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Unclaimed Support: Changes in the Take-Up of Means-tested Benefits in the UK since 2008

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Unclaimed Support: Changes in the Take-Up of Means-tested Benefits in the UK since 2008¹

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Abstract

Non-take-up of social benefits occurs when eligible individuals or households fail to claim welfare support to which they are entitled. This paper provides new estimates of take-up for major UK benefits between 2008 and 2023, including Child Benefit, Pension Credit, and Universal Credit together with the legacy benefits it replaced. Using Family Resources Survey data combined with the UKMOD tax-benefit microsimulation model, we reconstruct eligibility and compare simulated entitlement with reported receipt to estimate take-up rates.

The results show substantial and persistent non-take-up across all programmes. Child Benefit maintains relatively high participation but declines following the introduction of the High Income Child Benefit Charge. Take-up of working-age means-tested support is considerably lower and gradually declines during the Universal Credit rollout, with only a temporary increase during the COVID-19 pandemic. Non-claiming is more common among higher-income and more educated eligible households, while disadvantaged groups claim more consistently, suggesting a degree of self-screening.

A decomposition analysis shows that changes in population composition over the period of 2008-2013 would predict higher take-up; the observed decline is likely driven by behavioural or institutional factors affecting claiming incentives.

JEL codes: H53, I38, C63

Keywords: Benefit take-up; Non take-up; Social policy; Means-tested benefits; Child Benefit; Universal Credit; Pension Credit; Tax-benefit microsimulation; UKMOD

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1. Introduction

Non-take-up refers to situations in which individuals or households fail to claim social benefits to which they are legally entitled. While recent public debate and policy discourse have tended to concentrate on the problem of benefit misuse, arguably it is non-take-up of social benefits that appears to be both more widespread and more consequential (van Oorschot, 1991). For instance, a recent study covering 20 high-income countries found that fewer than one-fifth of programmes achieved take-up rates above 80 per cent, while almost one-quarter recorded rates of 40 per cent or lower (Ko and Moffitt, 2022).

The implications of incomplete take-up are twofold. From the perspective of policy effectiveness and equity, low take-up weakens the redistributive capacity of welfare states and limits their ability to protect households from economic hardship (Matsaganis et al., 2008). From a more functionalist perspective, however, non-take-up has been interpreted as a mechanism that screens out less needy households, thereby containing public expenditure (Nichols and Zeckhauser, 1982). Which of these interpretations is more accurate depends on the profile of non-claimants: if those who fail to claim benefits are disproportionately vulnerable, non-take-up represents a failure of social protection. Short-term savings may generate substantial long-term costs at both the individual and societal level, as prolonged spells of poverty can adversely affect health, employability and involvement in crime (Eurofound, 2015). If non-claimants are largely better-off households with small entitlements, non take-up may reduce fiscal cost without undermining equity. Determining this balance requires systematic empirical evidence.

Many countries collect information on programme participation, but few publish systematic statistics on benefit take-up. The United Kingdom (UK) represents a notable exception: since 1997, the Department for Work and Pensions (DWP) has released official estimates for several means-tested benefits, including Pension Credit, Housing Benefit, Income Support, and income-related Employment and Support Allowance. Her Majesty's Revenue and Customs (HMRC) also reported take-up rates for Child Benefit. In recent years, however, reporting by DWP has narrowed to pension-age benefits, and no estimates were produced for 2020-2021 due to the Covid-19 pandemic.

The most recent DWP figures suggest take-up of around 65 per cent for Pension Credit, 80 per cent for Housing Benefit and Pension Credit among pensioners, and 90 per cent for Income Support and income-related Employment and Support Allowance (DWP, 2024b). Child Benefit take-up is currently at 88 per cent, having declined from 96 per cent in 2010 (HMRC, 2024), likely reflecting the introduction of a taper that may have discouraged claims from middle-income families (Mitton et al., 2026). To date, no official take-up statistics have been published for Universal Credit. Introduced as a consolidation of multiple working-age benefits into a single monthly award, the Universal Credit was explicitly intended to simplify the system and, in doing so, raise take-up (Bennett, 2024).

The most recent descriptive overview of the UK situation, provided by Hoynes et al. (2024) using 2014-15 official DWP take-up estimates, indicates that take-up rates are higher when measured by expenditures than by caseload. This finding suggests that take-up is greater where

entitlements are larger, consistent with the interpretation of non take-up as a form of self-screening. However, this evidence is based on aggregated data rather than individual-level microdata. Studies that use microdata to examine the determinants of take-up in the UK are relatively old and predominantly rely on cross-sectional snapshots, providing limited insight into longer-term trends (Blundell et al., 1987, Craig, 2009, Pudney et al., 2006, Hernandez et al., 2007, Zantomio, 2015, Zantomio et al., 2010).

This article contributes to filling these gaps in three ways. Firstly, it provides new estimates of take-up for the main UK means-tested benefits – including Child Benefit, Universal Credit, and the benefits it replaced (hereafter referred to as Legacy Benefits), and Pension Credit – over the period 2008-2023. These estimates are derived from publicly available Family Resources Survey (FRS) data in combination with the UKMOD tax-benefit microsimulation model, offering a transparent and reproducible alternative to official statistics, which draw on administrative data and proprietary modelling tools.

Secondly, the analysis explores the socio-demographic characteristics of non-claimants, assessing whether non-take-up primarily excludes disadvantaged groups – thereby undermining welfare objectives – or whether it disproportionately affects the better-off households, consistent with the view of non-take-up as a form of self-screening.

Thirdly, it applies a Blinder-Oaxaca decomposition to distinguish the extent to which changes in take-up over time can be attributed to compositional shifts in household characteristics, as opposed to behavioural responses or policy change. Taken together, these contributions provide a comprehensive and analytically grounded account of the evolution of benefit take-up in the UK between 2008 and 2023.

2. Mechanisms behind non-take-up of social benefits

Accurately targeting social benefits to those in need is central to the effectiveness and fairness of welfare systems. Errors in allocation are, however, almost inevitable (Atkinson, 1995). Errors of inclusion (Type I Errors) occur when benefits are awarded to individuals who are not eligible, leading to leakage of public resources and potential erosion of public support for welfare programs (Pritchett, 2005). By contrast, errors of exclusion (Type II Errors) occur when eligible individuals do not receive benefits to which they are entitled – a phenomenon commonly referred to as non take-up. In this article, we use the term non take-up to refer to the observed non-receipt of benefits by eligible claimants, regardless of whether this reflects a deliberate choice or unintentional barriers.

From a rational choice perspective, non take-up can be seen as the outcome of a trade-off between the potential benefits of claiming a social benefit and the costs involved in the process (Moffitt, 1983). These costs include financial expenses, such as travel to a social security office, tangible but non-financial burdens like the time and effort needed to complete an application, and social or psychological costs, such as stigma or the perception of stigmatization by claimants (Baumberg, 2015). Lack of information about eligibility or programme rules can also be understood as an opportunity cost: individuals must spend time and effort to acquire

the necessary knowledge to claim benefits (Hernandez et al., 2007). In other words, not claiming a benefit can reflect the fact that the effort required – in terms of time, energy, or attention – outweighs the perceived gain.

Institutional and administrative factors – such as programme design, eligibility criteria, and the communication of benefit rights – can intentionally or unintentionally create barriers for claimants, highlighting that non take-up often reflects systemic constraints rather than voluntary choice (Hernanz et al., 2004, Janssens and Van Mechelen, 2022, van Oorschot, 1991). Empirical evidence supports this. Benefits that are automatically awarded, and therefore minimise opportunity costs, achieve higher participation than schemes requiring active applications (Deshpande and Li, 2019). By contrast, conditionality such as work requirements or sanctions increases claiming costs and reduces participation (Pattaro et al., 2022). Administrative simplification can have large effects: in Austria, the introduction of nationwide binding standards and a streamlined application process reduced non take-up of social assistance by over 40 percent (Fuchs et al., 2020). Experimental evidence from Spain further shows that proactive outreach and face-to-face information sessions substantially increases take-up (Lain and Julia, 2022). Similarly, evidence from Belgium indicates that information costs are more important predictors of non-receipt than process costs or stigma (Bolland et al., 2025).

Longitudinal studies from Germany (Wiemers, 2025, Harnisch, 2019) and UK (Vella et al., 2024) demonstrate that take-up exhibits strong state dependency: past claiming behaviour strongly predicts current participation. This persistence reflects the fact that once households have overcome the initial costs of claiming, they are likely to continue, whereas those who have never claimed face high entry costs and therefore often remain outside the system. Social interactions and local exposure to claiming behaviour may further reinforce these dynamics. Eligible households were more likely to participate when a greater share of their neighbours received welfare, according to a French study (Chareyron et al., 2021).

On the benefits side, evidence shows that the size of financial entitlements strongly influences take-up: higher benefits are consistently associated with higher claiming rates (Vella et al., 2024, Zantomio, 2015). This suggests that in some cases, non-take-up may function as a screening mechanism, discouraging households with relatively modest entitlements and thereby reducing fiscal costs (Nichols and Zeckhauser, 1982). At the same time, an increase in take-up does not necessarily signal improved targeting or higher claiming. Declining non take-up may simply reflect benefit erosion, for example when income thresholds are not indexed to wages or inflation, mechanically reducing the number of eligible households (Muñoz-Higuera et al., 2024).

Non take-up is widespread and not confined to any particular type of welfare state. Ko and Moffitt (2022) find that, in a sample of twenty high-income countries, fewer than one-fifth of programmes achieved take-up rates above 80 per cent, while nearly one-quarter recorded rates below 40 per cent. Although non take-up is particularly pronounced in means-tested, non-contributory programmes, it also occurs in contributory and universal schemes such as disability benefits (Vinck et al., 2019). Historical evidence further suggests that non-take-up is

persistent over time, with rates today broadly similar to those observed in the early 2000s (Eurofound, 2015).

Taken together, these findings highlight that non take-up is driven by a combination of claim costs, programme design, financial incentives, and past participation, and that it remains a persistent and widespread feature of the welfare states. This underscores the need for systematic, individual-level analysis of benefit take-up over time – a gap that the present study seeks to address by generating new estimates of take-up for major UK means-tested benefits.

3. Policy changes to means-tested benefits in the UK

The UK welfare state is typically classified as a liberal or residual welfare regime, reflecting its heavy reliance on means-tested provision and comparatively limited universal entitlements (Pearce and Kelly, 2025). This emphasis on targeting social support interacts with labour markets characterised by a high incidence of low-paid and part-time employment, requiring the benefit system to compensate for earnings shortfalls. For example, in 2023, 30 percent of the UK population received some form of means-tested support². The analysis in this paper focuses on the take-up of means-tested benefits, where entitlement is determined by a combination of personal and household socio-demographic characteristics, as well as current income and assets. Since individuals must actively apply for such support, both non-claiming and administrative errors can occur.

Table *I* summarises the main features of the three benefits that form the core of the UK’s means-tested support system. *Child Benefit (CB)* is a flat-rate payment made to carers of dependent children (under 16, or under 19 if in full-time education or training). Although simple in design and usually awarded automatically following a child’s birth, its universality was curtailed in 2013 by phasing it out for middle-income earners. As of 2023, CB reached 9.5 percent of the population, with average monthly payments of £157 per benefit unit.

Universal Credit (UC) is a means-tested benefit for working-age adults, gradually rolled out from 2013 onwards, replacing six ‘legacy’ benefits (Income Support, income-based Jobseeker’s Allowance, income-related Employment and Support Allowance, Housing Benefit, Child Tax Credit, and Working Tax Credit) with a single monthly payment. 7.4 percent of the UK population received UC in 2023, with average monthly payments of £858 per benefit unit.

Finally, *Pension Credit (PC)* provides income-related support to older people above State Pension age, assessed against both income and capital thresholds. Pension Credit comprises Guarantee Credit, which raises low incomes to the threshold, and Savings Credit, which provides an additional payment to reward and encourage savings. PC is claimed by 1.9 percent of the population, with the average monthly value of £315 per benefit unit.

² The benefit coverage and expenditure values in this section are computed using the UKMOD version B2025.06 with the 2023 policy system and 2023/24 FRS data.

The policy environment during the period under study was shaped by profound economic and political shifts. Following the global financial crisis of 2008-09, the UK governments pursued a prolonged austerity strategy, characterised by successive cuts and restrictions to working-age benefits, motivated as much by ideology as by fiscal consolidation. These included the introduction of an income test for Child Benefit; stricter work-hour requirements for Working Tax Credit; nominal freezes in benefit rates (reducing their value in real terms); and the introduction of the Benefit Cap, which limited the total annual support a household could receive. The 2017 “two-child limit” further restricted support through Child Tax Credit and UC, capping entitlement at two children for those children born after April 2017. Collectively, these measures tightened access and reduced generosity of the welfare system for working age families (Stewart et al., 2025).

It is worth noting that freezes to benefit levels were mirrored by freezes to income tax thresholds, creating a dual mechanism of austerity in which fiscal drag increased burdens on low- and middle-income households. De Agostini and Hills (2018) show that between the UK general elections of May 2010 and May 2015 the tax-benefit reforms had a regressive character, with the most affluent segments of the population largely protected. Certain benefit cuts were later temporarily reversed in 2020-21 to mitigate the adverse impact of COVID-19 lockdown measures on household incomes (Brewer and Tasseva, 2021). For the post-COVID period, Popova et al. (2026) find that policy changes protected low income households in relative terms, while reducing real living standards across much of the rest of the distribution through fiscal drag.

Although pandemic benefit uplifts were withdrawn in 2021, the post-COVID-19 energy price shock, inflation surge and falling real wages prompted the introduction of new support through a series of one-off means-tested payments and universal energy grants. These payments were conditional on receipt of core means-tested benefits, meaning that non-take-up not only restricts access to the means-tested benefits themselves but also to other supplementary support measures, underscoring the policy importance of addressing benefit non-take-up (Bennett, 2024).

Table 1: Means-tested benefits included in the study

	Child Benefit	Legacy Benefits/Universal Credit	Pension Credit
Type	Universal until means-tested charge at high income, as from 2013 (High Income Child Benefit Charge)	Means-tested (income and asset-dependent)	Means-tested (income and capital thresholds for pensioners)

	Child Benefit	Legacy Benefits/Universal Credit	Pension Credit
Complexity	Near-universal for families with dependent children, simple application, automatic for most births; few updates	Complex and fragmented eligibility rules across multiple programmes, frequent reassessments and onerous reporting requirements for changes in income, work status, or household composition	Complex income/asset rules, application process can be complex for older adults
Payment regularity	Predictable, stable. Paid every 4 weeks (weekly option for single parents or low-income households)	Amount depends on assessment, LB paid on different schedules depending on the benefit, UC paid monthly in arrears, with a single lump-sum payment covering all entitlements	Predictable, stable. Paid every 4 weeks or quarterly; depends on individual choice and banking arrangements.
Interaction with employment	Affected by earnings (if above HICBC)	Strongly interacts with earnings and hours worked	Not affected by employment, designed for those above State Pension age
Conditions attached to receipt	None (unless affected by HICBC; even then, opt-out is voluntary)	Includes work-related conditions (e.g. job-seeking, work preparation), reporting requirements, sanctions possible	None

Source: Authors' compilation based on information from GOV.UK, DWP benefit guides, and HMRC.

4. Data and measurement

To analyse benefit take-up, we employ a state-of-the-art approach that combines microsimulation techniques with survey data. Our method closely mirrors that adopted by the DWP, which produces official estimates of benefit take-up using linked Family Resources Survey (FRS) data, administrative caseload records, and a proprietary tax-benefit calculator, the Policy Simulation Model (PSM). While the official estimates draw on administrative information and internal modelling tools, our approach relies entirely on publicly available data

and the UKMOD tax-benefit microsimulation model, allowing the analysis to be transparent and replicable.

4.1 Measurement of take-up

Specifically, we use the free and publicly available tax-benefit microsimulation model UKMOD (version B2025.06), which is maintained, developed and managed by the Centre for Microsimulation and Policy Analysis at the Institute for Social and Economic Research (ISER), University of Essex (Richiardi et al., 2021). For both direct and indirect taxes as well as most cash benefits, UKMOD calculates entitlements and liabilities on the basis of individual and household characteristics – such as employment income, financial assets, demographic composition – together with the rules of the tax-benefit system, in order to estimate household disposable income. Both full and partial take-up of means-tested benefits can be simulated. Partial take-up is modelled using the take-up probabilities made available by DWP. The UKMOD baseline simulations are benchmarked annually against external statistical sources on earnings, tax receipts, benefit spending, and the number of taxpayers and recipients (Van de Ven and Popova, 2025).

The input data for UKMOD are drawn from the FRS, an annual household survey that collects detailed information on income and living conditions from a representative sample of private households in the UK. A key advantage of using the FRS is that it is the same survey source employed by DWP in their own take-up estimates, which enhances the comparability of our results. A well-known limitation of the FRS is the under-representation of high-income households, largely due to their lower propensity to participate (Jenkins, 2022). While this issue is addressed in the production of Households Below Average Income (HBAI) statistics, it does not materially affect the analysis of benefit take-up. We therefore base our analysis on the original FRS data, subject only to minor adjustments and cleaning, rather than drawing on HBAI adjusted income aggregates which is also possible in UKMOD.

A more pertinent issue for our study is the under-representation of benefit recipients and the misreporting of benefit amounts in the FRS. Since 2019/20, this has been partially addressed through systematic imputation and replacement of missing or inaccurate benefit-receipt data using linked administrative records (DWP, 2025). The match rate between survey respondents and administrative data exceeds 95%, making large-scale correction feasible, and these enhanced variables are included in the public-use FRS datasets. Prior to 2019, administrative linkage was also possible, but only with respondent consent, resulting in coverage of around half the sample. In those years, administrative data were used mainly for internal validation and quality assurance rather than for correcting the public datasets.

Despite these improvements, according to estimates provided by DWP (2024a) the overall FRS sample under-represents benefit recipients, and current grossing weights do not correct this bias. Weighting relies on traditional calibration targets (age, sex, geography, housing tenure), without adjustment to match actual caseloads. Consequently, benefit receipt is underestimated: for instance, the number of recipients is around 30% lower for Universal Credit and 27% lower for Pension Credit than administrative figures suggest. This illustrates that linkage alone does not resolve the undercount, as the underlying sample composition remains unbalanced. To

address this, DWP has been developing experimental grossing weights that incorporate administrative caseloads as calibration targets, thereby improving alignment between the FRS sample and the benefit-receiving population. However, these weights are not yet available in the public datasets and remain under testing in internal and experimental outputs. Our analysis therefore relies on the survey weights currently provided with the FRS.

All our results are produced under the assumption that incomes are pooled and shared among all household members. In practice, however, entitlement to most UK benefits is assessed at the level of the benefit unit – usually defined as a couple or a single adult with their dependent children – rather than the household as a whole. To facilitate comparability of incomes, taxes, and benefits across households of different sizes, we apply the Modified OECD equivalence scale, normalised to a value of one for a single-adult household. Under this scale, the first adult is assigned a weight of 1.0, each additional adult a weight of 0.5, and each child under 14 a weight of 0.3. The equivalent size of a household is the sum of the weights of all the members of a given household.

We examine the period from 2008 to 2023, spanning the onset of the financial crisis and the subsequent austerity, through to the COVID-19 pandemic and the more recent cost-of-living crisis. The input datasets underpinning policy simulations in UKMOD are not available for every year within this timeframe; specifically, data are missing for 2010 and 2011.

Take-up rates are conventionally defined as the proportion of eligible individuals or households who actually receive a given benefit (Goedemé and Janssens, 2020). Estimating take-up requires careful consideration of both the numerator, representing the observed recipients, and the denominator, representing the eligible population. Constructing the numerator relies on survey or administrative data. Defining the denominator is often more challenging, as eligibility must typically be reconstructed from programme rules. To identify actual beneficiaries, we draw on information reported by respondents in the FRS. In order to identify the eligible population, we employ UKMOD simulations under the assumption of full take-up. Therefore, the take-up rate can be expressed as:

$$\text{Take-up Rate} = \frac{\text{Claimants}}{\text{Eligible}} = \frac{\text{Observed recipients in FRS}}{\text{Simulated eligibility in UKMOD}} * 100 \quad (1)$$

Two types of measurement errors may arise in this framework. First, in the numerator, errors can occur due to misreporting of benefits by survey respondents. For instance, if an individual is eligible but fails to report receiving the benefit, they will be incorrectly counted as a non-recipient, leading to an understatement of take-up. Conversely, if an individual reports receiving a benefit but in reality they do not, for example due to confusion regarding timing, this can lead to an overstatement of take-up. Prior research has documented that the receipt of means-tested benefits is particularly susceptible to underreporting in survey data (Brewer et al., 2017).

Second, errors may arise in the denominator, when eligibility is simulated using policy rules on imperfect survey data. If eligibility is overestimated, the denominator becomes too large, thereby lowering the estimated take-up rate. Conversely, if eligibility is underestimated, the denominator is too small, leading to an inflated take-up rate. Almeida et al. (2025) shows that EUROMOD tends to overestimate beneficiary numbers compared to administrative data because, although income related and basic socio-demographic rules are well simulated, some important eligibility conditions such as asset tests, residence requirements, and administrative constraints cannot be fully captured by household surveys. Accounting for these potential sources of error is essential for interpreting take-up estimates accurately and for assessing the effectiveness and reach of social policy programmes.

Since the FRS sample under-represents benefit recipients (i.e. there is unit non-response), it is certain that the numerator of the take-up rate (observed claimants) is affected by this bias. The denominator (simulated eligibles) is also likely influenced, as eligibility is reconstructed from the same survey data. Because both numerator and denominator are subject to similar distortions, and the take-up rate is expressed as a ratio, these biases are to some extent offsetting. This makes our estimates of take-up less sensitive to FRS sample distortions than analyses of expenditure totals or caseload levels, where absolute numbers are critical. That said, if the denominator is more distorted – for example, in years prior to 2019 before administrative linkage was widely applied – our estimates are likely biased downwards. In that case, they can be interpreted as a lower bound (“floor”) for actual take-up.

In addition to measurement errors, take-up estimates may be affected by implementation issues. Even when eligibility rules are correctly simulated, delays in payment, administrative mistakes, or miscommunication can prevent eligible individuals from receiving benefits. While most entitlements are automatically determined by rules, social benefits officers have limited discretion, primarily to address exceptional circumstances or adjust payment arrangements. Our data cannot distinguish these implementation issues from reporting errors, but they should be acknowledged, as they may cause observed take-up to understate the “true” coverage of social assistance benefits.

To provide an indication of the extent of potential misclassification in the measurement of take-up, we complement the Take-up Rate (Equation 1) with a Reporting Error measure, defined as follows:

$$\text{Reporting Error Rate} = \frac{\text{Recipients in FRS not simulated as eligible in UKMOD}}{\text{Simulated as eligible in UKMOD}} * 100 \quad (2)$$

Reporting Error highlights discrepancies between survey-reported receipt and model-based eligibility. As noted above, such discrepancies may reflect misreporting by respondents, but they may also arise from incorrectly defined or imperfectly simulated eligibility in UKMOD due to data limitations. By quantifying these mismatches, this indicator helps us assess the robustness of take-up estimates and provides evidence on the extent to which measurement or simulation problems may bias our results.

One important limitation of our analysis is that UKMOD is only able to assess joint eligibility for UC and legacy benefits (LB) during the UC roll-out period, which spans 2015/16 to the last data point available (2023/24). This is because, using the cross-sectional FRS data, we cannot distinguish whether an eligible benefit unit is a new or a repeat claimant. Prior to the UC roll-out, only LB were operating. Since the roll-out began, UKMOD randomly allocates eligible claimants to either UC or LB based on DWP estimates and Office for Budget Responsibility (OBR) forecasts, which assume full transition to UC by 2025/26. According to these forecasts (shown in Appendix, Table A1), the share of claimants on UC rose from just 1% in 2015/16 to 35% by 2019/20, reaching 76% by 2023/24, and is projected to increase to 87% in 2024/25 before full coverage in 2025/26.

4.2 Decomposition of changes in take-up

To analyse the drivers of changes in take-up of means-tested benefits over time, we employ the extension of Blinder-Oaxaca decomposition for probit models (Fairlie, 2005). A similar approach has previously been applied by Bargain et al. (2012) to decompose changes in take-up using Finnish administrative data.

Let T_1 denote the take-up rate in a given year of interest (for instance, 2023) and T_0 the take-up rate in the reference year (2008). Let X_1 and X_0 be vectors of observed household characteristics, and \widehat{B}_1 and \widehat{B}_0 the estimated coefficients from a probit model, which predicts the probability of take-up among eligible households as a function of household characteristics.

The set of covariates includes: the log of the simulated benefit amount (in 2008 prices); demographic characteristics of the benefit unit head (age and age squared, sex, disability status, and employment status, distinguishing between employed and unemployed); the composition of the benefit unit, defined by the number of working age adults, the number of children under 18, and the number of adults aged 65 or over. We also control for the number of children in the household (one, two, or three or more), the quartile of equivalised market income of eligible individuals, the log of financial capital (in 2008 prices), and housing tenure (owner occupier, private renter, or social renter). In addition, the model controls for regional dummies.

The estimation samples include individuals simulated to be eligible for the benefit and who either take-up or do not take-up the benefit. Descriptive characteristics of claimants and non-claimants are reported in Appendix: Table A2 for Child Benefit, Table A3 for Universal Credit and Legacy Benefits, and Table A4 for Pension Credit.

The decomposition of changes between a year of interest and the reference year (2008) is then expressed as:

$$\Delta T = T_1 - T_0 = (X_1 - X_0)\widehat{B}_0 + X_0(\widehat{B}_1 - \widehat{B}_0) =$$

= Composition effect (change due to characteristics) + Coefficient effect (change due to behaviour/policy)

(3)

The composition effect captures the portion of the change in take-up attributable to changes in observable household characteristics, such as income distribution, labour market status, or household composition. For example, if in 2023 there are more households with working adults than in 2008, this alone could reduce take-up even if behaviour and policy remained unchanged. The coefficient effect reflects differences in the effects of these characteristics, which may arise from policy reforms, changes in benefit awareness, or other unobserved behavioural factors. For instance, even if the household characteristics stayed the same, stricter claiming rules or lower awareness of benefits in 2023 could reduce take-up relative to 2008. We perform this analysis for each benefit under study, covering changes between 2008-2023.

5. Findings

Below we analyse take-up of the main means-tested benefits in the UK from 2008 to 2023. Using UKMOD estimates, we track overall trends and assess reliability through reporting errors. We then examine differences in take-up across social and economic groups. Finally, we apply the Blinder-Oaxaca decomposition to separate the influence of changing household characteristics from shifts in behaviour or policy, revealing the factors driving observed changes in take-up over time and across population subgroups.

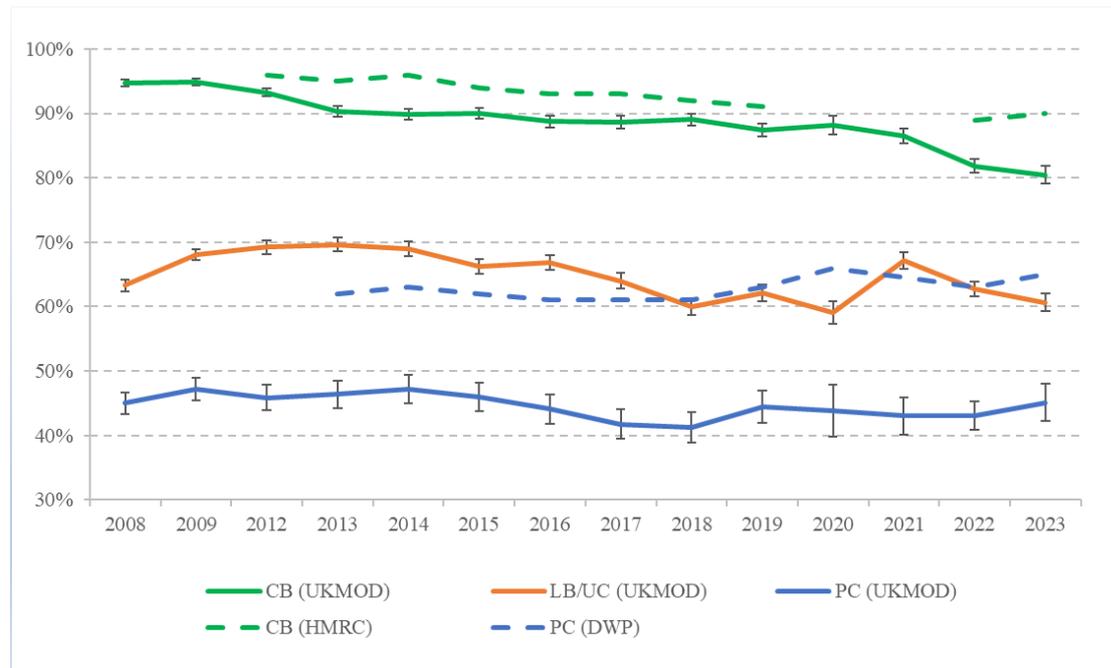
5.1 The Evolution of Take-Up Rates

Figure 1 shows changes in Take-up Rate for the main means-tested benefits in the UK since 2008, calculated following Equation 1. CB has historically had very high take-up, close to 90 per cent, but it has gradually declined since 2013, reaching around 80 per cent by 2023. This downward trend is likely linked to the introduction of the HICBC, which discouraged some eligible households from claiming. Take-up of LB/UC was relatively stable at around 65-70 per cent until 2015, after which a gradual decline is evident, with rates falling to around 60 per cent by 2023. This trend could reflect the UC roll-out and increased conditionality. A temporary surge in 2021, coinciding with the COVID-19 pandemic, briefly reversed this trend, but take-up subsequently fell back. Take-up of PC remains the lowest across the period, fluctuating between 40 and 50 per cent, with no sustained improvement over the years. Overall, the figure highlights persistent gaps in benefit take-up, with clear evidence of deterioration over time for CB and LB/UC, and chronically low take-up of PC.

A comparison with official administrative statistics indicates that UKMOD estimates capture the main trends in benefit take-up quite well (see Figure 1). For CB, UKMOD reproduces the overall downward trajectory, with the estimated rates being slightly below the HMRC figures. Similarly, for PC, UKMOD captures the low and fluctuating take-up seen in DWP data, but at a considerably lower level. These differences likely reflect measurement issues in the FRS data used with UKMOD, namely under-reporting of PC receipt, or underreporting of savings, as well as assumptions used in simulating PC. At the same time, the close correspondence in the direction of change provides reassurance that the microsimulation approach is reliable for analysing relative patterns, even if absolute levels are underestimated. For LB/UC, no directly

comparable administrative estimates are available, making the UKMOD series particularly valuable source of data.

Figure 1: Take-up Rate of main means-tested benefits in the UK

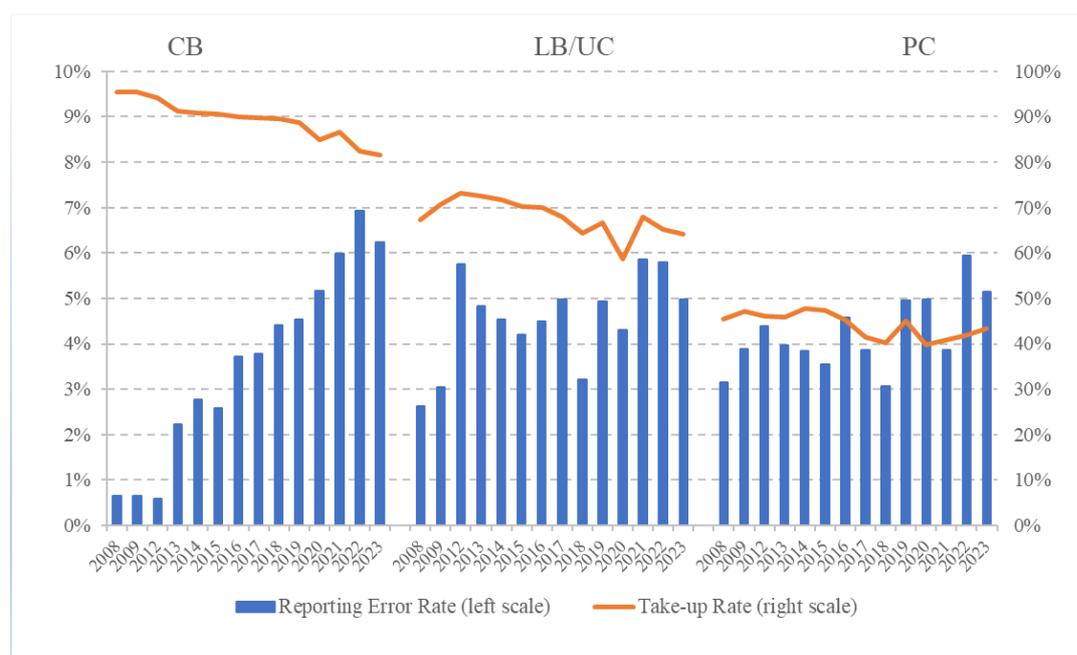


Sources: Authors' calculations using UKMOD with FRS data; Child Benefit Statistics: see HMRC annual releases; Pension Credit statistics: see DWP Pension Credit Tables.

Note: Vertical bars represent 95% confidence intervals around the estimates.

As a robustness check, Figure 2 shows the evolution of the Reporting Error (see Equation 2) for the three programmes under study. This measure captures the share of individuals reporting receipt of a benefit despite being simulated as non-eligible in UKMOD, expressed relative to the simulated eligible population. For CB, reporting error was close to zero until 2012, but it began to rise steadily from 2013 onwards, coinciding with the introduction of the HICBC, reaching around 6-7% by the early 2020s. For LB/UC, reporting error has fluctuated between 3% and 6% throughout the period, with some short-term peaks but no clear upward or downward trend. For PC, reporting error rate is relatively stable, generally between 3% and 5%, with modest year-to-year variation but no systematic increase. Taken together, these results suggest that reporting error remains moderate in scope, and apart from the rise observed for CB, no clear trends emerge that would have affected our estimates of take-up rates. This supports the view that our take-up estimates can be considered reliable.

Figure 2: Reporting Error Rate of main means-tested benefits in the UK



Source: Authors' calculations using UKMOD with FRS data.

5.2 Heterogeneity in Benefit Take-Up

We now turn to how take-up of means-tested benefits changed over time across different social and economic groups. Looking first at quartiles of equivalised market income of those simulated to be eligible (Figure A1, Appendix), CB take-up has generally remained high in the three lower quartiles, exceeding 90 per cent until 2021 before declining slightly. Among those in the top quartile, however, take-up dropped sharply by more than 10 percentage points in 2013, a fall that likely reflects the introduction of the HICBC.

For LB/UC, income differences are less pronounced, with broadly similar take-up across quartiles for much of the period. Nonetheless, take-up in the top quartile fell from around 50 per cent in 2017 to 41 per cent in 2023. An interesting convergence appears in 2021, when take-up temporarily narrowed across income quartiles. This may reflect the cumulative effects of temporary policy changes during the COVID-19 pandemic, such as the suspension of the Minimum Income Floor for the self-employed, eased work-related requirements, and the £20-per-week increase in the UC standard allowance. These measures primarily affected claimants in 2020–21, which may explain the convergence, even though there was no sharp rise in overall take-up in 2020.

PC displays the steepest income gradient, with the most consistent gap between the bottom and top quartiles throughout the period. In 2023, the difference between the quartiles with lowest and highest incomes was around 13 percentage points for CB, 24 points for LB/UC, and 28 points for PC, underlining the particular sensitivity of PC to income differences.

A similar picture emerges when looking at education (Figure A2, Appendix). Since 2013, CB take-up has been lower among the highly educated, following a drop in 2012 that may have

anticipated the introduction of the HICBC. For LB/UC, take-up is also lower among those with higher education, mirroring the pattern observed in the top income quartile. For PC, the pattern is less clear-cut: while the less educated tend to have higher take-up, the gap narrowed temporarily around 2018–21. Estimates for those with tertiary education are less precise, possibly given their small share among the elderly, but the convergence may reflect greater awareness, targeted outreach, or the changing composition of retirees as more highly educated cohorts reach pension age.

Family structure is another important dimension affecting take-up (Figure A3, Appendix). Lone parents stand out with consistently high take-up of both CB and LB/UC, although their take-up rates have declined somewhat since 2020 after remaining close to universal. For PC, single pensioners are more likely than couples to claim, with take-up of around 45–52 per cent compared to 29–39 per cent among couples.

Disabled individuals systematically display higher take-up, though the trends differ across benefits (see Figure A4, Appendix). For CB, disabled and non-disabled individuals had similar take-up until 2012, when rates for the non-disabled began to fall, dropping to around 80 per cent by 2023, while disabled individuals' take-up remained closer to 90–95 per cent, albeit with some decline after 2022. For LB/UC, disabled individuals consistently recorded higher take-up (around 85–90 per cent), compared with more volatile rates of 55–65 per cent among the non-disabled. Both groups saw gradual declines from the mid-2010s, though 2021 stands out with a temporary increase among the non-disabled. For PC, although wide confidence intervals limit precision, disabled individuals had somewhat higher take-up until around 2016, after which rates converged at relatively low levels, fluctuating between 40 and 50 per cent.

Taken together, the evidence indicates that non-take-up is systematically more pronounced among higher-income and more highly educated groups, whereas disadvantaged groups such as lone parents, single pensioners, and disabled individuals display consistently higher claiming rates. Temporary convergence in take-up rates during the pandemic illustrates that institutional design and short-term policy adjustments can influence group differences, yet overall patterns highlight the persistence of lower take-up among the relatively better-off. These findings are broadly consistent with recent studies from similar countries, such as Austria (Fuchs et al., 2020), Belgium (Bolland et al., 2025) and the Netherlands (Tempelman and Houkes-Hommes, 2016).

This brings us to the next section, where we examine how different factors have influenced the likelihood of claiming, and how their relative importance has changed over time.

5.3 The drivers of changes in take-up of means-tested benefits

To better understand the factors underlying the evolution of take-up over time, this section decomposes changes in take-up in each year starting from 2009 to 2023, relative to the 2008 baseline. The analysis uses a Blinder-Oaxaca decomposition based on the probit models (described in section 4.2). This approach separates the overall change in take-up into three elements: a composition effect, reflecting changes in the observable characteristics of eligible households; a coefficient effect, capturing changes in the relationship between these

characteristics and the probability of claiming; and an interaction term, reflecting the joint contribution of changes in both characteristics and coefficients. This decomposition allows us to assess whether changes in take-up are primarily driven by shifts in the characteristics of the eligible population, or by changes in behavioural responses and institutional factors affecting the propensity to claim.

Figure 3 presents the decomposition of changes in Child Benefit take-up in each year relative to the 2008 baseline. The underlying estimates for the decomposition of changes in take-up between 2023 and 2008 are reported in Appendix, Table A5. Overall take-up declines steadily over the period. After a small reduction in the early years, the gap relative to 2008 widens from around 2013 onwards and reaches approximately 15 percentage points by 2023. Confidence intervals around the estimates shown in the figure indicate that the broad downward pattern is statistically significant, particularly in the later years.

Changes in the composition of the eligible population account for only a small share of this decline. The composition effect is negative throughout most of the period and remains relatively modest in magnitude (below four percentage points). This suggests that shifts in the observable characteristics of eligible households have contributed only marginally to the overall decline in take-up.

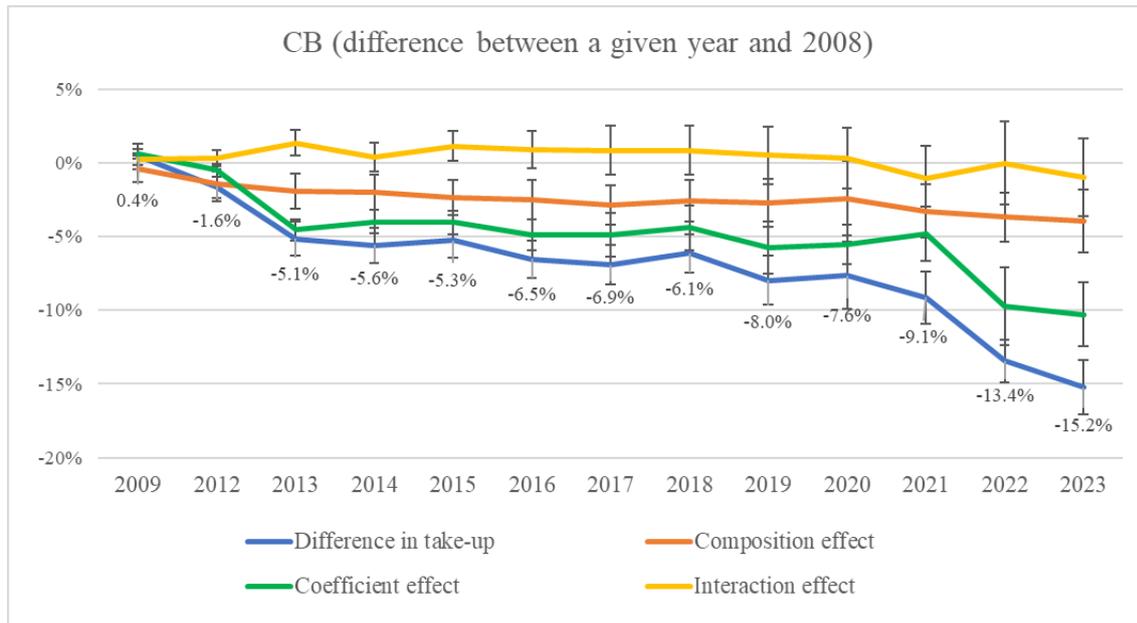
By contrast, the coefficient effect represents the largest component of the change over time. From around 2013 onwards it becomes clearly negative and remains substantial throughout the rest of the period, accounting for a large share of the difference in take-up relative to 2008. The timing of this shift coincides with the introduction of the HICBC, which may have altered incentives associated with claiming. The decomposition therefore suggests that the decline in Child Benefit take-up is primarily associated with changes in the relationship between household characteristics and the probability of claiming, rather than changes in the composition of the eligible population itself.

The interaction term remains small and generally positive across most years. Its magnitude is limited and it only slightly offsets the negative contributions of the composition and coefficient effects.

Looking at the effects of the individual coefficients, descriptive statistics show that the simulated amount of the benefit declined in real terms between 2008 and 2023 (see Table A2). However, the decomposition indicates that this change does not significantly explain the observed decline in take-up, as the benefit amount variable is statistically insignificant in the decomposition (see Table A5).

Overall, the decomposition indicates that the decline in Child Benefit take-up since 2008 is driven mainly by coefficient effects. Changes in the observable characteristics of eligible households play only a minor role, and the interaction between characteristics and coefficients has little influence on the overall trend.

Figure 3: Blinder-Oaxaca decomposition of Changes in Take-up compared to 2008: Child Benefit



Source: Authors' calculations using UKMOD with FRS data.

Note: Vertical bars represent 95% confidence intervals around the estimates.

Figure 4 presents the decomposition of changes in take-up for Universal Credit and Legacy Benefits relative to the 2008 baseline. The underlying estimates are reported in Appendix, Table A6. The overall pattern differs from that observed for Child Benefit. In the early years of our analysis, take-up is higher than in 2008, reaching around five to six percentage points above the baseline between 2012 and 2014. The gap then narrows and turns negative from around 2018 onwards. In 2023, take-up is approximately five percentage points below the 2008 level.

Changes in the composition of the eligible population contribute positively throughout the period, ranging from three to seven percentage points. This indicates that the observable characteristics of eligible households have evolved in ways that would tend to increase take-up over time. In other words, based on observed characteristics alone, the eligible population has become more likely to claim benefits.

The interaction effect is also consistently positive and relatively sizeable. Its magnitude typically lies between about five and ten percentage points, peaking around 2021. This component therefore reinforces the positive influence of compositional changes on predicted take-up.

However, these positive contributions are more than offset by a strongly negative coefficient effect. The coefficient component becomes negative early in the period and declines steadily thereafter, reaching around ten percentage points by the mid-2010s and falling to approximately twenty percentage points around 2018 and about fifteen percentage points in subsequent years. This pattern indicates that changes in the relationship between household characteristics and the probability of claiming have substantially reduced take-up among

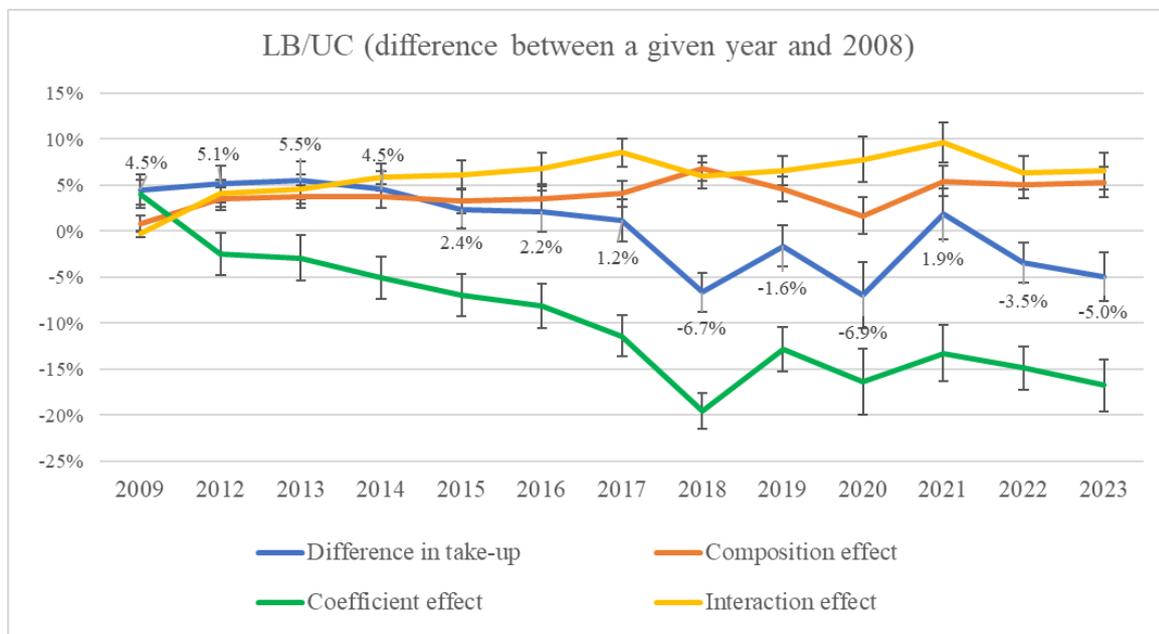
eligible households. These changes may reflect behavioural responses associated with the rollout of Universal Credit.

The decomposition indicates that declining take-up cannot be attributed to changes in benefit amount. In fact, the descriptive statistics indicate that simulated benefit entitlements increased in real terms between 2008 and 2023 (see Table A3). Although the composition effect for the simulated benefit amount is positive and statistically significant, implying that higher entitlements in 2023 would predict higher participation, the coefficient effect is only weakly significant, suggesting that changes in benefit generosity do not explain the decline in take-up.

Instead, the most important composition effects are related to age, disability status, household structure, financial capital, and social housing tenancy, all of which contribute positively to predicted take-up. In contrast, the largest and statistically significant coefficient effects are associated with household composition and having higher incomes (the top quartile of market income), suggesting that behavioural responses among couples, older households, and relatively better-off eligible households play a larger role in explaining the observed fall in take-up.

Overall, the decomposition shows that the decline in take-up relative to 2008 is driven primarily by the coefficient effect. At the same time, both compositional changes and interaction effects partially offset this decline. As a result, the observed reduction in take-up is relatively modest compared with the magnitude of the underlying coefficient effect.

Figure 4: Blinder-Oaxaca decomposition of Changes in Take-up compared to 2008: Universal Credit/Legacy Benefits



Source: Authors' calculations using UKMOD with FRS data.

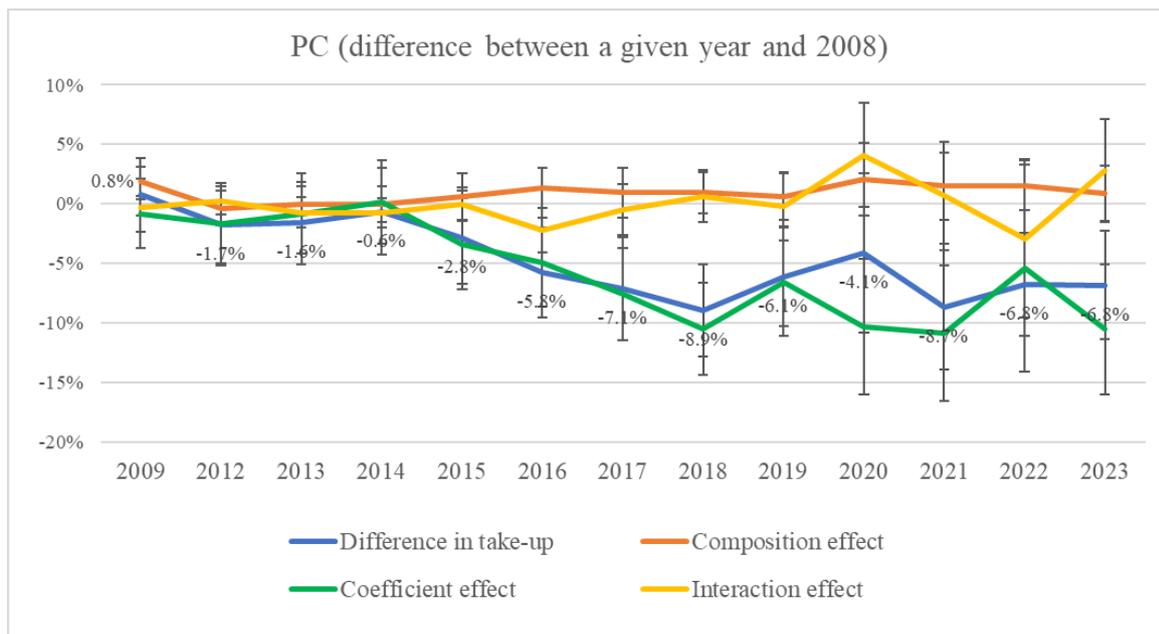
Note: Vertical bars represent 95% confidence intervals around the estimated effects.

Finally, in Figure 5 we present the decomposition of changes in Pension Credit take-up relative to the 2008 baseline, with the underlying estimates reported in Appendix Table A7. Take-up remains close to the 2008 level in the early years of the period and begins to decline more noticeably only from around 2015. The gap relative to the baseline then widens, reaching roughly nine percentage points by 2018 and then narrows to around seven to eight percentage points by 2023. The confidence intervals shown in the figure are wide, particularly in the later years, suggesting considerable uncertainty around the point estimates.

The composition effect remains close to zero throughout the period and fluctuates around small positive values. Given the size of the confidence intervals, these effects are generally small relative to the overall decline in take-up.

The interaction effect varies over time but also remains modest in magnitude. It fluctuates around zero during most of the period, but given the width of the confidence intervals, these movements should be interpreted cautiously.

Figure 5: Blinder-Oaxaca decomposition of Changes in Take-up compared to 2008: Pension Credit



Source: Authors' calculations using UKMOD with FRS data.

Note: Vertical bars represent 95% confidence intervals around the estimated effects.

As with the other means-tested benefits considered, the coefficient effect appears to account for the largest share of the decline in take-up. From around 2015 onwards this component becomes increasingly negative, reaching roughly nine percentage points by 2018 and remaining close to that level thereafter. Despite the relatively wide confidence intervals, the pattern suggests that changes in the relationship between household characteristics and the

probability of claiming have contributed substantially to the observed reduction in Pension Credit take-up.

The real value of benefits for the eligible population did not change substantially between 2008 and 2023 (see Table A4). The decomposition nevertheless indicates that compositional shifts in benefit size contributed modestly to the decline in take-up (see Table A7). However, the coefficient and interaction effects for the benefit amount are not statistically significant.

Overall, the decomposition indicates that the decline in Pension Credit take-up relative to 2008 is primarily associated with changes in behaviour/policies, while changes in the composition of the eligible population and interaction effects appear to play only a limited role.

6. Discussion and Conclusions

This paper contributes to the literature on benefit take-up in advanced welfare states by providing updated evidence on take-up trends across three major UK benefits using a consistent and transparent microsimulation-based approach. While previous UK studies have documented substantial non take-up in means-tested programmes, the evidence has often focused on single benefits or specific points in time. By combining simulated eligibility and entitlement estimates from UKMOD with survey data from the Family Resources Survey, this study produces a harmonised set of take-up estimates covering a long period (2008-2023) and multiple means-tested programmes. This allows a direct comparison of trends across the three main means-tested benefits in the UK targeted at different population groups: working-age low-income households (Universal Credit and Legacy Benefits), low-income pensioners (Pension Credit), and families with children (Child Benefit).

Our take-up estimates appear reasonably robust. The estimated reporting error rate is low, suggesting that misclassification of eligibility is unlikely to be a major source of bias. Although the Family Resources Survey underrepresents benefit recipients and our take-up estimates therefore fall below administrative caseload figures, particularly for Pension Credit, both the numerator and denominator of the take-up rate are derived from the same survey, so underreporting is likely to affect both components in a similar direction. During the Universal Credit rollout, the model can only assess joint eligibility for Universal Credit and legacy benefits, due to lack of detailed geographical information in the Family Resources Survey. Despite these limitations, our approach remains well suited for analysing patterns and trends in take-up over time.

Our results indicate that despite differences in programme design, take-up rates across the three means-tested benefits considered are far from full coverage and, in some cases, have significantly declined over time. Child Benefit, which previously had almost universal take-up, experienced a clear decline in participation after the introduction of the High Income Child Benefit Charge in 2013. Take-up of working-age means-tested support (Universal Credit/Legacy Benefits) also exhibits a downward trend, albeit a more modest one. The decline is particularly visible during the period associated with the rollout of Universal Credit, although we also see a temporary increase in take-up during the COVID-19 crisis. Pension Credit

consistently records the lowest participation rates throughout the period examined, with a further decline after 2018. In the absence of major structural reforms to Pension Credit during the period under study, this pattern warrants further investigation.

Non take-up is systematically more common among eligible households with higher incomes and higher levels of education, while more disadvantaged groups such as lone parents, single pensioners and disabled individuals tend to exhibit consistently higher claiming rates. Although take-up rates temporarily converged across groups during the COVID-19 pandemic, the broader pattern remains one of persistently lower participation among the relatively better off. This pattern is consistent with the “self-screening” explanation of non take-up, whereby households with lower expected gains or higher perceived costs are less likely to claim.

A further contribution of the paper is the decomposition of changes in take-up rates over 2008-2023. The results show that compositional changes in the eligible population tend to favour higher take-up, while the observed decline in participation is primarily driven by coefficient effects. This pattern is particularly pronounced for Child Benefit; for Universal Credit and Legacy Benefits as well as Pension Credit, coefficient effects also dominate but are partly offset by compositional shifts. Overall, the findings suggest that declining take-up in the UK mostly reflects changes in behavioural responses, policy design, or other institutional factors affecting the costs and incentives of claiming. While the present study cannot disentangle the relative importance of these mechanisms, this remains an important avenue for future research.

Finally, although the results show that non take-up is more prevalent among relatively better-off eligible households, the use of cross-sectional data means that we cannot assess whether non take-up creates significant problems for eligible individuals over time. Longitudinal research examining how take-up relates to outcomes such as employment, income and poverty dynamics, and health would therefore provide an important extension of the present analysis.

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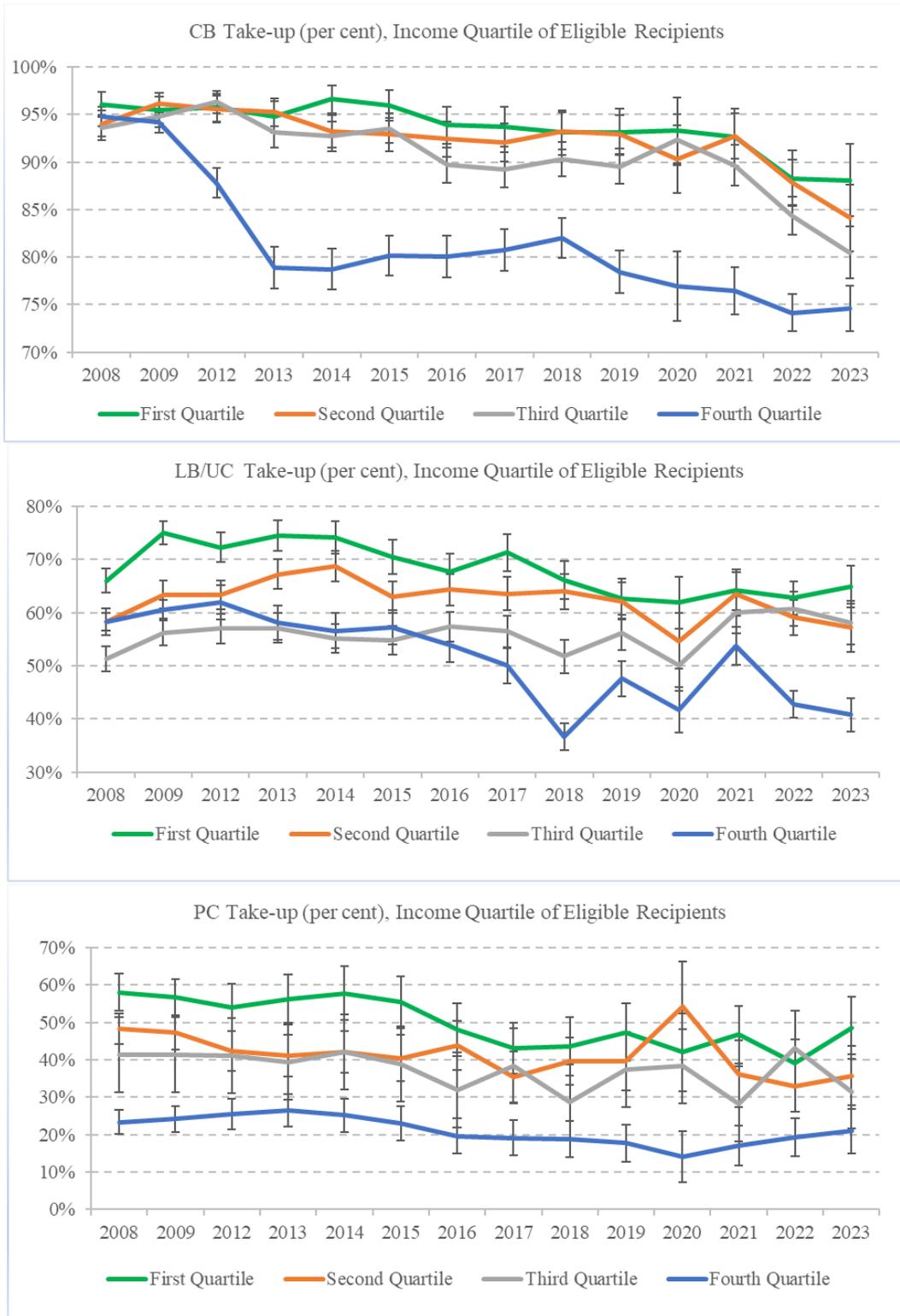
APPENDIX

Table A 1: DWP/OBR estimation of what share of claimants transferred onto UC

Fiscal year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
UC transition	1%	6%	10%	19%	35%	57%	63%	69%	76%	87%	100%

Source: Calculated in UKMOD using DWP estimates and OBR forecasts.

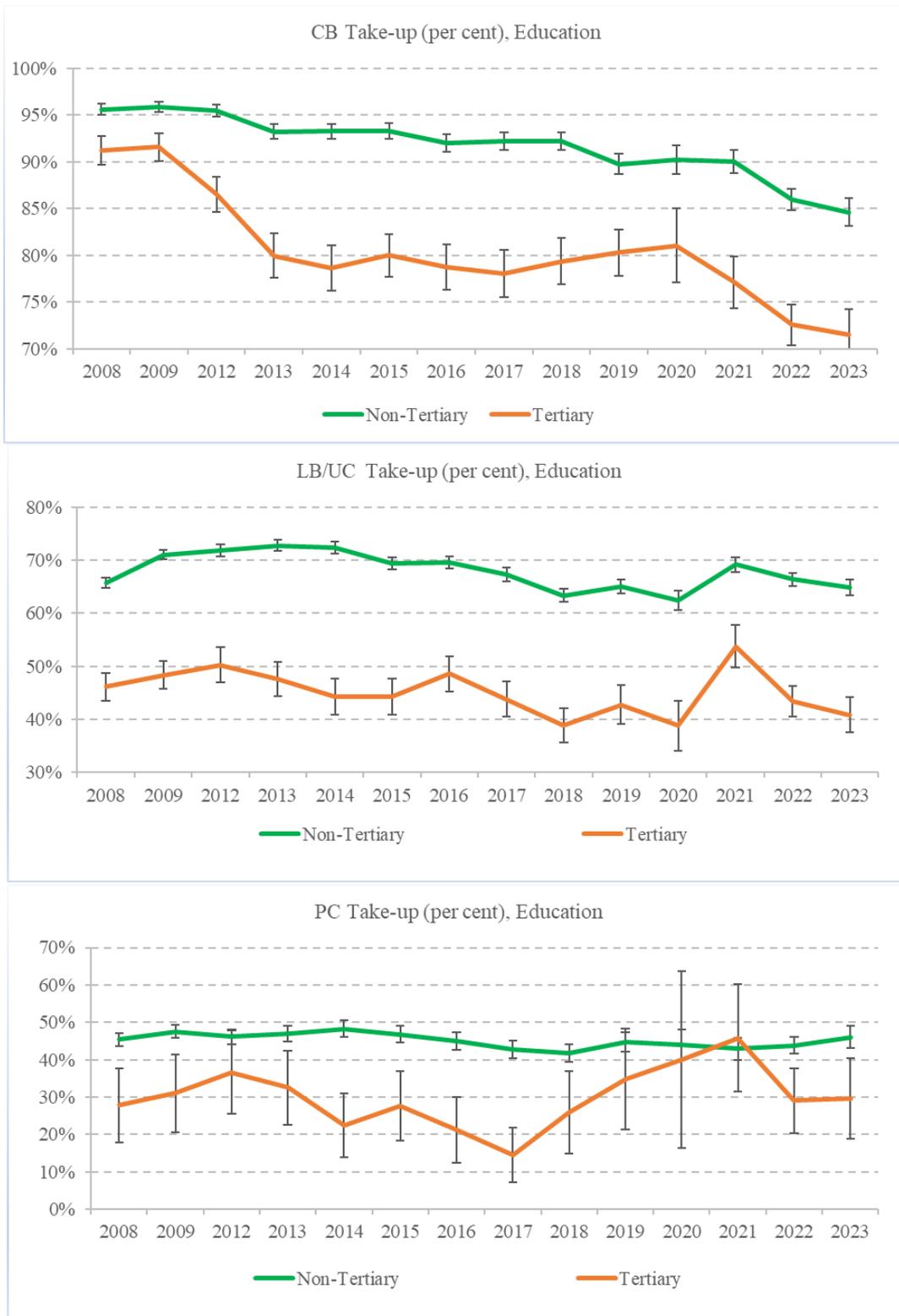
Figure A 1: Take-up rates for means-tested benefits by income quartile of eligible recipient



Source: Authors' calculations using UKMOD with FRS data.

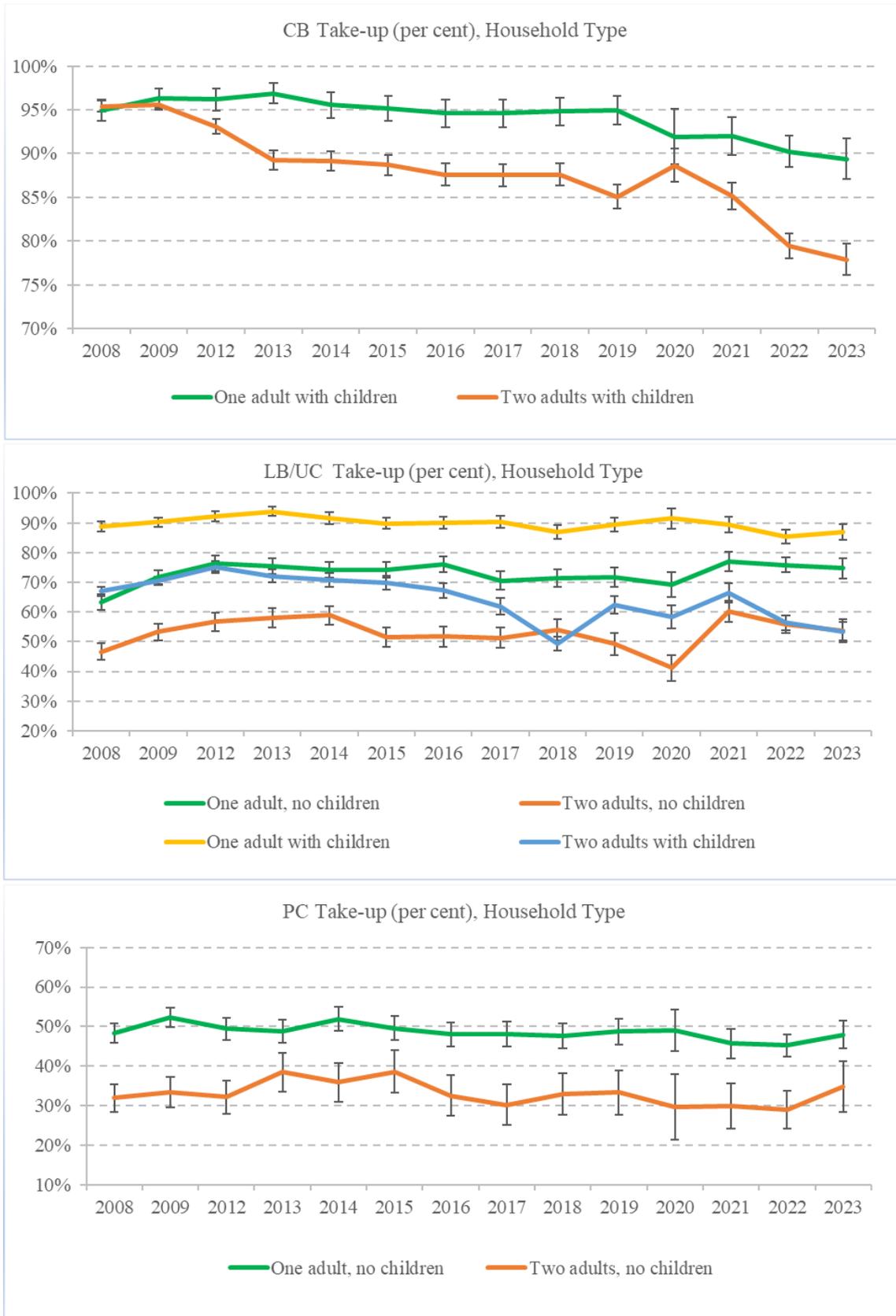
Notes: Income quartiles are constructed using equivalised market income of all individuals simulated to be entitled.

Figure A 2: Take-up rates for means-tested benefits by education



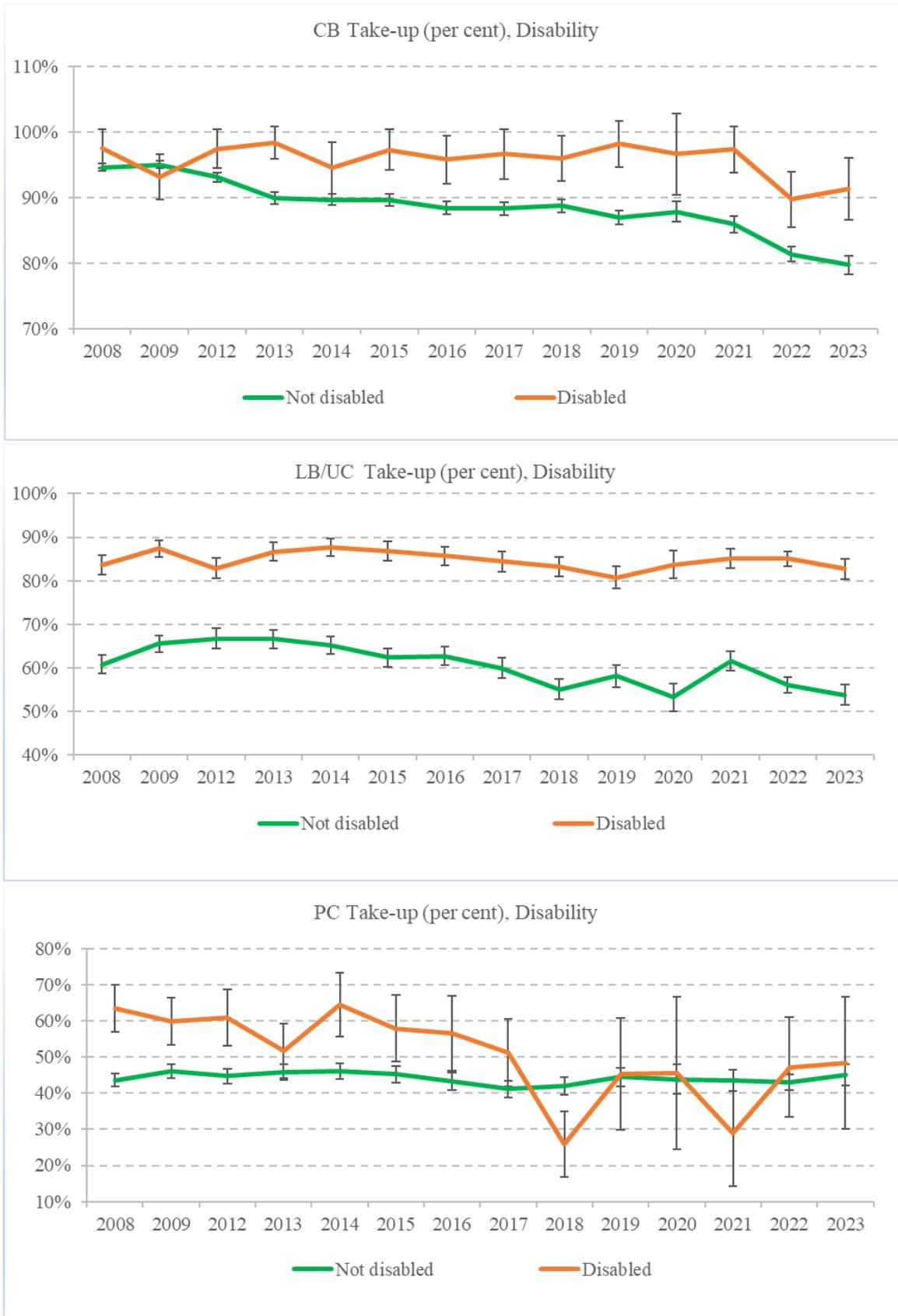
Source: Authors' calculations using UKMOD with FRS data.

Figure A 3: Take-up rates for means-tested benefits by household type



Source: Authors' calculations using UKMOD with FRS data.

Figure A 4: Take-up rates for means-tested benefits by disability



Source: Authors' calculations using UKMOD with FRS data.

Table A 2: Descriptive statistics of eligible recipients, Child Benefit

Variables	2008		2023	
	Non take-up	Take-up	Non take-up	Take-up
Log of real simulated benefit amount	4.60	4.74	4.38	4.58
BU head: male	61%	61%	62%	52%
BU head: age, years	39.64	38.94	41.97	40.31
BU head: age sq, years	1,686.27	1,593.70	1,843.16	1,701.30
BU head: disabled	2%	3%	3%	7%
BU head: tertiary education	34%	20%	46%	28%
BU head: in work	85%	83%	89%	82%
BU head: unemployed	4%	4%	2%	2%
BU head: other	11%	13%	9%	16%
BU composition: One adult with children	20%	21%	12%	25%
BU composition: Two or more adults with children	70%	77%	84%	73%
One child in BU	9%	1%	3%	1%
Two children in BU	57%	45%	48%	40%
Three+ children in BU	33%	53%	49%	59%
Market income: Q1	13%	18%	7%	13%
Market income: Q2	24%	22%	12%	17%
Market income: Q3	31%	26%	27%	29%
Market income: Q4	32%	34%	54%	41%
Log of real equivalised financial capital	4.71	4.50	4.90	3.96
Tenure: Owner outright or on mortgage	49%	66%	52%	48%
Tenure: Renter	33%	11%	32%	21%
Tenure: Free/reduced/social rent	18%	23%	16%	30%
Sample size	7,640		3,476	

Source: Authors' calculations using UKMOD with FRS data.

Table A 3: Descriptive statistics of eligible recipients, Universal Credit/Legacy Benefits

Variables	2008		2023	
	Non take-up	Take-up	Non take-up	Take-up
Log of real simulated benefit amount	4.80	5.51	5.27	6.11
BU head: male	65%	52%	58%	43%
BU head: age, years	40.90	44.15	42.67	48.21
BU head: age sq, years	1,943.36	2,214.34	2,140.75	2,594.81
BU head: disabled	5%	15%	10%	32%
BU head: tertiary education	18%	9%	26%	12%
BU head: in work	64%	49%	50%	32%
BU head: unemployed	10%	9%	11%	6%
BU head: other	26%	41%	39%	62%
BU composition: One adult, no children	13%	13%	10%	18%
BU composition: Two or more adults, no children	33%	13%	35%	21%
BU composition: One adult, one or more children	4%	19%	5%	21%
BU composition: Two or more adults, one or more children	42%	43%	36%	23%
BU composition: One adult 65+, no children	5%	11%	9%	14%
BU composition: Two or more adults 65+	3%	3%	5%	3%
One child in BU	54%	38%	59%	56%
Two children in BU	25%	28%	17%	17%
Three+ children in BU	21%	33%	24%	27%
Market income: Q1	0.17	0.24	0.17	0.28
Market income: Q2	18%	18%	17%	20%
Market income: Q3	25%	19%	20%	24%
Market income: Q4	40%	39%	45%	27%
Log of real equivalised financial capital	510%	314%	420%	263%
Tenure: Owner outright or on mortgage	56%	38%	38%	14%
Tenure: Renter	19%	13%	28%	22%
Tenure: Free/reduced/social rent	25%	49%	35%	64%
Sample size	12,050		4,712	

Source: Authors' calculations using UKMOD with FRS data.

Table A 4: Descriptive statistics of eligible recipients, Pension Credit

Variables	2008		2023	
	Non take-up	Take-up	Non take-up	Take-up
Log of real simulated benefit amount	4.49	4.97	4.38	4.96
BU head: male	49%	39%	36%	30%
BU head: age, years	73.06	72.26	76.02	75.91
BU head: age sq, years	5,386.90	5,272.18	5,803.58	5,780.83
BU head: disabled	5%	10%	3%	3%
BU head: tertiary education	3%	1%	7%	4%
BU composition: One adult 65+, no children	45%	52%	65%	73%
BU composition: Two or more adults 65+	26%	14%	22%	14%
Market income: Q1	12%	24%	20%	36%
Market income: Q2	22%	30%	23%	25%
Market income: Q3	28%	29%	23%	21%
Market income: Q4	38%	17%	34%	18%
Log of real equivalised financial capital	5.29	4.42	5.25	4.45
Tenure: Owner outright or on mortgage	66%	45%	71%	37%
Tenure: Renter	3%	6%	6%	9%
Tenure: Free/reduced/social rent	31%	50%	24%	54%
Sample size	3,977		1,421	

Source: Authors' calculations using UKMOD with FRS data.

Table A 5: Blinder-Oaxaca decomposition of Changes in Take-up between 2023 and 2008: Child Benefit

Variables		Coefficient	Std. Error	P-value
Overall	Group 1 (2023)	0.7937	0.0088	0.0000
	Group 2 (2008)	0.9459	0.0033	0.0000
	Difference in take-up	-0.1522	0.0094	0.0000
	Composition Effect	-0.0395	0.0112	0.0004
	Coefficient Effect	-0.1027	0.0108	0.0000
	Interaction Effect	-0.0100	0.0135	0.4582
Composition Effect	Log of real simulated benefit amount	-0.0096	0.0081	0.2360
	BU head: male	-0.0022	0.0010	0.0280
	BU head: age, years	0.0101	0.0054	0.0617
	BU head: age sq, years	-0.0115	0.0054	0.0344
	BU head: disabled	0.0004	0.0004	0.3412
	BU head: tertiary education	-0.0059	0.0014	0.0000
	BU head: in work	0.0001	0.0002	0.6513
	BU head: unemployed	0.0001	0.0003	0.7366
	BU composition: One adult with children	-0.0060	0.0021	0.0050
	Female * One adult with children	0.0064	0.0025	0.0108
	Two children in BU	-0.0061	0.0022	0.0053
	Three+ children in BU	0.0066	0.0024	0.0053
	Market income: Q2	0.0029	0.0012	0.0191
	Market income: Q3	-0.0015	0.0009	0.0951
	Market income: Q4	-0.0040	0.0022	0.0676
	Log of real equivalised financial capital	-0.0004	0.0008	0.6503
	Tenure: Renter	-0.0167	0.0025	0.0000
	Tenure: Free/reduced/social rent	-0.0017	0.0009	0.0491
	Region: North East	0.0000	0.0002	0.9343
	Region: North West	0.0002	0.0004	0.5947
	Region: Yorkshire and the Humber	0.0009	0.0005	0.0947
	Region: East Midlands	0.0004	0.0004	0.3039
	Region: West Midlands	0.0001	0.0002	0.5577
	Region: East of England	0.0000	0.0001	0.8227
	Region: South East	-0.0005	0.0005	0.3007
	Region: South West	-0.0004	0.0004	0.3060
	Region: Wales	-0.0003	0.0004	0.4901
Region: Scotland	0.0000	0.0003	0.9140	
Region: Northern Ireland	-0.0009	0.0006	0.1236	
Coefficient Effect	Log of real simulated benefit amount	0.0365	0.1892	0.8471
	BU head: male	-0.0149	0.0108	0.1689
	BU head: age, years	-0.4213	0.2236	0.0595
	BU head: age sq, years	0.2132	0.1097	0.0519
	BU head: disabled	-0.0004	0.0008	0.5923
	BU head: tertiary education	0.0022	0.0034	0.5190
	BU head: in work	0.0325	0.0366	0.3742
	BU head: unemployed	-0.0002	0.0009	0.8486
	BU composition: One adult with children	0.0195	0.0067	0.0037
	Female * One adult with children	-0.0130	0.0068	0.0568
	Two children in BU	-0.0495	0.0205	0.0155
	Three+ children in BU	-0.0629	0.0258	0.0146
	Market income: Q2	0.0058	0.0067	0.3821
	Market income: Q3	0.0073	0.0082	0.3753
	Market income: Q4	-0.0003	0.0112	0.9809
	Log of real equivalised financial capital	-0.0164	0.0105	0.1182
	Tenure: Renter	0.0075	0.0019	0.0001

Variables	Coefficient	Std. Error	P-value
Tenure: Free/reduced/social rent	0.0050	0.0036	0.1654
Region: North East	0.0006	0.0017	0.7451
Region: North West	-0.0043	0.0033	0.1990
Region: Yorkshire and the Humber	-0.0013	0.0024	0.5753
Region: East Midlands	-0.0014	0.0023	0.5604
Region: West Midlands	0.0017	0.0027	0.5249
Region: East of England	0.0019	0.0027	0.4713
Region: South East	0.0004	0.0037	0.9241
Region: South West	0.0003	0.0028	0.9132
Region: Wales	0.0013	0.0019	0.5101
Region: Scotland	0.0007	0.0019	0.7011
Region: Northern Ireland	-0.0009	0.0006	0.1238
Constant	0.1477	0.2184	0.4987
Interaction Effect			
Log of real simulated benefit amount	0.0012	0.0083	0.8872
BU head: male	-0.0014	0.0031	0.6465
BU head: age, years	0.0107	0.0234	0.6471
BU head: age sq, years	-0.0107	0.0232	0.6450
BU head: disabled	0.0002	0.0006	0.7364
BU head: tertiary education	-0.0009	0.0021	0.6850
BU head: in work	-0.0001	0.0003	0.7170
BU head: unemployed	-0.0001	0.0004	0.8577
BU composition: One adult with children	-0.0028	0.0061	0.6408
Female * One adult with children	0.0018	0.0038	0.6493
Two children in BU	-0.0033	0.0072	0.6485
Three+ children in BU	0.0038	0.0089	0.6703
Market income: Q2	0.0012	0.0027	0.6638
Market income: Q3	-0.0005	0.0011	0.6494
Market income: Q4	0.0001	0.0024	0.9812
Log of real equivalised financial capital	-0.0012	0.0026	0.6343
Tenure: Renter	-0.0065	0.0135	0.6275
Tenure: Free/reduced/social rent	-0.0012	0.0025	0.6354
Region: North East	0.0000	0.0000	0.9371
Region: North West	0.0001	0.0004	0.7384
Region: Yorkshire and the Humber	0.0002	0.0006	0.7286
Region: East Midlands	0.0001	0.0004	0.7239
Region: West Midlands	-0.0001	0.0002	0.7358
Region: East of England	0.0000	0.0001	0.8425
Region: South East	0.0001	0.0005	0.9257
Region: South West	0.0000	0.0002	0.9168
Region: Wales	0.0001	0.0002	0.7356
Region: Scotland	-0.0001	0.0004	0.7645
Region: Northern Ireland	-0.0007	0.0016	0.6504
Sample size	8,105		

Table A 6: Blinder-Oaxaca decomposition of Changes in Take-up between 2023 and 2008: Universal Credit/Legacy Benefits

Variables		Coefficient	Std. Error	P-value
Overall	Group 1 (2023)	0.5348	0.0121	0.0000
	Group 2 (2008)	0.5843	0.0061	0.0000
	Difference in take-up	-0.0495	0.0136	0.0003
	Composition Effect	0.0529	0.0084	0.0000
	Coefficient Effect	-0.1676	0.0143	0.0000
	Interaction Effect	0.0652	0.0103	0.0000
Composition Effect	Log of real simulated benefit amount	0.0174	0.0029	0.0000
	BU head: male	0.0038	0.0013	0.0028
	BU head: age, years	0.0321	0.0088	0.0003
	BU head: age sq, years	-0.0286	0.0092	0.0020
	BU head: disabled	0.0056	0.0015	0.0002
	BU head: tertiary education	-0.0038	0.0011	0.0005
	BU head: in work	-0.0016	0.0014	0.2500
	BU head: unemployed	-0.0002	0.0004	0.6381
	BU composition: Two or more adults, no children	-0.0001	0.0004	0.7501
	BU composition: One adult, one or more children	0.0163	0.0079	0.0379
	BU composition: Two or more adults, one or more children	-0.0178	0.0149	0.2314
	BU composition: One adult 65+, no children	0.0056	0.0018	0.0019
	BU composition: Two or more adults 65+	0.0027	0.0010	0.0087
	Two children in BU	-0.0187	0.0113	0.0984
	Three+ children in BU	0.0080	0.0049	0.1060
	Market income: Q2	-0.0005	0.0011	0.6744
	Market income: Q3	-0.0019	0.0019	0.3276
	Market income: Q4	0.0050	0.0021	0.0155
	Log of real equivalised financial capital	0.0086	0.0016	0.0000
	Tenure: Renter	0.0011	0.0025	0.6725
	Tenure: Free/reduced/social rent	0.0208	0.0029	0.0000
	Region: North East	0.0000	0.0007	0.9961
	Region: North West	-0.0014	0.0009	0.1189
	Region: Yorkshire and the Humber	0.0015	0.0011	0.1693
	Region: East Midlands	-0.0003	0.0006	0.6610
	Region: West Midlands	0.0008	0.0010	0.4326
	Region: East of England	-0.0002	0.0005	0.6875
	Region: South East	-0.0011	0.0007	0.0923
	Region: South West	-0.0007	0.0007	0.3408
	Region: Wales	-0.0006	0.0005	0.2695
	Region: Scotland	0.0013	0.0007	0.0731
	Region: Northern Ireland	-0.0003	0.0005	0.5458
Coefficient Effect	Log of real simulated benefit amount	0.1195	0.0668	0.0736
	BU head: male	-0.0213	0.0166	0.1995
	BU head: age, years	0.0336	0.2736	0.9022
	BU head: age sq, years	0.0089	0.1463	0.9514
	BU head: disabled	0.0044	0.0029	0.1258
	BU head: tertiary education	-0.0020	0.0049	0.6767
	BU head: in work	0.0558	0.0410	0.1733
	BU head: unemployed	-0.0029	0.0033	0.3828
	BU composition: Two or more adults, no children	-0.0284	0.0100	0.0044
	BU composition: One adult, one or more children	-0.0574	0.0315	0.0684
	BU composition: Two or more adults, one or more children	-0.3130	0.1302	0.0162
	BU composition: One adult 65+, no children	-0.0166	0.0063	0.0079

Variables	Coefficient	Std. Error	P-value
BU composition: Two or more adults 65+	-0.0062	0.0024	0.0102
Two children in BU	0.0697	0.0774	0.3679
Three+ children in BU	0.0679	0.0829	0.4130
Market income: Q2	-0.0033	0.0081	0.6845
Market income: Q3	0.0011	0.0116	0.9218
Market income: Q4	-0.0521	0.0230	0.0237
Log of real equivalised financial capital	-0.0119	0.0198	0.5485
Tenure: Renter	0.0150	0.0057	0.0083
Tenure: Free/reduced/social rent	0.0110	0.0112	0.3249
Region: North East	-0.0004	0.0032	0.8927
Region: North West	-0.0030	0.0064	0.6433
Region: Yorkshire and the Humber	-0.0093	0.0049	0.0586
Region: East Midlands	0.0005	0.0047	0.9184
Region: West Midlands	-0.0040	0.0057	0.4803
Region: East of England	-0.0015	0.0050	0.7586
Region: South East	-0.0105	0.0063	0.0940
Region: South West	-0.0092	0.0051	0.0679
Region: Wales	-0.0026	0.0033	0.4329
Region: Scotland	-0.0071	0.0039	0.0695
Region: Northern Ireland	-0.0003	0.0005	0.5459
Constant	0.0080	0.1752	0.9634
Interaction Effect			
Log of real simulated benefit amount	0.0123	0.0068	0.0707
BU head: male	0.0036	0.0028	0.2035
BU head: age, years	0.0021	0.0173	0.9022
BU head: age sq, years	0.0011	0.0184	0.9514
BU head: disabled	0.0034	0.0023	0.1347
BU head: tertiary education	-0.0008	0.0020	0.6777
BU head: in work	-0.0040	0.0030	0.1937
BU head: unemployed	0.0002	0.0005	0.6719
BU composition: Two or more adults, no children	-0.0029	0.0021	0.1545
BU composition: One adult, one or more children	-0.0306	0.0176	0.0818
BU composition: Two or more adults, one or more children	0.0800	0.0343	0.0198
BU composition: One adult 65+, no children	-0.0062	0.0028	0.0277
BU composition: Two or more adults 65+	-0.0038	0.0018	0.0391
Two children in BU	-0.0222	0.0248	0.3709
Three+ children in BU	0.0066	0.0085	0.4395
Market income: Q2	-0.0001	0.0003	0.7697
Market income: Q3	0.0001	0.0006	0.9222
Market income: Q4	0.0049	0.0028	0.0771
Log of real equivalised financial capital	0.0020	0.0033	0.5475
Tenure: Renter	0.0147	0.0055	0.0080
Tenure: Free/reduced/social rent	0.0046	0.0046	0.3201
Region: North East	0.0000	0.0000	0.9961
Region: North West	0.0003	0.0007	0.6559
Region: Yorkshire and the Humber	-0.0012	0.0011	0.2571
Region: East Midlands	0.0000	0.0002	0.9205
Region: West Midlands	-0.0003	0.0006	0.5971
Region: East of England	0.0001	0.0002	0.8063
Region: South East	0.0013	0.0010	0.2029
Region: South West	0.0008	0.0009	0.3864
Region: Wales	0.0003	0.0005	0.5142
Region: Scotland	-0.0014	0.0010	0.1777
Region: Northern Ireland	0.0003	0.0005	0.5462
Sample size	9,395		

Table A 7: Blinder-Oaxaca decomposition of Changes in Take-up between 2023 and 2008: Pension Credit

Variables		Coefficient	Std. Error	P-value
Overall	Group 1 (2023)	0.3392	0.0206	0.0000
	Group 2 (2008)	0.4076	0.0108	0.0000
	Difference in take-up	-0.0684	0.0233	0.0033
	Composition Effect	0.0091	0.0120	0.4479
	Coefficient Effect	-0.1050	0.0278	0.0002
	Interaction Effect	0.0276	0.0221	0.2119
Composition Effect	Log of real simulated benefit amount	-0.0100	0.0043	0.0199
	BU head: male	0.0046	0.0034	0.1762
	BU head: age, years	0.1486	0.0950	0.1179
	BU head: age sq, years	-0.1416	0.0931	0.1284
	BU head: disabled	-0.0030	0.0016	0.0600
	BU head: tertiary education	-0.0018	0.0018	0.3205
	BU composition: One adult 65+, no children	0.0035	0.0063	0.5815
	Female * One adult 65+	0.0047	0.0060	0.4299
	Market income: Q2	0.0009	0.0012	0.4802
	Market income: Q3	0.0043	0.0024	0.0760
	Market income: Q4	0.0016	0.0051	0.7541
	Log of real equivalised financial capital	-0.0004	0.0006	0.5031
	Tenure: Renter	0.0063	0.0041	0.1280
	Tenure: Free/reduced/social rent	-0.0064	0.0028	0.0256
	Region: North East	-0.0019	0.0014	0.1643
	Region: North West	-0.0003	0.0014	0.8463
	Region: Yorkshire and the Humber	-0.0011	0.0016	0.4685
	Region: East Midlands	-0.0005	0.0009	0.5966
	Region: West Midlands	-0.0044	0.0027	0.1033
	Region: East of England	0.0002	0.0016	0.8982
	Region: South East	0.0004	0.0013	0.7599
	Region: South West	0.0010	0.0014	0.4523
	Region: Wales	-0.0020	0.0018	0.2666
	Region: Scotland	0.0068	0.0040	0.0920
	Region: Northern Ireland	-0.0004	0.0004	0.2597
	Coefficient Effect	Log of real simulated benefit amount	-0.0816	0.0700
BU head: male		0.0247	0.0286	0.3889
BU head: age, years		9.2393	10.6517	0.3857
BU head: age sq, years		-4.2931	5.3313	0.4207
BU head: disabled		0.0026	0.0064	0.6847
BU head: tertiary education		-0.0001	0.0023	0.9508
BU composition: One adult 65+, no children		-0.0032	0.0295	0.9129
Female * One adult 65+		0.0027	0.0294	0.9259
Market income: Q2		-0.0013	0.0121	0.9152
Market income: Q3		-0.0184	0.0146	0.2067
Market income: Q4		0.0002	0.0149	0.9883
Log of real equivalised financial capital		-0.0165	0.0353	0.6395
Tenure: Renter		0.0006	0.0027	0.8306
Tenure: Free/reduced/social rent		0.0399	0.0125	0.0014
Region: North East		0.0056	0.0064	0.3824
Region: North West		-0.0010	0.0105	0.9221
Region: Yorkshire and the Humber		-0.0051	0.0087	0.5550

Variables	Coefficient	Std. Error	P-value
Region: East Midlands	0.0056	0.0075	0.4548
Region: West Midlands	-0.0007	0.0096	0.9419
Region: East of England	-0.0010	0.0077	0.8995
Region: South East	-0.0084	0.0103	0.4137
Region: South West	-0.0008	0.0084	0.9258
Region: Wales	-0.0141	0.0084	0.0924
Region: Scotland	-0.0007	0.0047	0.8856
Region: Northern Ireland	-0.0003	0.0003	0.2616
Constant	-4.9798	5.3638	0.3532
Interaction Effect			
Log of real simulated benefit amount	0.0017	0.0017	0.3231
BU head: male	-0.0041	0.0046	0.3746
BU head: age, years	0.2573	0.3100	0.4064
BU head: age sq, years	-0.2271	0.2930	0.4383
BU head: disabled	-0.0011	0.0028	0.6822
BU head: tertiary education	-0.0001	0.0016	0.9507
BU composition: One adult 65+, no children	-0.0009	0.0080	0.9119
Female * One adult 65+	0.0007	0.0079	0.9254
Market income: Q2	0.0001	0.0005	0.9166
Market income: Q3	0.0025	0.0024	0.2916
Market income: Q4	0.0000	0.0003	0.9883
Log of real equivalised financial capital	-0.0002	0.0006	0.6804
Tenure: Renter	0.0003	0.0016	0.8332
Tenure: Free/reduced/social rent	-0.0040	0.0021	0.0599
Region: North East	-0.0015	0.0018	0.4043
Region: North West	0.0000	0.0002	0.9303
Region: Yorkshire and the Humber	0.0004	0.0008	0.6433
Region: East Midlands	-0.0003	0.0007	0.6525
Region: West Midlands	0.0001	0.0016	0.9420
Region: East of England	-0.0002	0.0019	0.8990
Region: South East	-0.0002	0.0008	0.7713
Region: South West	-0.0001	0.0007	0.9261
Region: Wales	0.0047	0.0036	0.2001
Region: Scotland	-0.0005	0.0034	0.8846
Region: Northern Ireland	0.0002	0.0002	0.2837
Sample size	2,732		