extracts fell below this threshold, and those who did not were principally those in families with a disabled member where disability benefits or allowances were in payment: the social security system takes some account of the extra costs of disability, whereas the low income calculations for HBAI do not.

The main aim of this article is to show movements between discrete states of benefit receipt and non-benefit receipt. Nevertheless, while the actual incomes of

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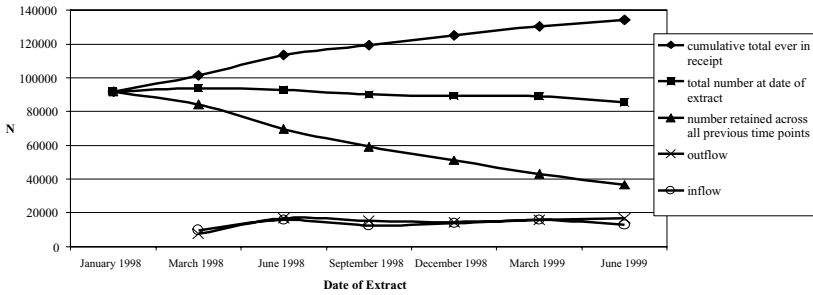


Figure 1. Children on benefit over time.
Source: Author's analysis of HB/CTB data, 1998–9.

those who move will vary with their particular circumstances, movements in and out of benefit support are likely to reflect real, albeit sometimes small, changes in income and/or circumstances which affect available income.[6]

Who experiences a benefit spell?

An overview of all seven extracts of the benefit data is given in Figure 1. The figure shows both the extensive amount of movement out of benefit receipt over the period as well as a core of those who remain on benefit for at least the 17 months that are observed. The middle of the three upper lines illustrates the cross-sectional counts with the line that declines below it representing the decreasing number of children supported continuously across the period. The top line illustrates the total number of different children who can be identified as having been supported by benefit over the period by the date in question. The two lines at the bottom of the figure represent the moves on and off benefit. The average number of children in receipt at any point over the 17-month period from January 1998 to June 1999 was 90,312, but the total number who were in receipt at some point over the period was nearly half as many again at 134,253 different children.

Using population estimates for the total number of children in Birmingham at this time, this means that roughly a third of Birmingham's children were supported by HB/CTB at any one time. Over the 17 months of the observation window, the proportion of children experiencing means-tested benefits was even higher. Nearly 50 per cent of the city's population of dependent children were supported by HB/CTB at some point during this short period.

Twenty-seven per cent of the 134,253 children who ever experienced benefit support, making up 43 per cent of the final (June 1999) extract, were supported by benefit continuously across the entire period, thus illustrating Bane and Ellwood's (1986) point about how longer-term claimants 'build-up' in the system. That is, those who are on benefit for longer will always make up a higher share of a cross

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section than they make up of all those ever on benefit. Nevertheless, the fact that only just over a quarter of all children on benefit at any time were on continuously over the 17-month period contrasts with the perspective of a long-term, benefit-dependent group. Instead, it emphasises the difficulty of making a distinction between those reliant on benefit support and those using it to ease a transition.

If we consider the stock (that is, the number on benefit at the beginning of the period) as a proportion of all those who are on benefit at any point during it, we find that 68 per cent of those on the data set at any point were already on benefit at the first extract. For those children supported by income support as well, the proportion was 67 per cent. This was greater than the proportion found by Ashworth *et al.* (1997) in which the 'stock' made up only 56 per cent of their Income Support cases under consideration. However, Ashworth *et al.*'s observation window was slightly longer (at two years) and they measured movement continuously across that period, and so could capture very short spells. Also, they included benefit units without children, some of whom experienced very short spells.

Within the data we can estimate the characteristics associated with remaining on benefit for longer rather than shorter periods, or with slower rather than faster exit from benefit. This is carried out in the next section. Such analysis is based on pooling those who are observed to enter the data set during the period under consideration. This pooled set of entrants constitutes a random sample of spells on benefit among all those children who are supported by benefit at all: some will leave after a short time; others will stay on for longer. By contrast, as mentioned above, cross sections taken at any point in time will contain an over-representation of those on benefit for longer periods compared to those on benefit for shorter periods. It is therefore not appropriate to use cross sections as the basis for estimating benefit duration, as the results will be biased to the extent that the characteristics of long-term recipients differ from those of short-term recipients, the very issue under consideration.

The different distributions of characteristics across benefit-supported children when they are grouped in different ways are illustrated in Table 1. The first column shows selected characteristics of the children when the cross sections are pooled, while the second column shows the distributions of these characteristics among those who are observed to enter the benefit 'envelope' (the 'inflowers'). The third column of Table 1 shows the distribution of these characteristics among those who are continuously on benefit across the observation window.[7] As expected, they show an exaggerated version of the distribution of characteristics from the cross sections. The final column shows the characteristics of those who are observed to exit benefit within the period. These 'outflowers' are a random sample of exits and so can be used to explore probabilities of re-entry (see below). The distribution of their characteristics is quite similar to that of the 'inflowers'.

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TABLE 1. Comparison of selected characteristics of children by extract type.

Percentage in	Pooled cross sections	Inflowers	Continuously on benefit	Outflowers
Income support families (%)	78	69	86	62
Average age of child (years)	7	9	8	9
Average age of claimant parent (years)	37	34	36	36
Type of family				
Lone parent families (%)	59	54	64	57
Couple parent families (%)	41	46	34	43
Housing tenure				
Local authority housing (%)	49	40	54	45
Owner occupation (%)	21	26	17	25
Private tenancy (%)	30	34	29	30
Ethnic group				
Bangladeshi (% excluding non-response/other)	3.1 (5.3)	2.5 (6.4)	3.4 (5.1)	3.1 (5.4)
Black Caribbean (% excluding non-response/other)	4.0 (7.1)	2.9 (7.4)	4.3 (6.5)	4.5 (7.8)
Indian (% excluding non-response/other)	2.5 (4.4)	2.0 (5.1)	2.6 (3.9)	3.0 (5.2)
Pakistani (% excluding non-response/other)	11.3 (19.7)	9.1 (23.5)	11.5 (17.3)	12.4 (21.5)
White UK (% excluding non-response/other)	32.2 (56.2)	19.5 (50.3)	40.2 (60.2)	30.3 (52.4)
Other groups (combined)	4.1 (7.3)	2.7 (7.3)	4.8 (7.0)	4.6 (7.7)
Non-response	42.8	61.3	33.2	42.1

Note: the average of cross sections is the simple average of the percentages across each of the 7 extracts. The number of 'inflowers' was 42,592, the number of those continuously on benefit was 36,552 and the number of 'outflowers' was 75,434.
Source: Author's analysis of HB/CTB data 1998–9.

Table 1 shows that, compared to the cross-sectional average, children entering a benefit spell were less likely to be supported by income support or living in lone-parent families or living in local authority housing, and more likely to be living in owner-occupied housing. Children living in income support recipient families and those living in lone-parent families seemed to stay on benefit longer. This is shown by the fact that they were more strongly represented in the cross sections and among the set of children who were observed to remain on benefit for the full 17 months. Those who moved off benefit receipt were similar to the inflowers. That is, they were less likely to be recipients of income support or in lone-parent families or in local authority housing than either those continuously supported by benefit or the cross-sectional averages.

The ethnic group information is harder to interpret, since ethnic group is not required for the processing of benefit information and thus there are high levels of missing data, where the information was either not supplied or, more frequently,

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was supplied but was not entered on to the benefit system.[8] Moreover, given the system of updating information over time, the measured non-response is higher for those who only claim benefit briefly, and lower for those who are in recurrent or long-term receipt with the consequent possibilities for adding the information at a later date. 'Non-response' to ethnic group for the claimant of the family in which the child lives thus varies from around 30 per cent for those continuously on benefit to around 60 per cent for the inflowers. Non-response will vary with ethnic group to the extent that benefit duration varies with ethnic group, but predominantly as a result of data entry processes. This should not therefore affect predictions based on recorded ethnic group. Table 1 gives proportions from each group including and excluding non-response. In the models in the next section, the focus is on the marginal effects of ethnic group, with non-response included as a separate category. This makes the impact of ethnicity easier to measure, and means that what information there is can be utilised even in the presence of high rates of missing data.

Some ethnic groups are more likely to experience some form of benefit receipt than others. For example, high rates of means-tested benefit support can be observed among Bangladeshis and Pakistanis (Platt, 2002). Such different starting points will affect the possibilities for, and meaning of, movements in and out of poverty (see the fuller discussion of this point in Platt, 2003).

Nevertheless, among the largest ethnic groups claiming HB/CTB in Birmingham – White UK, Black Caribbean, Bangladeshi, Indian and Pakistani – it would seem that minority group ethnicity of the claimant parent is associated with greater movement into and out of benefit, and that the White group is relatively heavily represented among those continuously supported by benefit.

By looking at the outflowers and their subsequent trajectories, we get a sense of how much return movement there is within the population. If exit from benefit support only represents a temporarily improved state, then that has significant policy implications. Leaving benefit becomes not simply about exiting but about remaining above the benefit threshold. Of the 75,434 outflowers, 34,584 children – roughly 46 per cent of the outflowers and 26 per cent of all the children observed on HB/CTB over the period – not only left benefit but also returned within the observation window.[9] If we exclude those who were aged over 14 at the time of exit and therefore might cease to be dependent children while off benefit, the proportion rose to 50 per cent of outflowers returning to benefit support. Within just a short period of 17 months, that represents an enormous amount of movement either side of the means-tested threshold.

Such levels of benefit dynamics constitute a remarkable finding, and one which has not previously been shown for *children* in families on means-tested support, either because the claimant categories did not allow disaggregation by whether children were present (Ashworth *et al.*, 1997), or because only lone parents were considered (Noble *et al.*, 1998; Böheim *et al.*, 1999). This finding is

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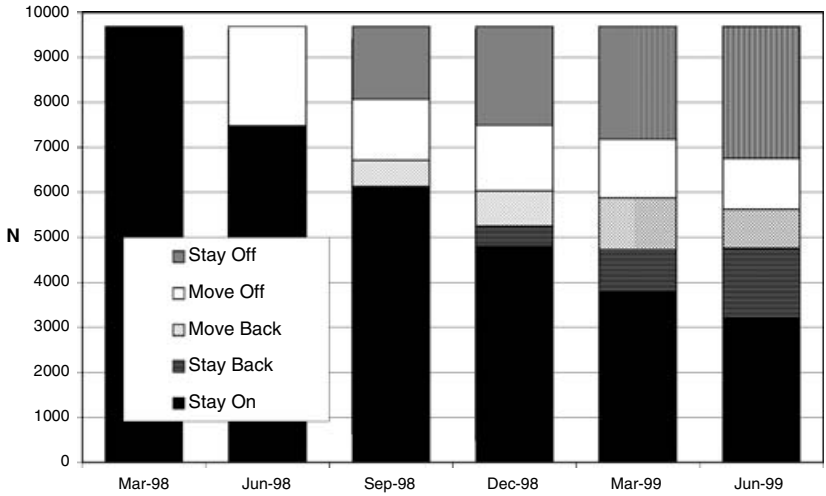


Figure 2. Movement on and off benefit for a cohort of children entering HB/CTB support in March 1998.

Notes: This shows the movements of those who started a benefit spell in March 1998 (*N*=9,690). The meaning of the categories are as follows:

Stay on = observed at each of the six timepoints

Move off = was observed at previous timepoint but not observed at current timepoint

Move back = was not observed at previous timepoint but is observed at current timepoint

Stay back = was observed at current timepoint and at least previous timepoint but was not observed at some earlier timepoint (i.e. had 'moved off' and 'moved back' prior to current timepoint)

Stay off = was not observed at current timepoint and was not observed at at least previous timepoint too (i.e. had 'moved off' prior to current timepoint without 'moving back' by current timepoint)

Source: Author's analysis of HB/CTB data 1998–9.

consistent with other research showing substantial levels of sub-annual benefit dynamics (Ashworth *et al.*, 1997; Noble *et al.*, 1998). However, it is notable in the current policy context emphasising children's welfare because it specifically reveals the complexity of adapting policy that aims to support children to a dynamic context.

When exploring the characteristics associated with benefit entry in the next section, I consider all those who exit benefit across the series of spells and their probabilities of re-entry. Meanwhile, here, for illustrative purposes, the movements simply of those who are observed to enter the data at March 1998 are explored as a cohort. Remarkably, these 9,690 children experienced between them every one of the 32 possible combinations of spells on and off benefit. Figure 2 provides a slightly simplified account of these movements. This figure shows that only a third (3,189) of those children who moved on to benefit in March 1998 remained supported by it for the full 15 months, although around 55 per cent of

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those who moved on at the beginning of the period (5,635 children) could also be found at the end of it: that is, those who had remained continuously supported by benefit combined with those who had moved (and stayed) back onto benefit support.

What characteristics are associated with exit from and re-entry to benefit?

In order to consider the extent to which probability of benefit exit (or re-entry) was associated with the child's characteristics, while taking account of the impact of elapsed duration since the child first became at risk of exit (re-entry) by entering (leaving) benefit support, a discrete time hazard regression model was employed (Jenkins, 1995, 2004). While it is important in the estimation of exit probabilities to take account of elapsed duration – the speed with which those who originally made up the pool of those at risk of exit declines over time – neither Noble *et al.* (1998), nor Böheim *et al.* (1999) did so in their models of benefit transitions. This, therefore, forms a particular contribution of this article. Moreover, this article is unusual in modelling re-entries in parallel with exits. The analysis emphases instability in benefit status and the importance of staying off benefit support as well as leaving it.

In modelling exits, those cases that were 'left censored', that is, which were already in receipt of benefit at the first extract, were excluded. Techniques for examining the timing of events have been designed to deal with those cases that do not end during the observation period: that is, which are 'right censored'. However, those cases that are left censored will consist of a combination of those who have been on benefit for a long time and those more recently on the data set, as noted above. As it is impossible to distinguish which are which, such cases are not suitable for survival analysis, since length of time already on benefit is likely to be associated with future duration of benefit. Modelling exit on the basis of the 'stock' (Noble *et al.*, 1998) biases the estimates of exit probabilities in the direction of those with longer stays. The 'inflowers' used here, however, constitute a random sample of those starting a benefit spell.

Since some of the spell endings might have occurred through leaving 'dependent' status at the age of 16, those aged 15 and over were also excluded from the model to avoid the possibility that patterns of exit and age effects were an artefact of this process. The data were then structured into 114,265 person–period spells (including repeat spells per child) for the 36,897 children included, and a complementary log–log regression was run with the log of elapsed duration included to model duration dependence.[10]

Other variables included in the model were those identified in Table 1 (that is, age of child, age of claimant parent, lone or couple parent, income support receipt, housing tenure, number of children in the family and ethnic group of the claimant parent). The age of the child was entered as a continuous variable,

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TABLE 2. Complementary log-log model of benefit exit.

Characteristics	Coefficient (SE)	Hazard ratio (SE)	p-value
Log of elapsed duration	−0.31 (0.02)	0.73 (0.02)	0.000
Housing Tenure (baseline = local authority housing)			
Owner occupation	0.15 (0.03)	1.16 (0.04)	0.000
Private renting	0.09 (0.03)	1.10 (0.03)	0.000
Income support receipt	−0.46 (0.03)	0.63 (0.02)	0.000
Age of child (baseline is pre-school (0–4))			
5–10	0.17 (0.02)	1.19 (0.02)	0.000
11+	0.20 (0.02)	1.23 (0.03)	0.000
Age of claimant parent	−0.01 (0.001)	0.99 (0.001)	0.000
Family form (baseline =couple parent)			
Lone parent	−0.24 (0.03)	0.79 (0.02)	0.000
Number of dependent children within family	0.004 (0.01)	1.005 (0.01)	0.611
Ethnic group (baseline = white UK)			
Bangladeshi	−0.18 (0.08)	0.84 (0.07)	0.034
Black Caribbean	0.17 (0.06)	1.18 (0.07)	0.007
Indian	−0.04 (0.08)	0.96 (0.08)	0.612
Pakistani	−0.02 (0.05)	0.98 (0.05)	0.655
Non-response	0.11 (0.03)	1.11 (0.03)	0.000
Constant	−1.10 (0.06)		0.000
Model fit: Wald chi2 (21df)	1120.3		0.000

Note: Number of person-spells = 114,265; number of exits = 18,287. Standard errors have been adjusted for repeat observations within families; coefficients for the ethnic groups not explicitly considered were positive but non-significant and have not been included for simplicity.

The positive effect for 'non-response' is consistent with ethnic group being more likely to be entered on to the benefit system the longer the family is in contact with the benefit system. This is the data entry issue highlighted in the text, disguising an actual ethnic group response rate of around 84 per cent (see note 9).

Source: Author's analysis of HB/CTB data 1998–9.

and alternatively as a categorical variable, to distinguish between pre-school, primary and secondary age. The results were consistent in that both showed an increasing probability of exit with increasing age. To accord with other work on child poverty dynamics (Hill and Jenkins, 2001), the categorical version of children's age is reported here. Standard errors were adjusted to take account of repeat observations within families (that is, the fact that where there is more than one child the family characteristics will be repeated across each child). The analysis assumed that exit probabilities did not differ significantly according to the date of the extract.

The regression estimated how exit rates varied with characteristics, including elapsed duration, and allows interpretation, through reported hazard ratios, of the proportional impact of any characteristic on the risk of exit (re-entry). Table 2 shows estimates of the model of benefit exit. Hazard ratios greater than 1 show

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a proportionately increased chance of benefit exit, while those under 1 show a proportionately reduced probability of exit.

The duration variable indicates a monotonically declining risk of exit over time: the longer the children in these families are on benefit, the longer they are likely to remain so, other things being equal. This finding is consistent with other studies of benefit dynamics. Specifically, each passing quarter is estimated to bring a 27 per cent reduction in the probability of exit. Turning to the individual characteristics, we can see that, controlling for the other factors, living in owner-occupied or privately rented housing (as opposed to local authority housing) and having a Caribbean claimant parent increased the probability of exit, other things being equal, with owner occupation increasing the chances of exit by about 15 per cent, private tenancy by an estimated 9 per cent and having a Caribbean parent by nearly 20 per cent. Housing tenure may be standing in for a number of factors related to location and opportunities over and above the tenure itself. The increased probability of exit for those in Caribbean families can be understood in relation to findings that Caribbean lone parents are more likely to work (and move into work) than other lone parents (Berthoud, 2005; Platt, 2002).

Receipt of income support reduced the exit probabilities by an estimated 37 per cent, which was unsurprising given that those not supported by income support largely had parents who were working and whose earnings might therefore at some point have taken them out of eligibility for HB/CTB or caused them to fluctuate in and out. Those from Bangladeshi families were less likely to exit benefit: their chances of exit being an estimated 16 per cent lower than the baseline White UK group. This is a striking finding given that income support receipt and family size are controlled for, and suggests a particularly vulnerable position in the labour market. This is entirely consistent with what we know about the disadvantaged situation of Bangladeshis in Britain (Platt, 2002, 2003), but it has never previously been demonstrated in relation to benefit or income dynamics.

Figure 3 illustrates the differential probabilities of remaining on benefit according to this model for three different types of children, demonstrating the effect of lone parenthood and income support receipt in different combinations on children's experience of benefit receipt. The median duration – that is, the point after which half of the group are estimated to have exited benefit and which is shown by where the horizontal line running across the figure at the 50 per cent mark cuts the survival curve – was, for primary school-aged children in lone-parent families not on income support, estimated at about four quarters (or approximately a year). For those in couple-parent families on income support it was about five quarters; and for those in lone-parent families on income support it was about six quarters.

A similar model estimated the impact of characteristics on benefit re-entry for those children exiting benefit (who constitute a random sample of those who

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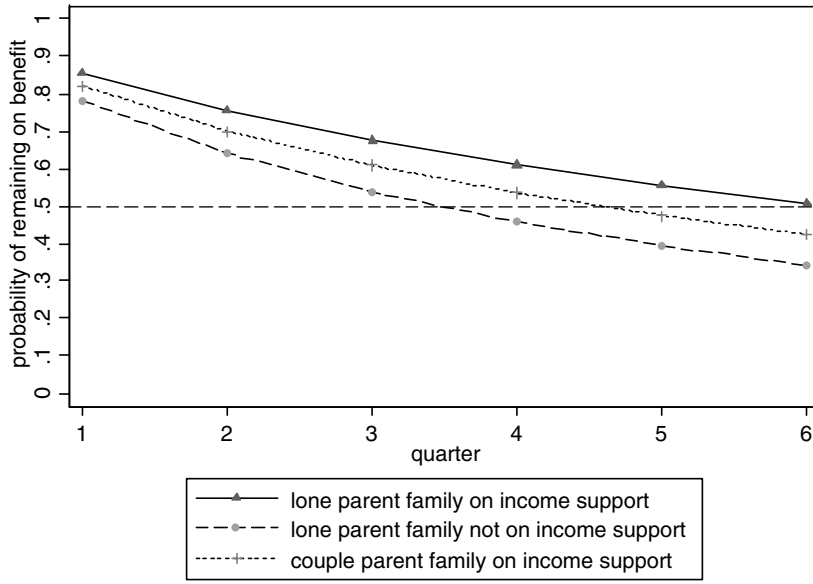


Figure 3. Probability of remaining on benefit over time for children in three family types.
Notes: Characteristics other than the ones specified have been set at the following values: living in social housing, parent from White UK ethnic group, parent aged 30, child aged between 5 and 10.
Source: Author's analysis of HB/CTB data 1998–9.

have experienced a completed spell on benefit and who are at risk of re-entry). Characteristics were measured at the point of exit. Table 3 shows the estimates from this model.

As Table 3 shows, the estimated coefficient of the log of elapsed duration was negative, indicating that probability of re-entry to benefit declined with time: the longer families with children remained off benefit, the less likely were they to return. The hazard ratio had the value of 0.27, indicating that chances of re-entry were reduced by 73 per cent with the passing of each quarter. It is short-term changes in benefit status that are clearly an issue for these children.

Controlling for duration and other factors, many of the characteristics associated with higher probabilities of benefit exit – such as housing tenure and having a younger claimant parent – are also associated with lower probabilities of benefit re-entry. However, interestingly, those who leave from income support recipient families are more likely to stay off benefit, the hazard ratio indicating a 26 per cent lower chance of re-entry compared to those who were on non-income support HB/CTB. This is probably not to do with prior receipt of income support itself, but reflects the fact that it requires a bigger change in income to cross the threshold for HB/CTB eligibility from income support in the first place. Once that bigger (and harder) jump from income support across the HB/CTB eligibility threshold has been achieved, it may well be that it is easier to maintain.

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TABLE 3. Complementary log-log model of benefit re-entry.

Characteristics	Coefficient (SE)	Hazard ratio (SE)	p-value
Log of elapsed duration	−1.29 (0.02)	0.27 (0.01)	0.000
Housing Tenure (baseline = local authority housing)			
Owner occupation	−0.38 (0.03)	0.68 (0.02)	0.000
Private renting	−0.09 (0.02)	0.91 (0.02)	0.000
Income support receipt	−0.30 (0.02)	0.74 (0.01)	0.000
Age of child (baseline is pre-school (0–4))			
5–10	0.02 (0.01)	1.02 (0.01)	0.085
11+	0.02 (0.02)	1.02 (0.02)	0.220
Age of claimant parent	0.003 (0.001)	1.003 (0.001)	0.005
Family form (baseline =couple parent)			
Lone parent	0.22 (0.02)	1.24 (0.03)	0.000
Number of dependent children within family	0.05 (0.01)	1.05 (0.08)	0.000
Ethnic group (baseline = white UK)			
Bangladeshi	0.40 (0.05)	1.49 (0.08)	0.000
Black Caribbean	0.06 (0.04)	1.06 (0.04)	0.150
Indian	0.17 (0.05)	1.19 (0.06)	0.001
Pakistani	0.30 (0.03)	1.35 (0.04)	0.000
Non-response	−0.18 (0.02)	0.83 (0.02)	0.000
Constant	−0.91 (0.05)		0.000
Model fit: Wald chi2 (21df)		4699.95	0.000

Notes: Number of person-spells = 139,613; number of re-entries = 33,040. Standard errors have been adjusted for repeat observations within families; coefficients for the ethnic groups not explicitly considered were non-significant and, for simplicity, have not been included.

The negative effect for ethnic group 'non-response' is, as with Table 2, consistent with ethnic group being more likely to be entered onto the system over time and thus the longer the family is in contact with the benefit system.

Source: Author's analysis of HB/CTB data 1998–9.

Bangladeshis, Indians and Pakistanis all had higher probabilities than the White UK ethnic group of re-entry once other factors were controlled. In particular, Bangladeshis were estimated to have one and a half times the chances of the White UK group of re-entry, while Pakistanis and Indians had an estimated 35 per cent and 20 per cent greater probability. This suggests greater vulnerability and potentially greater insecurity for children from these groups. For Bangladeshis in particular, with their high absolute rates of benefit support and their relatively lower probability of benefit exit, the picture is of a concentration around and below the levels of means-tested support.

A comparison of the differential probabilities of remaining off benefit for the same three groups that were considered in Figure 3 is illustrated in Figure 4. It shows that 50 per cent of children in couple-parent families on income support could be expected to remain off benefit for over five quarters after exiting. However, lone-parent families return much sooner, with 50 per cent of those not

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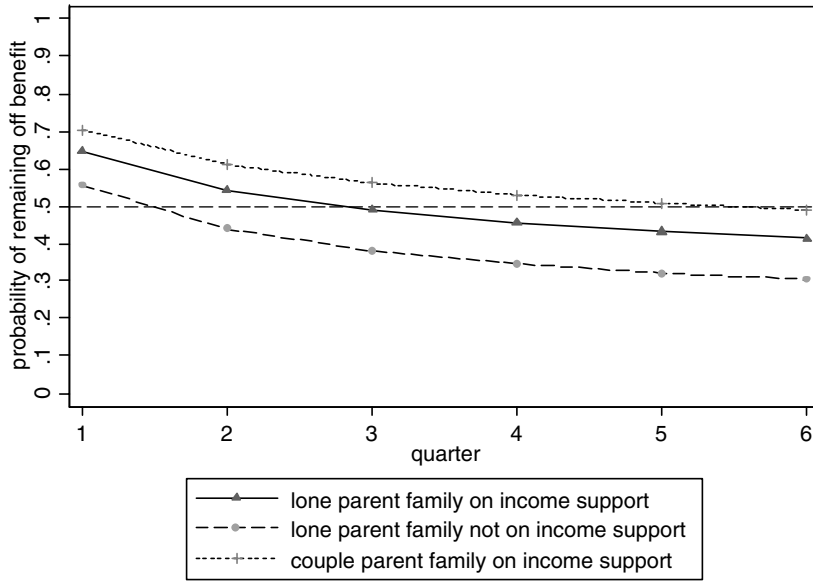


Figure 4. Probability of remaining off benefit over time for children in three family types.
Notes: Characteristics other than the ones specified have been set at the following values: living in social housing, parent from White UK ethnic group, parent aged 30, child aged between 5 and 10.
Source: Author's analysis of HB/CTB data 1998–9.

on income support estimated to return after only two quarters. The estimated median duration off benefit for those on income support was only about a quarter longer. This finding highlights the problem of not only moving off but of staying off benefit, particularly within lone-parent families (see also Evans *et al.*, 2004).

Summary and conclusions

This study confirms and extends our knowledge of the amount of movement that takes place on to and off means-tested benefits. It confirms findings of extensive sub-annual levels of benefit dynamics, corresponding to changes in income. It has reiterated the increased risks of longer spells associated with income support receipt, with lone parenthood and with living in local authority housing. However, it has also developed existing research in three ways. First, it has looked at the experience of children across both lone-parent and couple-family types, focusing on the experience of the child rather than the family as a whole. Second, it has paid attention to 're-entries' (moves back on to benefit) as well as to exits, thus capturing characteristics associated with the risk of repeat spells in addition to those associated with longer spells. And, third, it has included the effect of ethnic group of the child's parent, making it the first study of British benefit dynamics to identify ethnic differences in risks.

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The focus on children allows the article to highlight issues of welfare rather than concerning itself with issues of incentives and behaviour. In the context of a strong emphasis on child welfare and eliminating child poverty in British policy, the benefit experience of children is of particular interest (Work and Pensions Select Committee, 2004). Both the extent of children's contact with the means-tested benefit system and the complexity of that experience are issues for child poverty policy. This article has shown that for children in Britain's second largest city, a majority had contact with means-tested benefits over the 17-month study period. Of those children who experienced benefit support, many did so for just a short time, but many also experienced multiple spells. This suggests that for a number of those in contact with means-tested benefits, the material quality of life on benefit may not be that different from life off benefit. Low income is part of many children's lives, and benefit recipients and non-recipients change places to a remarkable extent. It is necessary to understand not only what factors help children to exit benefit, but also what can move them a safer distance from the benefit threshold and inhibit re-entry.

Moreover, it is important to consider that the impact of frequent movements on and off benefit may be different for children than for claimant adults. It could be argued that, for adults, any moves off benefit are positive in that they show both willingness and ability to engage with the labour market and allow some experience of the associated economic and social benefits. However, for children in a state of benefit flux, it is likely that short-term gains from increased family income may be offset by the instability of regular changes of status and the accompanying shifting patterns of available resources (and available carers) within the household. To the extent that income mobility is accompanied by geographical mobility, it may also involve disruption of the children from their school and social contexts. Policy attention needs to be paid to identifying the costs for children of such fluctuations and how to avoid them.

The examination of characteristics associated with exit from and re-entry to HB/CTB support showed that those who find it harder to exit are also more likely to return to benefit support if they do succeed in exiting. Being in a lone-parent family, being supported by income support, being younger, having Bangladeshi parent(s) and living in local authority housing were all associated with lower probabilities of benefit exit. For lone parents, those in local authority housing and those in Bangladeshi families, the greater difficulties in leaving benefit were accompanied by greater difficulties in remaining off, even for a short time, resulting in high overall rates of benefit support for children in all these situations. Supporting those who manage to make a difficult transition off benefit, in addition to targeting those who are at risk of longer durations in the first place is clearly an issue for policy. Such support will be important in preventing the cumulative disadvantage for children of large amounts of time spent below the income threshold for HB/CTB.

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As suggested above, the costs to the children of short-term exits from benefit may be greater than the advantages accruing from such exits. This raises the question of whether the loss of stability arising from leaving benefit support only to return merits, from a child welfare perspective, the effort taken to achieve the exit. This becomes an increasingly moot point if the benefit threshold is increased (and the child elements have been substantially increased since the date of this investigation), offering a higher level of support on benefit.

The analysis also revealed that there were ethnic group differences in risks of both exit and re-entry. While Bangladeshis had higher risks of both longer durations on benefit and of re-entry to benefit should they leave, Caribbeans were more likely than other groups to exit benefit and were no more likely than those of White UK origins to re-enter. Among the other groups, Indians and Pakistanis did not differ significantly from their White UK counterparts in their chances of exiting benefit, but they were more likely to re-enter. This suggests that different ethnic groups have particular sets of characteristics resulting in different patterns of stability and instability on and off benefit. What these characteristics are, how they operate, and what the implications are for the welfare of children from the different ethnic groups are issues which merit further, and alternative, forms of investigation. Such investigation, and resulting policy response, is important not only in relation to considerations of child welfare, but also of ethnic group disadvantage and resources. Understanding how different groups manage the insecurity of living on the margins of poverty or of long-term benefit receipt and the consequences for their children may provide lessons as well as insights for policy and enable it more fruitfully to adapt its child poverty agenda to the complexity of children's poverty dynamics.

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Notes

1 The ethnic groups measured in these data were: Bangladeshi, Black African, Black Caribbean, Black Other, Chinese, Indian, Pakistani, Vietnamese, White Irish, White Other, White UK and Other/Not stated. This analysis focuses on the largest groups in the city: that is, White UK, Indian, Black Caribbean, Pakistani and Bangladeshi. For a discussion of the distribution of ethnic groups in Birmingham, see Platt (2003).

2 Ruggles (1990) explored monthly income and poverty transitions in the US using the Survey of Income and Program Participation (SIPP) for 1984. Consistent with this study, she found that the number of poor at some point during the year was much greater than that given

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by an annual measure, which itself was substantially greater than those poor continuously over the year.

3 The first period, January 1998 to March 1998, covers just two months rather than three because the (preferred) December 1997 extract could not be accessed by the time of analysis.

4 Local authority systems for calculation and payment of HB and CTB vary widely, but focusing on just one local authority means that such variation does not have to be taken into account in this study. Moreover, Birmingham, as the largest local authority in the country, is dealing with extremely large numbers of claims, which both necessitate and enable (in terms of economies of scale) an efficient system. Following up a sample of cases by hand, I was able directly to experience the correspondence between paper records and electronic information.

5 Where information is insufficient to reallocate a claim identifier, some repeat claims may be wrongly assessed as fresh claims, but this will not affect measurement of benefit exit. It is extremely unlikely that a new claimant will be allocated a previous claimant's identification number given the range of information sought to match claims. Thus any error will be in the direction of *understating* the amount of mobility within the population.

6 It can be argued that increases in benefit naturally result in entrances, or returns to benefit without other changes of circumstances. However, applicable amounts within housing benefit did not increase in generosity over this period, being only uprated by inflation. Additionally, the data do not show clear indications of increases in claims following the April uprating.

7 For those continuously on benefit, characteristics are measured as those which apply at the latest extract at which they appear. For the 'inflowers', their characteristics are measured at the point at which they first enter the data set.

8 That this was a problem of non-entry of information was demonstrated by direct investigation of a sample of 1,000 forms classified as missing or as 'other/not known', which indicated that actual response rates to the ethnic group question were in the order of 84 per cent (Platt, 2001: 352–7).

9 The likelihood that the number of repeat spells is an artefact of 'administrative churning' (Bane and Ellwood, 1994) – that is, distortion through false exits and re-entries caused by administrative error or initial shortage of information – is reduced by taking quarterly, as opposed to more frequent, extracts, thus giving a period of up to three months for claims to 'settle'.

10 The coefficients for this model differed little from a fully non-parametric version, suggesting that the choice of log of spell lengths was appropriate to measure the duration effect.

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